1st International ÇAM & SAKURA Pediatric Days

&

3rd EPA /UNEPSA (European Paediatric Association) Hot Topics Europaediatrics Joint Meeting

1st International ÇAM & SAKURA Pediatric Nursing Days

Until All Children Smile...



Program and Abstract Book

25-27
JUNE 2026

Başakşehir ÇAM & SAKURA City Hospital Conference Halls

Istanbul
Türkiye

www.hottopicseuropaediatrics.org

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SCIENTIFIC PROGRAM

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Istanbul Türkiye

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25 Haziran, Perşembe | Salon G | A Blok, Zemin Kat, Seminer Odası 4

June 25, Thursday | Hall G | Block A, Lower Ground Floor, Seminar Room 4

CASE BASED NEONATAL MECHANICAL VENTILATION COURSE

Course Directors:
İlke Mungan Akın, Atalay Demirel

09:00 - 09:15	**Introduction and Welcome** **Course Objectives, Participant Introductions** **Course Directors:** *İlke Mungan Akın, Atalay Demirel*
09:15 - 09:45	**Neonatal Respiratory Physiology** **Principles of Neonatal Lung Mechanics, Compliance, Resistance** *İlke Mungan Akın*
09:45 - 10:15	**Blood Gas Analysis & Adjusting Ventilation Parameters** **Interpretation of Blood Gases, Modifying PEEP, FiO_2, Rate, and Volume** *Atalay Demirel*
10:15 - 10:30	**Kahve Arası / Coffee Break**
10:30 - 11:00	**Non-Invasive Ventilation (NIV)** **CPAP, HFNC, NIPPV Indications, Advantages, Patient Selection** Evrim Kıray Baş
11:00 - 11:30	**Invasive Mechanical Ventilation (IMV)** **Conventional Ventilation Modes, Initial Settings, Troubleshooting** *Tuğba Erener Ercan*
11:30 - 12:00	**Weaning, Extubation & Post-Extubation Support** **Extubation Criteria, NIV After Extubation, Minimizing Failure Risks** *Ersin Ulu*
12:00 - 13:00	**Öğle Yemeği / Lunch**
13:00 - 13:00	**Novel Mechanical Ventilation Strategies - 1** **HFO, HFJV, nasal HFO** *Emel Altuncu*
13:30 - 14:00	**Novel Mechanical Ventilation Strategies - 2** **NAVA, Application and Benefits** *Zeynep Alp Ünkar*
14:00 - 14:30	**Complications of Mechanical Ventilation** **Barotrauma, Volutrauma, BPD, Hemodynamic Effects, Air Leaks** *Leyla Aliyeva*
14:30 - 14:45	**Kahve Arası / Coffee Break**
14:45 - 15:45	**Practical Workshop: Ventilator Management & Troubleshooting** **Hands-on: Ventilator Setup, Adjusting Parameters, Recognizing Asynchrony** *All Instructors*
15:45 - 16:00	**Final Discussion & Closing** **Q&A, Feedback, Certificate Distribution** *Course Directors*

25 Haziran, Perşembe | Doktor Ofisleri

June 25, Thursday | Doctor's Offices

PEDIATRIC EMERGENCY & CRITICAL CARE COURSE (PEDECC) by EPA - UNEPSA
PRACTICAL SESSIONS
Course Coordinator

Prof. Dr. Esra Şevketoğlu
EPA-UNEPSA yönetim kurulu üyesi, Başakşehir Çam ve Sakura Çocuk Sağlığı ve Hastalıkları İdari ve Eğitim Sorumlusu
Full Professor of Pediatrics, University of Health Sciences, Türkiye
Council Member, Educational Project Manager of European Paediatric Association EPA-UNEPSA
Chief, Department of Pediatrics, Director of Pediatric Residency Program, Cam ve Sakura City Hospital, Istanbul
Chief, Division of Pediatric Intensive Care, Director of Pediatric Critical Care Fellowship Program, Cam ve Sakura City Hospital, Istanbul

08:30 - 09:00	**INTRODUCTION & OPENING** *Özgür Yiğit Chief Executive Physician Cam& Sakura City Hospital* *Mehmet Vural EPA-UNEPSA* *Esra Şevketoğlu EPA-UNEPSA*
09:00 - 10:15	**Cardiac Rhythm Disturbances in Children** *Ayşe İrem Sofuoğlu* *Mehmet Emin Menentoğlu*
10:15 - 10:30	**Kahve Arası / Coffee Break**
10:30 - 12:00	**Central Venous Catheterization** *Cansu Durak* *Mustafa Çolak* *Mustafa Oğur*
12:00 - 13:00	**Öğle Yemeği / Lunch**
13:00 - 14:15	**Approach to Trauma** *Ayşe İrem Sofuoğlu* *Mehmet Emin Menentoğlu* *Cansu Durak*
14:15 - 14:30	**Kahve Arası / Coffee Break**
14:00 - 16:00	**Essentials of Pediatric Diagnostic Imaging** *Mustafa Çolak* *Mustafa Oğur*
16:00 - 16:30	**Certificate Ceremony**

25 Haziran, Perşembe | Salon G | A Blok Altzemin Katı Konferans Salonu 2

June 25, Thursday | Hall G | Conference Room 2, Ground Floor, Block A

PRETERM BEBEK ORAL MOTOR GİRİŞİMİ KURSU
PIOMI (Premature Infant Oral Motor Intervention)
Kurs Başkanları

Gülçin Bozkurt, Seda Çağlar

Kurs Eğitimcileri:

Zerrin Çiğdem, Selver Güler

09:00 - 09:30	**Açılış Konuşması** *Seda Çağlar*
09:30 - 10:15	**Preterm Bebeklerde Emme-Yutma-Solunum İşlevinin Nörogelişimsel Olgunlaşma Süreci** *Zerrin Çiğdem*
10:15 - 11:00	**Preterm Bebeklerde Duyu Motor Girişimlerin Teorik Çerçevesi ve Oral Motor Becerinin Gelişimi** *Zerrin Çiğdem*
11:00 - 11:15	**Kahve Arası / Coffee Break**
11:15 - 12:00	**Preterm Bebeklerde Oral Motor Girişimi (PIOMI)** *Selver Güler*
12:00 - 13:00	**Öğle Yemeği / Lunch**
13:00 - 13:45	**PIOMI: Araştırma Sonuçları** *Selver Güler*
13:45 - 14:00	**Kahve Arası / Coffee Break**
14:00 - 16:30	**PIOMI: Beceri Eğitimi** *Selver Güler* *Zerrin Çiğdem*
16:30 - 17:00	**HIPP Sunum**
17:00 - 17:30	**Kursun Değerlendirilmesi Kapanış ve Sertifika Takdimi** *Seda Çağlar* *Zerrin Çiğdem* *Selver Güler*

25 Haziran, Perşembe | Salon F | A Blok Altzemin Katı Seminer Salonu 3

June 25, Thursday | Hall F | Block A, Lower Ground Floor, Seminar Room 3

PEDİATRİK HASTALARDA PERİFERİK VE SANTRAL KATETER YÖNETİMİ KURSU

Kurs Yöneticileri:
Duygu Sönmez Düzkaya, Gülzade Uysal

08:45 - 09:00	**Açılış Konuşmaları** *Duygu Sönmez Düzkaya* *Gülzade Uysal*
09:00 - 09:30	**Çocuğun Gelişimsel Dönemine Göre Kateter Girişimine Hazırlanması** *Gülzade Uysal*
09:30 - 10:00	**Periferik Venöz Katetere Erişim** *Duygu Sönmez Düzkaya*
10:00 - 10:30	**Periferik Venöz Kateter Bakımı ve Çıkarılması** *Seda Çağlar*
10:30 - 10:50	**Kahve Arası / Coffee Break**
10:50 - 11:30	**Periferik Kateter Girişimi İçin Yardımcı Teknikler, Bakım Paketlerinin/ Rehberlerin Kullanımı** *Derya Kılınç*
11:30 - 12:00	**Periferik Kateter İlişkili Komplikasyonların Yönetimi** *Sinem Duymaz*
12:00 - 13:00	**Öğle Yemeği / Lunch**
13:00 - 14:00	**Santral Venöz Katetere Erişim ve Bakımı** *Pınar Taşpınar*
14:00 - 15:00	*** Setler ve Bağlantı Konnektörleri Bakımı ve Değişimi** *** İlaç ve Sıvıların Özellikleri** *Tülay Yakut*
15:00 - 15:20	**Kahve Arası / Coffee Break**
15:20 - 16:00	**Hemodiyafiltrasyon ve Santral Venöz Kateter İlişkili Komplikasyonların Yönetimi** *Tülay Yakut*
16:00 - 16:30	**Kursun Değerlendirilmesi ve Kapanış**

26 Haziran, Cuma | A Blok Zemin Kat Konferans Salonu 1

June 26, Friday | A Block Ground Floor Conference Hall 1

09:00 - 10:00	**From Nurturing Care to Pediatric Practice: Integrating Sleep, Development and Nutrition in Early Childhood** **Oturum Başkanları:** *Elif Özmert, Perran Boran, Bilge Bayraktar* **09:00 - 09:20** **Nurturing Early Development** *Elif Özmert* **09:20 - 09:40** **Reframing Wearly Childhood Sleep Interventionsthough Nurturing Care: The NEST Aproach** *Perran Boran* **09:40 - 10:00** **Nutrition as Nurturing Care: Aupporting Growth, Regulation and Family Wellbeing in Early Childhood** *Bahar Kural*
10:00 – 10:30	**Kahve Arası / Coffee Break**
10:30 - 11:30	**Oturum Başkanları:** *Mehmet Vural, Esra Şevketoğlu* **10:30 - 11:00** **Navigating the Future of Child Health: the EPA-UNEPSA NeoPed Vision for 2050 Toward an Integrated, Life-Course Model of Care** *Massimo Pettoello-Mantovani* **11:00 - 11:30** **Breast is the Best** *Joseph Haddad*
11:30 - 12:30	**Oturum Başkanı:** *Mehmet Vural* **Çocuklarda Soğuk Algınlığında Konforu Artırmak: Ateş, Ağrı ve Öksürüğe Etkili ve Güvenli Çözümle** *Ayper Somer* Opella.
12:30 - 13:30	**Öğle Yemeği / Lunch**

26 Haziran, Cuma | A Blok Zemin Kat Konferans Salonu 1

June 26, Friday | A Block Ground Floor Conference Hall 1

13:30 - 14:30

Oturum Başkanları: *Esin Koç, Yıldız Perk*

13:30 - 13:50
CPD Improves Doctors' Well-being and Patient Care. Increasing CPD Opportunities and Challenges for Health Professionals and Educators in Europe and Internationally
Hilary Hoey

13:50 - 14:10
Allergy, Obesity and not only - The Long-term Effect of Antibiotics
Leyla Namazova Baranova

14:10 - 14:30
Children are not Small Adults
Sir Terence Stephenson

14:30 - 15:30

Oturum Başkanları: *Ömer Erdeve, Ida Giardiono*

14:30 - 14:50
Work-life Challenges for Paediatricians: What Works to Improve Working Lives?
Lady Alison Johns

14:50 - 15:10
Iron Deficiency: A Major Health Burden
Patrick Tounian

15:10 - 15:30
Late Vitamin K Deficiency Bleeding Despite Intramuscular Vitamin K Prophylaxis at Birth: What Should Be Done?
Giuseppe Buonocore

15:30 - 16:00 — **Kahve Arası / Coffee Break**

16:00 - 17:00

Oturum Başkanları: *Zeynep İnce*

16:00 - 16:20
The Instructive Story of Implementation of RSV Prophylaxis in France
Robert Cohen

16:20 - 16:40
Nocturnal Enuresis and Sleep Disorders
László Szabó

16:40 - 17:00
Current Updates in Pediatric Meningococcal Vaccination
Bahar Kural

17:00 - 18:00 — **Açılış**

26 Haziran, Cuma | Salon B | A Blok Zemin Kat Konferans Salonu 2

June 26, Friday | Hall B | A Block Ground Floor Conference Hall 2

Pediatrik Travma Oturumu
Oturum Başkanı: *Mücahit Kapçı, Süleyman Bayraktar, Derya Büyükayhan*

09:00 - 09:20
Pediatrik Travmada TXA: Erişkinin 'Altın Standardı' Çocukta Neden Hâlâ Off-Label? — 2025 Ortak Pozisyon Belgesi ve Kalan Sorular
Nihat Müjdat Hökenek

09:00 - 10:00

09:20 - 09:40
Erişkinin Kuralı Çocuğa Uymaz: Pediatrik C-Spine'da NEXUS'un Sonu, PECARN'ın Doğuşu (Lancet 2024)
Gökhan Eyüpoğlu

09:40 - 10:00
Pediatrik Resüstasyon Pediatrik Arrestte Adrenalin Aralığı Tartışması: <3 dk Daha Fazla ROSC, Daha Az Sağ Kalım mı? — ICU-RESUS Verileri (Crit Care Med 2024)
Ertuğrul Altınbilek

10:00 – 10:30 — **Kahve Arası / Coffee Break**

Yenidoğan Oturumu
Oturum Başkanları: *Aslı Memişoğlu, Nurdan Uraş, Nejat Narlı*

10:30 - 10:50
Altın Saat"ten Eve Dönüşe: İleri Preterm Bakımında Kanıta Dayalı Yol Haritası
Beril Yaşa

10:30 - 11:30

10:50 - 11:10
Perinatal Nöroproteksiyon: Neredeyiz, Nereye Gidiyoruz?
Dilek Yavuzcan Öztürk

11:10 - 11:30
Hassas İzlem, Minimum Girişim: Non-invaziv Takipte Yeni Teknolojik Standartlar
Meliha Aksoy

12:30 - 13:30 — **Öğle Yemeği / Lunch**

26 Haziran, Cuma | Salon B | A Blok Zemin Kat Konferans Salonu 2

June 26, Friday | Hall B | A Block Ground Floor Conference Hall 2

13:30 - 14:30

Pediatrik Havayolu Yönetiminde Multidisipliner Zirve
Oturum Başkanları: *Nurettin Onur Kutlu, Nagehan Aslan, İlke Mungan Akın*

13:30 - 13:40
Üst Havayolu Obstrüksiyonları: KBB Perspektifinden Triaj ve Tanısal Algoritmalar
Begüm Bahar Yılmaz

13:40 - 13:50
Konjenital Havayolu Anomalileri: Tanı ve Yaklaşım
Safiye Giran Örtekin

13:50 - 14:00
Pediatrik Trakeotomi: Endikasyonlar, Güncel Teknikler ve Dekanülasyon Stratejileri
Büşra Ünsal

14:00 - 14:10
Alt Havayolu Taklitçileri: Stridor ile Wheezing ve Bronkomalazinin Ayırıcı Tanısı
Füsun Ünal

14:10 - 14:20
Zor Pediatrik Havayolunda Anestezi Yönetimi: Güvenlik Protokolleri ve Ventilasyon Stratejileri
Şerife Özalp

14:20- 14:30
Postoperatif Kritik Bakım: Kompleks Havayolu Hastalarının Pediatrik Yoğun Bakımda Yönetimi
Mehmet Emin Menentoğlu

14:30 - 15:30

Çocuk Romatoloji Oturumu Çocuk Romatolojide Klinik Karar Verme

Oturum Başkanı: *Rukiye Eker Ömeroğlu, Nuray Aktay Ayaz, Meltem Erol*

14:30 - 14:50
Semptomdan Tanıya: Klinik Akıl Yürütme
Özlem Akgün

14:50 - 15:10
Laboratuvardan Tanıya: Diagnostik Momentum ve Yanılgılar
Şeyda Doğantan

15:10 - 15:30
Kırmızı Bayraklar ve Aciller
Figen Çakmak

26 Haziran, Cuma | Salon B | A Blok Zemin Kat Konferans Salonu 2

June 26, Friday | Hall B | A Block Ground Floor Conference Hall 2

15:30 - 16:00	Kahve Arası / Coffee Break
16:00 - 17:00	**Otitis Media: Pediatrik Hastalarda Multidisipliner Yaklaşımlar** **Oturum Başkanları:** *Özgür Yiğit, Murat Elevli* **16:00 - 16:05** **Açılış Konuşması ve Giriş** *Özgür Yiğit* **16:05 - 16:15** **Otitis Media Sınıflaması ve Patofizyolojisi** *Ozan Tüysüz* **16:15 - 16:25** **Tanı ve Tedavi Yaklaşımları** *Yalçın Alimoğlu* **16:25 - 16:35** **Otitis Media Komplikasyonları ve Yönetimi** *Selin Üstün Bezgin* **16:35 - 16:45** **Otitis Mediada Antimikrobiyal Tedavi ve Direnç Paternleri** *Nevin Hatipoğlu* **16:45 - 16:55** **Otitis Mediada Görüntüleme: Ne Zaman ve Hangi Yöntem Kullanılmalı** *Ercan Ayaz* **16:55 - 17:00** **Tartışma**

26 Haziran, Cuma | Salon H | Fizik Tedavi Hastanesi Konferans Salonu

June 26, Friday | Hall H | Physical Therapy Hospital Conference Hall

09:00 - 10:00

Dünyanın Yükü Küçük Omuzlarda
Oturum Başkanları: *Gülçin Bozkurt, Beyhan Budak*

09:00 - 09:20
Küreselleşmenin Çocuk Sağlığına Etkileri
Ayşegül Şimşek

09:20 - 09:40
Göç ve Çocuk Sağlığı
Sevim Güneş Çalıcıoğlu

09:40 - 10:00
Savaş ve Çocuk
Melek Altun

10:00 – 10:30 — Kahve Arası / Coffee Break

10:30 - 11:30

Pediatri Hemşireliğinde Digital Sağlık Uygulamaları
Oturum Başkanları: *Gülzade Uysal, Melike Yılmaz Akdağ*

10:30 - 10:50
Pediatri Hemşireliğinde Metaverse Uygulamaları
Duygu Sönmez Düzkaya

10:50 - 11:10
Pediatri Hemşireliği ve Yapay Zeka
Ayfer Açıkgöz

11:10 - 11:30
Pediatri Hemşireliğinde İnovasyon ve Bilişimin Önemi
Nazife Altınel Dalmış

12:30 - 13:30 — Öğle Yemeği / Lunch

13:30 - 14:30

Yenidoğan Oturumu
Oturum Başkanları: *Serap Balcı, Hazel Koçan*

13:30 - 13:50
Non İnvaziv Monitörizasyon ve Hemşirelik İzlemi
Melek Selalmaz

13:50 - 14:10
Yenidoğan Yoğun Bakım Ünitesinde İletişim: Zor Ailelerle Görüşme
Fatma Rümeysa Erdoğan

14:10 - 14:30
Digital Hemşirelik ve Alarm Yönetimi
Nuray Dilek

26 Haziran, Cuma | Salon H | Fizik Tedavi Hastanesi Konferans Salonu

June 26, Friday | Hall H | Physical Therapy Hospital Conference Hall

Diyabet Yönetiminde Güncel Yaklaşımlar
Oturum Başkanları: *Sevim Savaşer, Rahime Koç*

14:30 - 14:50
Tanıdan Takibe
Çağrı Çövener Özçelik

14:30 - 15:30

14:50 - 15:10
Teknoloji ile Diyabet Yönetimi
Melike Doğan

15:10 - 15:30
Diyabet Yönetiminde Aile Eğitimi
Sevdenur Yıldız

15:30 - 16:00 — **Kahve Arası / Coffee Break**

Acilde Kritik Dakikalar
Oturum Başkanları: *Sevil İnal, Asuman Karakaya*

16:00 - 16:20
Ateşli Çocuk
Rabiye Güney

16:00 - 17:00

16:20 - 16:40
Solunum Acilleri
Bahar Nur Akdoğan

16:40 - 17:00
Aile ve Çocuğa Yaklaşım: Kriz Yönetimi
Eda Aktaş

27 Haziran, Cumartesi | Salon A | A Blok Zemin Kat Konferans Salonu 1

June 27, Saturday | Hall A | A Block Ground Floor Conference Hall 1

09:30 - 10:30

Makrofaj Aktivasyon Sendromu Multidisipliner Oturum
Oturum Başkanları: *Esra Şevketoğlu, Hilmi Apak*

09:30 - 09:50
Hematoloji Gözüyle Makrofaj Aktivasyon Sendromu
Arzu Akçay

09:50 - 10:10
Romatoloji Gözüyle Makrofaj Aktivasyon Sendromu
Figen Çakmak

10:10 - 10:30
Yoğun Bakım Gözüyle Makrofaj Aktivasyon Sendromu
Mehmet Emin Menentoğlu

10:30 - 11:00 — **Kahve Arası / Coffee Break**

11:00 - 12:00

Çocuk Hastada Ne Zaman Ortopedi Konsültasyonu İstenmeli?
Oturum Başkanları: *Mehmet Ali Talmaç, Egemen Ayhan*

11:00 - 11:10
Yenidoğan Brakial Pleksus Felci
Kadir Çevik

11:10 - 11:20
Aksayan Çocuk
İlyas Kar

11:20 - 11:30
Yürüme Bozuklukları (İçe Basma – Dışa Basma)
Sema Ertan Birsel

11:30 - 11:40
O Bacak – X Bacak
Melih Civan

11:40 - 11:50
Kas-İskelet Sistemi Tümörleri
Serdar Toy

11:50 - 12:00
Tartışma

12:00 - 13:00

Pediatride Mikrobiyotaya Bütüncük Yaklaşım: Yaşam Boyu Sağlık İçin Yönetim Stratejileri
Adem Karbuz

Opella.

13:00 - 14:00 — **Öğle Yemeği / Lunch**

27 Haziran, Cumartesi | Salon A | A Blok Zemin Kat Konferans Salonu 1

June 27, Saturday | Hall A | A Block Ground Floor Conference Hall 1

Serebral Palside Multidisipliner Yaklaşım
Oturum Başkanları: *Egemen Ayhan, Cengiz Havalı, Şahin Hamilçıkan*

14:00 - 14:15
Serebral Palsiyi Anlamak
Özge Kucur

14:15 - 14:30
Serebral Palside Omurga: Deformite ve Denge
Mehmet Ali Talmaç

14:00 - 15:00

14:30 - 14:45
Üst Ekstremitede Fonksiyonel Rekonstrüksiyon
Egemen Ayhan

14:45 - 15:00
Alt Ekstremitede Fonksiyon ve Yürüyüş
Ali Şeker

Çocuk Nöroloji Oturumu
İnfantil Epileptik Ensefalopatiler: Klinik ve Genetik Perspektiften Tanı, Yönetim ve Güncel Tedavi Stratejileri
Oturum Başkanları: *Pınar Arıcan, Alper Gezdirici*

15:00 - 15:20
İnfantil Epileptik Ensefalopatilerde Klinik Tanı: Klinik İpuçları ve Merkez Deneyimimiz
Zeynep Öz Dağdelen

15:00 - 16:00

15:20 - 15:40
İnfantil Epileptik Ensefalopatilere Güncel Genetik Yaklaşım ve Tanısal Algoritmalar
Esma Nur Konur Aktaş

15:40 - 16:00
İnfantil Epileptik Ensefalopatilerde Güncel ve Hedefe Yönelik Tedavi
Özge Kucur

27 Haziran, Cumartesi | Salon A | A Blok Zemin Kat Konferans Salonu 1

June 27, Saturday | Hall A | A Block Ground Floor Conference Hall 1

Sağlık Hizmeti İlişkili Enfeksiyonlar
Oturum Başkanları: *Sevliya Öcal Demir, Burcu Bursal*

16:00 - 16:20
Ventilatör İlişkili Pnömoni ve Kateter İlişkili İdrar Yolu Enfeksiyonu Önlem Paketi
Canan Caymaz

16:00 - 17:00

16:20 - 16:40
Santral Kateter İlişkili Kan Dolaşım Enfeksiyonu ve Cerrahi Alan Enfeksiyonu Önlem Paketi
Melis Deniz

16:40 - 17:00
El Hijyeni, İzolasyon Önlemleri ve Yoğun Bakım Ünitesinde Yapılması Önerilen Taramalar
Gülşen Akkoç

17:00 - 17:30 — **Kahve Arası / Coffee Break**

Pediatri Pratiğinde Otizm Spektrum Bozukluğu
Oturum Başkanı: *Yaşar Tanır*

17:30 - 17:50
Otizm Spektrum Bozukluğu: Dünyada ve Türkiye'de Değişen Tablo
Abas Haşimoğlu

17:30 - 18:30

17:50 - 18:10
Otizm Spektrum Bozukluğu Tanılı Çocukta Acil Psikiyatrik Durumlara Yaklaşım
Fırat Öz

18:10 - 18:30
Otizm Spektrum Bozukluğu Tanılı Çocuklarda Pediatrik Eş Tanılar ve Yönetim
Yasin Çalışkan

27 Haziran, Cumartesi | Salon B | A Blok Altzemin Katı Konferans Salonu 2

June 27, Saturday | Hall B | A Block Lower Ground Floor Conference Hall 2

Çocuk Sağlığına Güncel Yaklaşım Oturumu
Oturum Başkanı: *Melike Ersoy, Esra Deniz Papatya Çakır, Evrim Kıray Baş*

09:30 - 10:30	**09:30 - 09:45** **Beslenmenin Evrimi** *Hasan Önal* **09:45 - 10:00** **Beslenme Bozukluklarına Bağlı Anemiler** *Ali Ayçiçek* **10:00 - 10:15** **Okul Çağında Sağlığın İzlenmesi: Taramalar ve Bağışıklama** *Ayşe Şahin* **10:15 - 10:30** **Küresel Çocuk Sağlığında Çevresel Sorunlar** *Şeymanur Uçum Ağcakoyun*
10:30 - 11:00	**Kahve Arası / Coffee Break**
11:00 - 12:00	**Pediatrik Endokrinolojide Tanısal ve Klinik Yönetim Stratejileri** **Oturum Başkanları:** *Aydilek Dağdeviren Çakır, Esra Deniz Papatya Çakır* **11:00 - 11:20** **Konjenital Hipotiroidi: Yenidoğan Taramasından Uzun Dönem İzleme** *Emel Hatun Aytaç Kaplan* **11:20 - 11:40** **Kısa Boylu Çocuk: Tanı Algoritmaları ve Klinik İpuçları** *İlknur Kurt* **11:40 - 12:00** **Erken Puberte: Tanısal Süreç ve Yönetim İlkeleri** *Zekiye Küpçü*
13:00 - 14:00	**Öğle Yemeği / Lunch**
14:00 - 15:00	**Pediatrik Nöroşirürji'de Şüpheden Tanıya Cerrahi Patolojileri** **Oturum Başkanları:** *Bekir Tuğcu, Adnan Dağçınar* **14:00 - 14:20** **Spinal Disrafizm ve Cilt Bulguları** *Nejat Akalan* **14:20 - 14:40** **Etyolojisine göre Hidrosefali Tanı, Takip ve Tedavi** *Burcu Göker* **14:40 - 15:00** **Kafa Şekil Bozukluklarında Güncel Yaklaşım** *Serdar Onur Aydın*

27 Haziran, Cumartesi | Salon B | A Blok Altzemin Katı Konferans Salonu 2

June 27, Saturday | Hall B | A Block Lower Ground Floor Conference Hall 2

Çocuk Cerrahisi Oturumu
Oturum Başkanları: *Fatma Saraç, Birgül Karaaslan, Tufan Kutlu*

15:00 - 15:20
Son 20 Yılda NEK Yönetiminde Değişen Yaklaşımlar
Mehmet Yazıcı

15:00 - 16:00

15:20 - 15:40
NEK Sonrası Uzun Dönem Psikososyal ve Nörogelişimsel Sorunlar
Ahmet Baş

15:40 - 16:00
NEK Tedavisinde Rejeneratif Yaklaşımlar ve Gelecek Perspektifi
Tuba Erdem Şit

Çocuk Alerji ve İmmunolojide Tanı ve Hasta Yönetimi
Oturum Başkanları: *Çiğdem Aydoğmuş, Pınar Gökmirza*

16:00 - 16:15
Deri Bariyerinin Korunmasında Gelecek Nesil Emolyenlerin Yeri
Hikmet Tekin Nacaroğlu

16:15 - 16:30
Sık Hastalanan Çocuk
İlknur Kökçü Karadağ

16:00 - 17:00

16:30 - 16:45
Ne Zaman Astım Düşünelim Nasıl Yönetelim
Burçin Beken

16:45 - 17:00
Anaflakside Tanı ve Tedavi
Sevgi Sipahi Çimen

17:00 - 17:30 — **Kahve Arası / Coffee Break**

Çocuk Kardiyoloji ve Kalp Damar Cerrahisi Oturumu
Oturum Başkanları: *Alper Güzeltaş, Ali Can Hatemi, Tayfun Uçar*

17:30 - 17:50
Fetüsten Yenidoğana Kritik Konjenital Kalp Hastalıklarının Erken Tanısı
Erkut Öztürk

17:30 - 18:30

17:50 - 18:10
Konjenital Kalp Hastalıklarında Girişimsel Anjiografik Çözümler
Selman Gökalp

18:10 - 18:30
Yenidoğan ve İnfant Kalp Cerrahisinde Güncel Stratejiler
Servet Ergün

27 Haziran, Cumartesi | Salon C | H Blok Fizik Tedavi Hastanesi Konferans Salonu

June 27, Saturday | Hall C | H Block Physical Therapy Hospital Conference Hall

Bağışıklamada Güncel Yaklaşımlar
Oturum Başkanı: *Zerrin Çiğdem, Eda Çiftci Karan*

09:30 - 09:50
Çocukluk Çağı Aşılarında Güncel Durum
Bengüsu Aydın Karakaş

09:30 - 10:30

09:50 - 10:10
Aşı Karşıtlığı: Sessiz Salgın mı?
Özge Karakaya Suzan

10:10 - 10:30
Aşı Karşıtlığı ile Mücadele Çözüm Önerileri
Zeynem Yıldırım Balkan

10:30 - 11:00 — **Kahve Arası / Coffee Break**

Çocuk Yoğun Bakım Ünitelerinde İzlem, Destek ve Aile
Oturum Başkanları: *Sema Kuğuoğlu, Sema Şimşek*

11:00 - 11:20
Çocuk Yoğun Bakım Ünitelerinde Hasta Yönetimi
Tülay Yakut

11:00 - 12:00

11:20 - 11:40
Non-İnvaziv Ventilasyon ve Yüksek Akım Oksijen Tedavileri
Hamide İlknur Çulcuoğlu

11:40 - 12:00
Aile Merkezli Bakım
Pınar Sarıyar

27 Haziran, Cumartesi | Salon C | H Blok Fizik Tedavi Hastanesi Konferans Salonu

June 27, Saturday | Hall C | H Block Physical Therapy Hospital Conference Hall

13:00 - 14:00	Öğle Yemeği / Lunch
14:00 - 15:00	**Hematoloji-Onkoloji Hastalarında Semptom Yönetimi** **Oturum Başkanları:** *Birsen Mutlu, Elif Marangoz* **14:00 - 14:20** **Ağrı ve Yorgunluk Yönetimi** *Duygu Demir* **14:20 - 14:40** **Bulantı ve Kusma Yönetimi** *Osman Gökdemir* **14:40 - 15:00** **Oral Mukozit ve Ağız Bakımı** *Songül Gürses*
15:00 - 16:00	**Sessiz Çığlıklar: Görünmeyeni Görmek** **Oturum Başkanları:** *Suzan Yıldız, Rabia Acar Gümüşlü* **15:00 - 15:20** **Çocuk İstismarında Tanıdan Adli Sürece : Klinik ve Hukuki Perspektif** *Nurgül Bozkurt* **15:20 - 15:40** **Travma Sonrası Psikolojik Etkiler ve Kanıta Dayalı Müdahaleler** *Rahime Atakoğlu Yılmaz* **15:40 - 16:00** **Çocuğun Çevresindeki Sistemi İyileştirmek: İstismara Aile Merkezli Yaklaşım** *Şuheda Arslan Çolak*
16:00 - 16:30	**Oturum Başkanları:** *Esra Şevketoğlu* **Pediatri'de Akılcı İlaç Kullanımı** *Şeymanur Uçum Ağacakoyun*
17:00 - 17:30	Kahve Arası / Coffee Break

SÖZLÜ BİLDİRİLER

1st International ÇAM & SAKURA Pediatric Days
&
3rd EPA/UNEPSA (European Paediatric Association) Hot Topics Europaediatrics Joint Meeting
1st International ÇAM & SAKURA Pediatric Nursing Days

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Başakşehir ÇAM & SAKURA City Hospital Conference Halls
Istanbul / Türkiye

	HALL D A Blok Altzemin Katı Seminer Salonu 1	HALL E A Blok Altzemin Katı Seminer Salonu 2	HALL F A Blok Altzemin Katı Seminer Salonu 3	HALL G A Blok Altzemin Katı Seminer Salonu 4	HALL A A Blok Zemin Kat Konferans Salonu 1	HALL B A Blok Altzemin Katı Konferans Salonu 2	HALL C H Blok Fizik Tedavi Hastanesi Konferans Salonu
08:00 - 09:00	Oturum Başkanları: Zeynem Yıldırım Balkan, Büşra Ekinci Sözlü Sunum Oturumu 1 Nursing	Oturum Başkanları: Mehmet Emin Menentoğlu, Mustafa Oğur Sözlü Sunum Oturumu 2	Oturum Başkanları: Nihal Akçay, Mustafa Çolak Sözlü Sunum Oturumu 3	Oturum Başkanları: Süheyla Gümüş, Gamze Gubse Yaldız Sapan, Nihat Müjdat Hökenek Sözlü Sunum Oturumu 4	Oturum Başkanları: Sibel Akpınar Tekgündüz, Saide Ertürk Sözlü Bildiri Oturumu 5	Oturum Başkanları: Derya Büyükkayhan, Turan Güzel Sözlü Bildiri Oturumu 6	Oturum Başkanları: Behice Ekici, Sevim Güneş Çalıcıoğlu Sözlü Bildiri Oturumu 7 Nursing
09:00 - 10:00	Oturum Başkanları: Ayfer Açıkgöz, Kübra Ergün Sözlü Sunum Oturumu 8 Nursing	Oturum Başkanları: Kahraman Yakut, İlke Mungan Akın Sözlü Sunum Oturumu 9	Oturum Başkanları: Emel Hatun Aytaç Kaplan, Serkan Arslan Sözlü Sunum Oturumu 10	Oturum Başkanları: Rabia Kuş Bakır, Yaşar Tanır Sözlü Sunum Oturumu 11			
10:00 - 10:30	Kahve Arası / Coffee Break						
10:30 - 11:30	Oturum Başkanları: Bahar Nur Akdoğan, Eda Çiftci Karan Sözlü Sunum Oturumu 12 Nursing	Oturum Başkanları: Ayşe Sandıkkaya, Yaşar Tanır Sözlü Sunum Oturumu 13	Oturum Başkanları: Elif Çoban, Ersin Ulu Sözlü Sunum Oturumu 14	Oturum Başkanları: Füsun Ünal, Evrim Kıray Baş Sözlü Sunum Oturumu 15			
11:30 - 12:30	Oturum Başkanları: Hacer Çetin, Sinem Duymaz Sözlü Sunum Oturumu 16 Nursing	Oturum Başkanları: Serdar Bozlak, Hülya Baykız Sözlü Sunum Oturumu 17	Oturum Başkanları: Özge Kucur, Pınar Arıcan Sözlü Sunum Oturumu 18	Oturum Başkanları: Cengiz Havalı, Şeyda Doğantan Sözlü Sunum Oturumu 19			
12:30 - 13:30	Öğle Yemeği / Lunch			Oturum Başkanları: Asuman Gedikbaşı, Muhammed Talha Karadoğan Sözlü Sunum Oturumu 20			
13:30 - 14:30	Oturum Başkanları: Rabiye Güney, Tuğçe Asil Sözlü Sunum Oturumu 21 Nursing	Oturum Başkanları: Yasemin Özgen, Esra Arslantaş Sözlü Sunum Oturumu 22	Oturum Başkanları: Özge Kaba, Şeymanur Uçum Ağcakoyun Sözlü Sunum Oturumu 23	Oturum Başkanları: Esin Yıldız Aldemir, Fatma Yeşil Dilber Sözlü Sunum Oturumu 24			
14:30 - 15:30	Oturum Başkanları: Burcu Yaman Güçlü, Muhammet Hamza Halil Toprak Sözlü Sunum Oturumu 25	Oturum Başkanları: Hasan Önal, Ahmet Sert Sözlü Sunum Oturumu 26	Oturum Başkanları: Selin Üstün Bezgin, Ayşe Pervanlar Kakışım Sözlü Sunum Oturumu 27	Oturum Başkanları: Onur Dağdeviren, Begüm Bahar Yılmaz Sözlü Sunum Oturumu 28			
15:30 - 16:30	Oturum Başkanları: Zafer Orhan, İlyas Kar Sözlü Sunum Oturumu 29	Oturum Başkanları: Hatice Dilara Karakaş, Birgül Karaaslan Sözlü Sunum Oturumu 30	Oturum Başkanları: Murat Tanyıldız, Burcu Bursal Sözlü Sunum Oturumu 31	Oturum Başkanları: Zeynep Hazıroğlu Ökmenk, Begüm Şirin Sözlü Sunum Oturumu 32			

Sözlü Bildiri Oturumu 1 – Nursing

OP - 001
QUANTUM TOUCH FOR REDUCING TRANSFER ANXIETY IN PEDIATRIC EMERGENCY ADMISSIONS: A RANDOMIZED CONTROLLED TRIAL
Özlem İbrahimoğlu[1], Özlem Akarsu Akkaya[1], Eda Polat[1], Derya Kilinç[3], Özlem Akkaya[2]

OP - 002
INTERVENTIONS TO PREVENT CRIME AND VIOLENCE IN CHILDREN: A SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS
Esra Ekmekçi[1], Rabiye Güney[1], Nursan Çınar[2]

OP - 003
THE EFFECT OF TOY USE DURING INHALER THERAPY ON ANXIETY AND EMOTIONAL STATE IN CHILDREN
Ayşe Böke[1], Birsen Mutlu[2]

OP - 004
EFFECT OF A STRUCTURED EDUCATIONAL INTERVENTION ON HOSPITAL PERCEPTION IN HEALTHY CHILDREN AGED 8–10
Esra Şapaloğlu Dövenci[1], Behice Ekici[2]

OP - 005
THE EFFECT OF THE PIVC-SAFE CARE BUNDLE ON INFILTRATION, PHLEBITIS, AND CATHETER SUCCESS IN THE PEDIATRIC EMERGENCY DEPARTMENT
Gizem Çolak[1], Seda Çağlar[1]

OP - 006
EVALUATION OF HEALTH LITERACY LEVELS AND ASSOCİATED DETERMINANTS AMONG MOTHERS OF PEDIATRIC INPATIENTS
Dilek Beytut[1], Sevil Altuntaş[2]

OP - 007
BALANCING CAREER AND PARENTHOOD: FACTORS ASSOCIATED WITH FERTILITY DESIRE AMONG WOMEN HEALTHCARE PROFESSIONALS
Engin Aydın[1], Arzu Akdemir[2], Dilek İstengir[3], Dilek Bingöl Aydın[4]

OP - 008
EFFECT OF VIRTUAL REALITY AND DISTRACTION CARDS DURING INHALATION THERAPY
Tuğba Karakuş Türker[1], Tuğba Karakaya[2]

Sözlü Bildiri Oturumu 2

OP - 009

FFP-RELATED ANAPHYLAXIS DURING THERAPEUTIC PLASMA EXCHANGE IN PALF

Busranur Tirtir Yilmaz[1], Mehmet Emin Menentoglu[2], Süheyla Piyade[2], Pinar Yamac Dilaver[3], Esra Sevketoglu[2]

OP - 010

COMBINED CRRT AND THERAPEUTIC PLASMAPHERESIS IN SEVERE PEDIATRIC CARBAMAZEPINE POISONING

Raif Kaan Bas[1]

OP - 011

SINGLE HIGH-DOSE VITAMIN D AMPOULE CAUSING INFANT NEPHROCALCINOSIS

Raif Kaan Bas[1]

OP - 012

EXPERIENCE WITH INTRAVENOUS THEOPHYLLINE IN THE PEDIATRIC INTENSIVE CARE UNIT FOR SEVERE RESPIRATORY FAILURE

Semra Nasibova[1], Emek Akbıyık[2], Ebru Azapağası[1], Mutlu Uysal Yazıcı[1]

OP - 013

HYPERINFLAMMATORY SYNDROME PRESENTING WITH ACUTE ABDOMEN, PANCREATITIS, AND ATRIAL FIBRILLATION: A CASE REPORT

Nermine Durmaz[1], Mehmet Emin Menentoğlu[2], Öykü Korubeyi Bezci[2], Mehmet Turan Başünlü[3], Figen Çakmak[4], Esra Şevketoğlu[2]

OP - 014

IATROGENIC ESOPHAGEAL PERFORATION IN AN EXTREMELY LOW BIRTH WEIGHT PRETERM NEONATE

Banu Adıgüzel[1], Meliha Aksoy[1], Nurdan Uraş[1]

OP - 015

DIFFUSION MRI EVALUATION OF RECURRENT PEDIATRIC SEIZURES IN EMERGENCY

Ahmet Kerem İmrek[1]

OP - 016

EVALUATION OF THE NEED FOR REPEAT BRAIN COMPUTED TOMOGRAPHY AND ITS IMPACT ON CLINICAL FOLLOW-UP IN PATIENTS AGED 1 MONTH TO 18 YEARS PRESENTING TO THE PEDIATRIC EMERGENCY DEPARTMENT WITH MILD HEAD TRAUMA.

Fatmanur Kazaz[1], Yüksel Bıcılıoğlu[2]

Sözlü Bildiri Oturumu 3

OP - 017
FACTORS AFFECTING MORTALITY IN THE PEDIATRIC CARDIAC INTENSIVE CARE UNIT
Emine Hekim Yılmaz[1], Ali Ertan Ulucan[2]

OP - 018
PEDIATRIC BRAIN DEATH: EPIDEMIOLOGY AND OUTCOMES FROM A SINGLE CENTER
Ayberk Özkavaklı[2], Ayşe Aşık[1], Muhterem Duyu[1]

OP - 019
SYMPTOMATIC NEONATAL POLYCYTHEMIA: CLINICAL PROFILE AND SHORT-TERM NICU COURSE
Nazan Neslihan Dogan Kocabiyik[1], Gizem Aslan[2], Ozgul Salihoglu[1]

OP - 020
LIVER ENZYME CHANGES DURING PHOTOTHERAPY IN NEONATAL HYPERBILIRUBINEMIA: A SINGLE-CENTER NEONATAL INTENSIVE CARE UNIT EXPERIENCE
Esra Ecem Erol[1], Ayşe Sena Delil[1], Nazan Neslihan Doğan Kocabıyık[1], Özgül Salihoğlu[1]

OP - 021
EVALUATION OF HOSPITALIZATIONS AND TREATMENT COSTS OF PATIENTS DIAGNOSED WITH ROTAVIRUS GASTROENTERITIS BETWEEN ONE MONTH AND FIVE YEARS OF AGE
Meltem Günalay Taş[1], İlknur Fidancı[1], Medine Ayşin Taşar[1]

OP - 022
EARLY NEONATAL OUTCOMES IN ADOLESCENT PREGNANCIES
Meltem Bor[1], Beril Yaşa[2], Leyla Bilgin[2]

OP - 023
NEONATAL OUTCOMES FOLLOWING PROLONGED RUPTURE OF MEMBRANES
Şenay Akcan[1], Nurdan Uraş[1]

OP - 024
BLOOD GAS–ECHOCARDIOGRAPHY CORRELATION IN EARLY POSTNATAL RESPIRATORY INSTABILITY
Esra Ecem Erol[1], Nazan Neslihan Doğan Kocabıyık[1], Ayşe Kaplan Sancak[1]

Sözlü Bildiri Oturumu 4

OP - 025

EFFECT OF DELIVERY MODE ON MORTALITY AND MORBIDITY IN PRETERMS UNDER 32 WEEKS

Kubilay Pıçaklar[1], Emre Dincer[2]

OP - 026

PREDICTIVE PERFORMANCE OF THE RSIG SCORE FOR INTENSIVE CARE UNIT ADMISSION AND TRANSFUSION REQUIREMENT IN PEDIATRIC TRAUMA PATIENTS

Güleser Akpınar[1], Mehmet Koşargelir[1], Abdullah Yaser Güney[1], Amine Eslem Başıbüyük[1], Ahmet Sırrı Yılmaz[1], Arzu Köse[1], Selmani Doğan[1]

OP - 027

ANTIMICROBIAL RESISTANCE PATTERNS AND CLINICAL OUTCOMES IN GRAM-NEGATIVE EARLY-ONSET NEONATAL SEPSIS

Hatice Turgut[1], Ramazan Özdemir[1]

OP - 028

DIAGNOSTIC CHALLENGE, IMMUNOMODULATORY TREATMENT PATTERNS, AND OUTCOMES BEYOND MORTALITY IN PEDIATRIC HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS

Zeynep Kemer Aktas[1], Alper Koker[2], Funda Tayfun Kupesiz[3], Nazan Ulgen Tekerek[2], Elif Guler[3], Alphan Kupesiz[3], Elif Comak[4], Gulsah Kaya Aksoy[4], Murat Erdal[2], Mustafa Koyun[4], Sema Akman[4], Tugce Tural Kara[5], Oguz Dursun[2]

OP - 029

INCIDENCE, ETIOLOGY AND RISK FACTORS OF RESPIRATORY DISTRESS IN TERM NEONATES: A 10-YEAR, SINGLE-CENTER EXPERIENCE

Şeyma İrem Afacan[2], Evrim Kıray Baş[1], Ali Bülbül[1], Ebru Türkoğlu Ünal[1], Alper Divarcı[1], Hasan Avşar[1], Sinan Uslu[1], Umut Zübarioğlu[1]

OP - 030

PREDICTING FACTORS FROM THE FIRST WEEK OF LIFE FOR SEVERE BPD DEVELOPMENT IN EXTREME PREMATURE INFANTS

Meryem Güzel Kaya[1], Burak Bozkurt[1], Ömer Güran[1], İlke Mungan Akın[1]

OP - 031

REGIONAL PULMONARY AND CEREBRAL OXYGENATION IN BABIES WITH TRANSIENT TACHYPNEA OF THE NEWBORN: ASSOCIATIONS WITH LUNG ULTRASOUND SEVERITY AND PULMONARY HEMODYNAMICS

Merve Kurtbeyoğlu Çaki[1], Nur Aycan[1], Serap Karaman[1], Sercan Özkaçmaz[2]

OP - 032

EXAGGERATED EXTRAUTERINE GROWTH RESTRICTION IN VERY LOW BIRTH WEIGHT INFANTS WITH SUSPECTED COW'S MILK PROTEIN ALLERGY

Burak Bozkurt[1], Meryem Güzel Kaya[1], Ferhat Durup[2], Özlem Şahin[1], İlke Mungan Akın[1]

Sözlü Bildiri Oturumu 5

OP - 033

COMPARATIVE ANALYSIS OF PRISM-III, PELOD-2, AND PHOENIX SEPSIS SCORES IN CRITICALLY ILL CHILDREN WITH CONFIRMED SEPSIS DIAGNOSES

Tuğba Söyler Kılıç[1], Gürkan Atay[1], Seher Erdoğan[1]

OP - 034

ASSOCIATION BETWEEN SHIFT FREQUENCY AND DYSBIOSIS-RELATED SYMPTOMS AMONG EMERGENCY DEPARTMENT PERSONNEL WORKING IN ROTATING SHIFTS

Engin Ertek[1]

OP - 035

TRANSCOBALAMIN II DEFICIENCY IN AN ADOLESCENT: DEEP PANCYTOPENIA DUE TO TREATMENT NON-COMPLIANCE AND LITERATURE REVIEW

Özgü Hançerli[1], Fatma Aslan[2]

OP - 036

BUDGERIGAR-INDUCED HYPERSENSITIVITY PNEUMONITIS MISDIAGNOSED AS ASTHMA: A CASE REPORT

Nesrin Havare[1], Gülay Bilgin[1], Sinem Can Oksay[1], Saniye Girit[1]

OP - 037

DIFFUSE PULMONARY ARTERIOVENOUS MALFORMATIONS IN PEDIATRIC HEREDITARY HEMORRHAGIC TELANGIECTASIA

Nesrin Havare[1], Gülay Bilgin[1], Sinem Can Oksay[1], Saniye Girit[1]

OP - 039

THE EFFECTIVENESS OF PARTIAL SPLENIC EMBOLIZATION IN HYPERSPLENISM AND VARICEAL BLEEDING IN CHILDREN

Fırat Kaya[1], Pınar Yamaç Dilaver[1], Erkan Akkuş[1], ÖZGÜR KILIÇKESMEZ[2], Günsel Kutluk[1]

OP - 040

GASTROINTESTINAL-RENAL INVOLVEMENT IN IGA VASCULITIS: THREE CASES

Ege Eruçar[1], Zeynep Karayıldız[1], Betül Beyza Özbal[2], Turan Güzel[3], Figen Çakmak[3], Şeyda Doğantan[3], Sevgi Yavuz[4]

Sözlü Bildiri Oturumu 6

OP - 041

CLINICAL RISK FACTORS FOR PROLONGED HOSPITAL STAY, REINTUBATION REQUIREMENT, AND VENTILATOR DEPENDENCY IN NEONATES UNDERGOING ARTERIAL SWITCH OPERATION

Erkut Ozturk[1], Ahmet Saki Oğuz[1], Demet Kangel[1]

OP - 042

THE CALLY SCORE MAY BE ASSOCIATED WITH DISEASE SEVERITY AND MALNUTRITION IN CHILDREN WITH CHRONIC LIVER FAILURE

Hasret Ayyıldız Civan[1]

OP - 043

FROM SKIN TO SIGHT: OCULAR ASSOCIATIONS OF CUTANEOUS CAPILLARY HEMANGIOMAS IN PEDIATRIC PATIENTS

Tülin Öğreden[1], Yaren Nur Demir[1]

OP - 044

LOW-DOSE CARDIAC CTA IN MAPCA MAPPING: AGREEMENT ANALYSIS WITH CATHETER ANGIOGRAPHY

Özgür Genç[1], İsmail Balaban[2]

OP - 045

DEVELOPMENT AND VALIDATION OF A PREDICTIVE MODEL FOR ACUTE KIDNEY INJURY IN NEONATES UNDERGOING ARTERIAL SWITCH OPERATION

Demet Kangel[1], Erkut Ozturk[1]

OP - 046

AIRWAY COMPLICATIONS IN PEDIATRIC PATIENTS UNDERGOING AORTIC ARCH SURGERY FOR CONGENITAL HEART DISEASE

Erkut Ozturk[1], Burcu Çevlik[1], Ahmet Saki Oğuz[1]

OP - 047

MATERNAL AND NEONATAL RISKS ASSOCIATED WITH ADOLESCENT PREGNANCY: A SINGLE- TERTIARY CENTER STUDY

Nihal Akıncı[1], Nihan Uygur Külcü[1], Güner Karatekin[2]

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OP - 001

QUANTUM TOUCH FOR REDUCING TRANSFER ANXIETY IN PEDIATRIC EMERGENCY ADMISSIONS: A RANDOMIZED CONTROLLED TRIAL

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Aim: This randomized controlled trial aimed to evaluate the effectiveness of Quantum Touch in reducing transfer anxiety among children and their parents during admission from the pediatric emergency department to inpatient units.

Material & Method: A single-blind randomized controlled trial was conducted with 60 children aged 5–10 years and their parents. Participants were randomly assigned to an intervention group (n=30) or a control group (n=30). Data were collected using the Information Form, Children's Anxiety Meter-State (CAM-S), Children's Fear Scale (CFS), Visual Analog Scale (VAS), and the State-Trait Anxiety Inventory (STAI). Children in the intervention group received a three-minute Quantum Touch application before transfer to the inpatient unit, while the control group received routine transfer-related information. Data were analyzed using independent samples t-tests, paired samples t-tests, and chi-square tests.

Results: No significant differences were found between groups regarding children's anxiety and pain levels before the intervention ($p > 0.05$). Following the intervention, children in the Quantum Touch group demonstrated significantly lower anxiety, fear, and pain scores compared with those in the control group ($p < 0.05$). Within-group analyses showed significant reductions in anxiety, fear, and pain among children receiving Quantum Touch ($p < 0.001$), whereas only modest improvements were observed in the control group. Parents in the intervention group also experienced significant reductions in both state and trait anxiety levels compared with parents in the control group ($p < 0.001$).

Conclusion: Quantum Touch appears to be an effective complementary intervention for reducing transfer-related anxiety, fear, and pain in children during the transition from the emergency department to inpatient units. The intervention also decreases parental anxiety and supports family-centered pediatric care. Quantum Touch may be considered a safe, non-invasive, and practical nursing intervention for pediatric clinical settings. The findings presented in this abstract are based on a study previously published in the Journal of Pediatric Nursing (2025;85:404–411).

Keywords: Anxiety Emergency, Fear, Hospitalization, Pain, Pediatric nursing

OP - 002

INTERVENTIONS TO PREVENT CRIME AND VIOLENCE IN CHILDREN: A SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS

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Aim: The frequency of criminal acts and violence among children and young people is increasing, and it is an important issue for public health due to the harm it causes on their peers and society. In UNICEF's 2025 report, it is reported that there are 259 thousand detained children between the ages of 5-17 in the world. School, family, and community-based interventions are used to reduce crime and violence. The aim of this systematic review is to evaluate the effectiveness of interventions to prevent crime and violence in children/adolescents through randomized controlled studies published between 2015 and 2025.

Material & Method: Articles between 2015 and 2025 were scanned using English keywords in Scopus, PubMed and CINAHL search engines. The articles were evaluated by two independent researchers. A total of 2576 articles were reached, including PubMed: 701, CINAHL: 394, Scopus: 1481. 32 of 153 articles whose topics were suitable for the research topic were included in the research.

Results: A total of 32 studies that met the criteria for inclusion in this systematic review examined crime and violence prevention interventions classified into five categories: school, family, community psychosocial/individual, and hospital-based. In most studies, findings have generally revealed that interventions are effective in preventing crime and violence. Among the studies examined, school-based programs were the most frequently used type of intervention, but the content of the intervention programs included Chinese martial arts practices, mentoring practices, practices containing interactive games and activities, drama practices and workshops.

Conclusion: Interventions to prevent crime and violence in children and adolescents generally produce positive results. These findings are important for the development and dissemination of evidence-based practices to prevent children from being involved in violence and crime, especially during childhood and adolescence.

Keywords: systematic review, crime, violence, children, preventation

OP - 003

THE EFFECT OF TOY USE DURING INHALER THERAPY ON ANXIETY AND EMOTIONAL STATE IN CHILDREN

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Aim: This randomized controlled experimental study aimed to evaluate the impact of using a familiar toy (Kral Şakir) during inhaler therapy on the anxiety levels and emotional states of children in a pediatric emergency department.

Material & Method: The study population comprised 72 children aged 4–6 years who were admitted to a training and research hospital between November 2024 and March 2025. Participants were randomly assigned to the experimental (n=36) or control group (n=36). The inclusion criteria were age-appropriate cognitive development, oxygen saturation of ≥ 95 %, and no prior invasive procedures during the visit. Institutional and ethical approvals were obtained for this study. While the control group received standard care, the experimental group engaged in a procedure where inhaler therapy was simultaneously "administered" to a toy. Data were collected using the Children's Emotional Manifestation Scale (CEMS) and the Children's Anxiety Scale-State (CAS-S). Data were analyzed using SPSS version 28.0.

Results: Baseline descriptive characteristics and pre-treatment scale scores were statistically similar across both groups ($p > 0.05$). However, during and five minutes post-therapy, the experimental group exhibited significantly lower median CEMS and CAS-S scores than the control group ($p < 0.001$). Notably, 100% of the experimental group maintained mask compliance, whereas 80.60% of children in the control group attempted to remove the nebulizer mask during the procedure.

Conclusion: The integration of toy-assisted distraction during inhaler therapy significantly mitigated pediatric anxiety, improved emotional manifestations, and enhanced treatment compliance by preventing refusal of the mask. These findings suggest that age-appropriate distracting interventions should be standardized in pediatric emergency protocols to optimize respiratory treatment delivery in early childhood.

Keywords: Inhaler therapy, Pediatric emergency, Anxiety, Toy-assisted distraction, Preschool children

OP - 004

EFFECT OF A STRUCTURED EDUCATIONAL INTERVENTION ON HOSPITAL PERCEPTION IN HEALTHY CHILDREN AGED 8–10

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Aim: This study aimed to investigate the effect of a structured educational intervention on hospital perception among healthy children aged 8–10 years.

Material & Method: This study was conducted using a pre-test–post-test control group design (ClinicalTrials.gov March 25, 2025 ID: NCT06895694). The study was conducted with 159 healthy children aged 8 – 10 who met the inclusion criteria. The Hospital Perception Scale for Healthy Children (HPSHC) was used in the study. A high scale score indicates a negative perception of the hospital. Participants were randomly assigned to either an intervention group or a control group. The intervention group received a structured educational program titled “What Kind of a Place is the Hospital?” designed according to children’s developmental level. Hospital perception was assessed using the Hospital Perception Scale for Healthy Children (HPSHC) at baseline and after the intervention. Data were analysed using SPSS, and effect size was calculated using Cohen’s d.

Results: In the analysis of the data, it was determined that the children’s demographic characteristics showed a similar distribution. At baseline, no statistically significant difference was found between the intervention and control groups in hospital perception scores ($p > 0.05$). After the intervention, children in the intervention group demonstrated significantly lower total hospital perception scores compared with the control group ($p < 0.05$). The structured educational intervention had a large effect size on improving perceptions of the hospital (Cohen’s $d = 1.19$) (Table 1).

Table 1. Comparison of Mean Total Scores on the HPSHC for the First and Second Measurements by Group

Groups	Pre-test Mean ± SD[3] (min[4] - max[5])	Post-test Mean ± SD[3] (min[4] - max[5])	Pre-test Between groups [2]t; p	Post-test Between groups [2]t; p
Intervention Group (n = 71)	19,77 ± 7,81 (4-41)	9,39 ± 6,64 (0-30)	2,044; 0,052	-4,532; **0,000**
Within the group:[1]Z; p	-6,895; **0,000**			
Control Group (n = 88)	17,39 ± 7,04 (2-39)	14,20 ± 6,66 (0-38)		
Within the group:[1]Z; p	-4,59; **0,000**			

[1] Wilcoxon Signed-Rank Test. [2]Independent Samples test (T-test). [3]SD: Standard Deviation. [4]Min: Minimum. [5]Max: Maximum.

Conclusion: A structured educational intervention effectively improved the perception of the hospital among healthy children aged 8 to 10. Integrating preventive hospital education into pediatric nursing practices and school health programs can help prepare children for future medical experiences and support their psychosocial well-being.

Keywords: Perception, Child, Hospital, Hospital perception, Structured educational

OP - 005

THE EFFECT OF THE PIVC-SAFE CARE BUNDLE ON INFILTRATION, PHLEBITIS, AND CATHETER SUCCESS IN THE PEDIATRIC EMERGENCY DEPARTMENT

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Aim: This study was conducted to evaluate the effectiveness of a care bundle developed to prevent peripheral intravenous catheter-associated infiltration and phlebitis in children.

Material & Method: The study used a quasi-experimental design and included 200 children receiving inpatient treatment in a pediatric emergency department, with 100 in the standard care group and 100 in the care bundle group. Data were collected using the Patient Information Form, Nurse Information Form, Visual Infusion Phlebitis Diagnostic Scale, and Pediatric Peripheral Infiltration Scale. In the standard care group, PIVC care was performed according to the clinic's routine procedures, and then the PIVC-SAFE Care Bundle was implemented. The bundle included peripheral intravenous catheter management training, attention to hand hygiene and aseptic technique, limiting each practitioner to no more than two attempts, using a skin antiseptic containing 2% chlorhexidine and 70% alcohol for asepsis, and using hydrocolloid transparent adhesive tape for securement (Table 1).

Table 1. Components of the PIVC-SAFE Care Bundle: "PIVC-SAFE" SAFE PRACTICE – FEWER COMPLICATIONS

PIVC-SAFE Components	**Description**
S – Securement	PIVC securement will be performed using a transparent hydrocolloid dressing.
A – Antiseptic Technique	Hand hygiene will be ensured before PIVC insertion. The insertion site will be disinfected using a skin antiseptic containing 2% chlorhexidine and 70% alcohol.
F – Follow-Up / Regular Monitoring	A PIVC monitoring checklist will be created. PIVC assessment will be performed before every shift change and at 4-hour intervals. Families will

	be informed about monitoring signs of infiltration and phlebitis.
E – Education	Nurses working in the clinic will receive a training session entitled "Peripheral Intravenous Catheter Management" provided by the researcher. During PIVC insertion, the same nurse will not perform more than two insertion attempts.

"PIVC-SAFE" SAFE PRACTICE – FEWER COMPLICATIONS

Results: The children's demographic and catheter-related characteristics were similar between the two groups, and the nurses' sex, education level, professional experience, and pediatric emergency experience were also comparable. The infiltration rate was higher in the standard care group (46%) than in the care bundle group (25%). There was no significant difference between the groups in the incidence of phlebitis, but the mean phlebitis score was higher in the standard care group (0.09 ± 0.29 vs. 0.02 ± 0.14) (Table 2). The first-attempt success rate for PIVC insertion was higher in the care bundle group (70%) than in the standard care group (41%), and the mean number of catheter insertion attempts was lower in the care bundle group (1.43 ± 0.76 vs. 1.73 ± 0.72) (Table 3).

Table 2. Rate of Infiltration, Phlebitis, PPIS, and GIFTS Scores (n=200)

Variables	**Standard Care Group (n=100)**	**Care Bundle Group (n=100)**	**p**
	n (%)	n (%)	
Infiltration Rate			0.008**
Not Developed	54 (54.0)	75 (75.0)	
Developed	46 (46.0)	25 (25.0)	
PPIS Score Mean[a]	0.51 ± 0.59	0.25 ± 0.44	0.001**
Median (Min–Max)	0 (0–2)	0 (0–1)	
Phlebitis Rate			0.105
Not Developed	92 (92.0)	98 (98.0)	

Developed	8 (8.0)	2 (2.0)	
GIFTS Score[b]	0.09 ± 0.29	0.02 ± 0.14	0.030*
Median (Min–Max)	0 (0–1)	0 (0–1)	

p<0.05, *p<0.01, χ^2: Chi-square test (categorical variables), z: Mann–Whitney U test. Abbreviations: SD: Standard deviation, Med: Median, Min–Max: Minimum and maximum values, GIFTS: Visual Infusion Phlebitis Diagnostic Scale.PPIS: Pediatric Peripheral Infiltration Scale

Table 3. Comparison of PIVC Success Rates

Characteristics	**Standard Care Group (n=100)**	**Care Bundle Group (n=100)**	**Total (n=200)**	**p**
	n (%)	n (%)	n (%)	
Number of Catheter Insertion Attempts				0.000**
First attempt	41 (41.0)	70 (70.0)	111 (55.5)	
Second attempt	47 (47.0)	20 (20.0)	67 (33.5)	
Third attempt	10 (10.0)	7 (7.0)	17 (8.5)	
Four and more attempts	2 (2.0)	3 (3.0)	5 (2.5)	
Mean Number of Catheter Insertion Attempts[a]	1.73 ± 0.72	1.43 ± 0.76	1.58 ± 0.75	0.005**
Median (Min–Max)	1 (1–4)	1 (1–4)	1 (1–4)	
First-Attempt Success Rate				0.000**
Unsuccessful	59 (59.0)	30 (30.0)	89 (44.5)	
Successful	41 (41.0)	70 (70.0)	111 (55.5)	

p<0.05, *p<0.01, χ^2: Chi-square test (categorical variables), t: Independent Samples t-test. Bold values indicate statistically significant differences between groups. Mean: Average, SD: Standard deviation, Med: Median, Min–Max: Minimum and maximum values.

Conclusion: The PIVC-SAFE Care Bundle reduced infiltration rates and improved catheter insertion success in children. Its use in pediatric emergency PIVC care is recommended to help prevent infiltration and phlebitis.

Keywords: Child, peripheral intravenous catheter, infiltration, phlebitis, care bundle

OP - 006

EVALUATION OF HEALTH LITERACY LEVELS AND ASSOCİATED DETERMINANTS AMONG MOTHERS OF PEDIATRIC INPATIENTS

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Aim: This study was conducted to determine the health literacy levels of mothers aged 18 and over, and the factors influencing them, of children hospitalized in the pediatric clinic of a State Hospital in the Turkish Republic of Northern Cyprus (TRNC).

Material & Method: The study was conducted between June and July 2025 with 126 mothers of children hospitalized in the pediatric ward of a state hospital in the Turkish Republic of Northern Cyprus (TRNC). Data were collected through face-to-face interviews using a Sociodemographic Information Form and the Turkish adaptation of the European Health Literacy Scale (EHL-TR), and analyzed using SPSS 26.0 software. Prior to the commencement of the research, ethical approval for conducting the study was obtained from the Lefke European University Scientific Research and Publication Ethics Committee. Furthermore, consent was obtained from the institution where the research was conducted and from the participants during the data collection phase.

Results: The average health literacy score of mothers was found to be 147.50±17.69. Furthermore, statistically significant differences were found between educational status, spouse's education, employment and income level, place of birth, and general health perception variables ($p < 0.05$). The study found that the average score of participating mothers on the Treatment and Service Health Literacy subscale of the European Health Literacy Scale (EHL-TR) was 51.72±7.08, the average score on the Disease Prevention Health Literacy subscale was 46.73±6.02, and the average score on the Health Promotion Health Literacy subscale was 49.05±6.63. Mothers with a bachelor's degree, who were employed, had high incomes, and positively evaluated their health status, were found to have higher health literacy scores compared to other groups.

Conclusion: In conclusion, the study findings reveal that mothers' health literacy is closely related to their education and income levels, and that the ways in which they access information directly affect their health literacy.

Keywords: Health literacy, mother, sick child, North Cyprus

OP - 007

BALANCING CAREER AND PARENTHOOD: FACTORS ASSOCIATED WITH FERTILITY DESIRE AMONG WOMEN HEALTHCARE PROFESSIONALS

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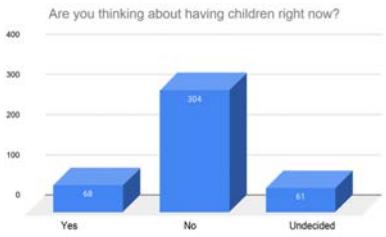
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Aim: Fertility intentions are influenced by multiple social, economic, psychological, and cultural factors. Healthcare professionals may experience additional challenges related to work burden, career planning, and family responsibilities that can affect reproductive decisions. This study aimed to evaluate fertility desire and factors associated with childbearing intentions among healthcare professionals.

Material & Method: This cross-sectional study was conducted among 433 healthcare professionals. Data were collected using a sociodemographic questionnaire and the 19-item Fertility Desire Scale. Descriptive statistical analyses were performed, and the internal consistency of the scale was assessed using Cronbach's alpha coefficient. Fertility desire subdimensions, including positive motivations, concerns about childbearing, childbearing preferences, and social beliefs, were evaluated.

Results: The mean age of participants was 35.5 ± 8.8 years. Among participants, 59.4% had children, while 39.0% reported an intention to have children in the future, 43.9% did not intend to have children, and 17.1% were undecided (Figure 1). The mean total Fertility Desire Scale score was 59.1 ± 8.4, with acceptable internal consistency (Cronbach's $\alpha = 0.74$). Mean subscale scores were 20.48 ± 5.11 for positive motivations, 12.94 ± 3.38 for childbearing concerns, 10.78 ± 2.22 for childbearing preference, and 14.86 ± 2.57 for social beliefs. Younger participants demonstrated significantly higher fertility intentions compared with older participants ($p < 0.001$). Significant differences in fertility desire scores were also observed according to future childbearing intentions ($p < 0.05$).

Figur 1. Are you thinking about having children right now?



Many of them, and our future, are at risk.

Conclusion: Fertility intentions among healthcare professionals appear to be associated with age and psychosocial attitudes toward childbearing. Understanding these determinants may help in developing supportive reproductive health policies and interventions aimed at improving family planning and reproductive well-being among healthcare workers.

Keywords: Fertility desire, healthcare professionals, childbearing intention, reproductive health, family planning.

OP - 008

EFFECT OF VIRTUAL REALITY AND DISTRACTION CARDS DURING INHALATION THERAPY

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Aim: This study aimed to determine the effect of virtual reality (VR) glasses and distraction cards used during inhalation therapy on physiological parameters (heart rate, respiratory rate, oxygen saturation) and anxiety levels in children aged 6-12 years.

Material & Method: This randomized controlled study included 108 children (36 per group) with bronchopneumonia receiving inhalation (salbutamol) therapy. Participants were allocated into VR (aquarium/sea creatures video), distraction cards, and routine care control groups. All groups received 10-minute therapy at 6-8 L/min air flow; physiological parameters and anxiety were measured 1 minute before and after the procedure. Anxiety was assessed using the Children's Emotional Manifestation Scale (CEMS). Data were analyzed with ANOVA, Kruskal-Wallis, paired t-test, and Wilcoxon tests.

Results: At pretest, no significant differences existed between groups in physiological parameters or anxiety ($p > 0.05$), whereas significant differences emerged at posttest ($p < 0.01$). In the VR group, heart rate (97.72±10.21), respiratory rate (21.56±0.61), and total CEMS anxiety score (5.44±0.69) were significantly lower, while oxygen saturation (97.22±1.66%) was significantly higher than in the other groups. The distraction card group also achieved more favorable values than the control group ($a < b < c$). In the control group, changes in respiratory rate and most anxiety subscales were not significant.

Conclusion: VR glasses and distraction cards applied during inhalation therapy positively affected physiological parameters and reduced anxiety, with VR being the most effective method.

Keywords: Virtual reality, distraction, inhalation therapy, anxiety, child

OP - 009

FFP-RELATED ANAPHYLAXIS DURING THERAPEUTIC PLASMA EXCHANGE IN PALF

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Aim: Extracorporeal support modalities such as therapeutic plasma exchange and continuous renal replacement therapy (CRRT) may serve as bridge therapies to liver transplantation or spontaneous hepatic recovery in pediatric acute liver failure, particularly in severe cases. However, allergic reactions and, rarely, anaphylaxis may occur due to the use of fresh frozen plasma (FFP) during therapeutic plasma exchange. We aimed to present an adolescent patient who developed FFP-related anaphylaxis during therapeutic plasma exchange performed for paracetamol-associated acute liver failure.

Case: A 16-year-old female with no known chronic disease was admitted to the emergency department with nausea and vomiting following high-dose paracetamol and multiple drug ingestion in a suicide attempt. Initial laboratory tests revealed AST 826 U/L, ALT 1099 U/L, and INR 2.1. Due to rapid deterioration in liver function tests, the patient was admitted to the pediatric intensive care unit with acute liver failure. Therapeutic plasma exchange was initiated using the centrifugation method with the Optia® device because of progressive hepatocellular injury and coagulopathy. Fresh frozen plasma (FFP) was used as the replacement fluid during the first session.

Results: At the 10th minute of the procedure, acute dyspnea, nausea, vomiting, and bronchospasm developed. The clinical presentation was considered compatible with an anaphylactic reaction, and the procedure was terminated. Symptoms rapidly improved following intramuscular epinephrine administration. In subsequent sessions, the replacement fluid used during therapeutic plasma exchange was changed to 20% human albumin. Additional FFP replacement was administered before and after the procedures with premedication using pheniramine maleate (Avil®). Simultaneously, CRRT was performed in CVVHDF mode without anticoagulation. After three sessions of extracorporeal support therapy, clinical and biochemical improvement was achieved, and the patient was discharged without the need for liver transplantation.

Conclusion: This case suggests that albumin may be used as an alternative replacement fluid for therapeutic plasma exchange in pediatric acute liver failure.

Keywords: Pediatric acute liver failure, Therapeutic plasma exchange, Anaphylaxis, Anaphylaxis, Albumin

OP - 010

COMBINED CRRT AND THERAPEUTIC PLASMAPHERESIS IN SEVERE PEDIATRIC CARBAMAZEPINE POISONING

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Aim: Carbamazepine is highly protein-bound (75–78% to albumin), limiting its removal by conventional hemodialysis, and can cause severe neurologic and cardiac toxicity. We present a toddler with life-threatening carbamazepine poisoning initially misdiagnosed as a febrile seizure, successfully managed with combined continuous renal replacement therapy (CRRT) and albumin-replacement therapeutic plasma exchange (TPE).

Case: A 2-year-old, 15-kg girl ingested an estimated three 400-mg carbamazepine tablets (~80 mg/kg) from her grandmother's medication kept at home. About 12 hours later she had a generalized seizure and was treated at another center as "febrile convulsion" with rectal diazepam. After the family noticed missing tablets, she was referred to our center with suspected poisoning. She developed respiratory failure requiring intubation. A double-lumen jugular catheter was placed and CRRT was started; given carbamazepine's high albumin binding, albumin-replacement TPE (20% human albumin) was added, for two sessions total.

Results: Admission carbamazepine level was > 42 µg/mL (assay upper limit), confirming true intoxication rather than a post-ictal state. The course was complicated by aspiration pneumonia (adenovirus, entero/rhinovirus, S. pneumoniae, H. influenzae), transient cytopenia (managed with blood products), and transient hypotension (noradrenaline). The carbamazepine level fell below the therapeutic range (3.1 µg/mL) by day 8. After 11 days of mechanical ventilation and 14 days of pediatric intensive care, she was extubated to high-flow nasal cannula and discharged without sequelae after a 17-day stay.

Conclusion: In pediatric seizures with an atypical history, "febrile convulsion" can dangerously mask drug poisoning; grandparents' medication cabinets are a key exposure source. CRRT targets the free fraction and albumin-replacement TPE the protein-bound fraction—pharmacokinetically complementary modalities that are effective and feasible in refractory severe pediatric carbamazepine poisoning within a multidisciplinary support package.

Keywords: Carbamazepine poisoning; pediatric intoxication; continuous renal replacement therapy; therapeutic plasma exchange

OP - 011

SINGLE HIGH-DOSE VITAMIN D AMPOULE CAUSING INFANT NEPHROCALCINOSIS

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Aim: Vitamin D intoxication in children causes hypercalcemia, hypercalciuria, and suppressed parathyroid hormone (PTH) with 25-OH-D > 100 ng/mL. In Türkiye, 300,000-IU vitamin D3 ampoules licensed for adults are available over the counter and are often given to children by families. We present an infant who received a single adult ampoule and developed life-threatening hypercalcemia and permanent bilateral nephrocalcinosis.

Case: A 19-month-old, 11-kg girl (consanguineous Syrian migrant family) was given one 300,000-IU vitamin D ampoule orally by her father, who attributed her inability to walk unsupported to vitamin D deficiency. A week later she developed vomiting and lethargy. Hypercalcemia was found at another center, where hydration, furosemide, and a first dose of pamidronate were started; she was then referred to our center and admitted to pediatric intensive care.

Results: Calcium rose from 11.1 to a peak of 15.1 mg/dL; 25-OH-D was > 120 ng/mL (assay upper limit) and PTH was suppressed (< 2.4 pg/mL). She received aggressive hydration, prednisolone, and three doses of intravenous pamidronate (0.5 + 0.5 + 1 mg/kg); calcium normalized by day 19. Renal ultrasound showed increased medullary echogenicity consistent with early bilateral medullary nephrocalcinosis—a permanent structural finding. She was discharged after a 19-day stay with endocrine and nephrology follow-up.

Conclusion: High-dose vitamin D ampoules, perceived by families as “natural and harmless,” can cause life-threatening hypercalcemia and irreversible renal damage from a single dose. Over-the-counter access, low health literacy, and adult protocols self-applied to children are preventable risks. For X44 pediatric admissions, routinely asking about vitamins/supplements, social-work consultation, and structured discharge education are essential.

Keywords: Vitamin D intoxication; hypervitaminosis D; hypercalcemia; pamidronate; medullary nephrocalcinosis

OP - 012

EXPERIENCE WITH INTRAVENOUS THEOPHYLLINE IN THE PEDIATRIC INTENSIVE CARE UNIT FOR SEVERE RESPIRATORY FAILURE

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Aim: Intravenous magnesium is routinely used in pediatric intensive care units (PICUs) for patients with severe respiratory failure and bronchoconstriction associated with airway collapse. However, in some patients with severe respiratory failure, clinical improvement may not be achieved despite treatment with β2-agonists, sedoanalgesic agents (such as dexmedetomidine and ketamine), magnesium, and corticosteroids. In such cases, intravenous theophylline may be administered with therapeutic drug monitoring. In this study, we used intravenous theophylline in five patients with severe respiratory failure who did not respond to standard therapies and aimed to present their clinical outcomes.

Case: Successful outcomes of theophylline therapy in five patients who developed severe respiratory failure and were unresponsive to standard treatments are presented. The demographic characteristics of the patients and the treatments administered are shown in Table 1. Intravenous theophylline was administered as a loading dose of 6mg/kg followed by a continuous infusion of 0.6mg/kg/hour. Serum theophylline levels were monitored and maintained within the therapeutic range. No adverse effects were observed during treatment.

Table 1. Demographic characteristics of the patients and treatments

	Age	Gender	Diagnosis at PICU	Underlying disease	Respiratory viral panel	Invasive MV	Noninvasive MV (BiPAP)	HFNC	Duration of theophylline therapy	Adverse effect	PICU length of stay
Case 1	10 months	female	Severe asthma exacerbation	no	H.Rhinovirus	2 days	2 days	4 days	3 days	no	7 days
Case 2	26 months	female	Viral pneumonia	no	H.Metapneumovirus		4 days	5 days	3 days	no	7 days

Case 3	25 months	male	Viral pneumonia	no	H.Rhinovirüs /enterovirus	2 days	3 days	4 days	2 days	no	6 days
Case 4	7 years	male	Viral pneumonia	no	H.Rhinovirus /H.Adenovirus		2 days	3 days	2 days	no	3 days
Case 5	3 years	male	pneumonia	KCNB1 gene mutation	H.Metapneumavirus		6 days	4 days	4 days	no	8 days

Results: In the management of severe asthma exacerbations, stepwise therapy is generally applied, beginning from the base of the treatment pyramid and progressing sequentially through short-acting β2-agonists, inhaled corticosteroids, long-acting β2-agonists, leukotriene antagonists, anticholinergic agents, and finally low-dose theophylline at the top of the pyramid. In the pediatric intensive care setting, where patients with severe respiratory failure are at high risk of life-threatening deterioration and rapid intervention is required, these medications are often administered simultaneously rather than sequentially. In patients who fail to show clinical improvement despite standard treatment, intravenous theophylline may also be used with therapeutic drug monitoring.In our study, theophylline therapy was initiated in five patients who showed no clinical improvement despite receiving all guideline-recommended standard treatments.

Conclusion: Theophylline should be considered in difficult-to-treat cases and administered under intensive care conditions with appropriate monitoring.

Keywords: PICU, Theophylline, respiratory failure

OP - 013

HYPERINFLAMMATORY SYNDROME PRESENTING WITH ACUTE ABDOMEN, PANCREATITIS, AND ATRIAL FIBRILLATION: A CASE REPORT

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Aim: Hyperinflammatory syndrome is a life-threatening systemic condition affecting multiple organs. When gastrointestinal involvement predominates, it can mimic acute appendicitis, and rare manifestations such as pancreatitis and atrial fibrillation may further complicate the clinical picture. We present the case of an adolescent patient who was initially managed with a diagnosis of acute appendicitis and rapidly progressed to a hyperinflammatory syndrome.

Case: A 17-year-old male presented with fever and abdominal pain. Abdominal computed tomography (CT) demonstrated an appendiceal diameter of 7 mm, leading to admission to the pediatric surgery ward with a presumptive diagnosis of acute appendicitis. On the second day of hospitalization, the patient developed acute respiratory distress, hypotension, and increasing oxygen requirement, necessitating inotropic support and transfer to the pediatric intensive care unit (PICU). Empiric treatment was initiated for suspected hyperinflammatory syndrome, sepsis, pulmonary edema, myocarditis, and acute pancreatitis. Laboratory investigations revealed elevated acute-phase reactants, amylase, lipase, troponin, and pro-BNP levels. Echocardiography demonstrated a severely reduced ejection fraction (EF) of 30%. Intravenous immunoglobulin (IVIG), followed by pulse methylprednisolone, was administered, and a levosimendan infusion was initiated for cardiac support.

Results: During follow-up, the patient developed new-onset atrial fibrillation, prompting initiation of therapeutic enoxaparin. Normal sinus rhythm was successfully restored via synchronized cardioversion. Significant improvement in myocardial function was achieved following treatment with milrinone, furosemide, levosimendan, and antiarrhythmic agents. Oral feeding was resumed after pancreatic enzyme levels declined. Following clinical stabilization, the patient was transferred back to the pediatric ward on the ninth day of his PICU stay.

Conclusion: Hyperinflammatory syndrome is a critical condition that may initially masquerade as an acute surgical abdomen, such as acute appendicitis, before rapidly progressing to multisystem involvement. Early recognition, close multi-organ monitoring, and multidisciplinary intensive care are crucial to reducing morbidity and mortality in these patients.

Keywords: Hyperinflammatory syndrome, Atrial fibrillation, Acute appendicitis, Myocarditis, Pancreatitis

OP - 015

DIFFUSION MRI EVALUATION OF RECURRENT PEDIATRIC SEIZURES IN EMERGENCY

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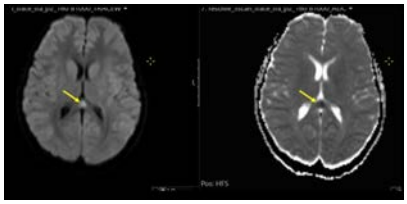
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Aim: The aim of this study was to evaluate diffusion-weighted magnetic resonance imaging (DW-MRI) findings in children presenting to the pediatric emergency department with a history of recurrent seizures, to determine the distribution of pathological findings, and to assess the diagnostic value of diffusion MRI as a rapid neuroimaging tool in the acute clinical setting.

Material & Method: This retrospective descriptive study included 84 patients (50 male, 34 female; mean age: 6.79 ± 4.66 years; median age: 5.0 years; age range: 1–17 years) who presented to the pediatric emergency department with recurrent seizures and underwent diffusion MRI. Patients were classified as nonfebrile, subfebrile, and febrile according to their fever status at the time of emergency admission. Diffusion MRI sequences (B0, B1000, and ADC) were reviewed by experienced radiologists, with abnormalities recorded and categorized.

Results: Diffusion MRI was normal in 67 patients (79.8%), while pathological findings were detected in 17 patients (20.2%). Among pathological findings, parenchymal abnormalities were the most common (n=11, 13.1%), followed by arachnoid cyst (n=1, 1.2%), developmental venous anomaly (n=1, 1.2%), mega cisterna magna (n=1, 1.2%), subdural abscess (n=1, 1.2%), and corpus callosum diffusion restriction (n=1, 1.2%) (Figure 1). Of the patients, 58 (69.0%) were nonfebrile, 8 (9.5%) were subfebrile, and 18 (21.4%) were febrile. The male-to-female ratio was 1.47:1, with a predominance of male patients

Figure 1. Diffusion-weighted MRI images show diffusion restriction in the splenium of the corpus callosum.



Conclusion: Pathological findings on diffusion MRI were detected in approximately one-fifth of children presenting to the emergency department with recurrent seizures. Parenchymal abnormalities were the most common pathology, and the detection of conditions requiring urgent intervention, such as subdural abscess, highlights the clinical importance of diffusion MRI in this patient group. Given its rapid acquisition time, lack of need for sedation in most cases, and high sensitivity for cytotoxic edema, diffusion MRI should be considered as a valuable first-line neuroimaging modality in the pediatric emergency setting.

Keywords: Pediatric Seizures, pediatric emergency, Diffusion MRI, recurrent convulsion, pediatric emergency

OP - 016

EVALUATION OF THE NEED FOR REPEAT BRAIN COMPUTED TOMOGRAPHY AND ITS IMPACT ON CLINICAL FOLLOW-UP IN PATIENTS AGED 1 MONTH TO 18 YEARS PRESENTING TO THE PEDIATRIC EMERGENCY DEPARTMENT WITH MILD HEAD TRAUMA.

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Aim: This study aimed to evaluate the frequency and clinical indications of repeat cranial computedtomography (CT) in pediatric patients aged 1 month to 18 years presenting to the Pediatric Emergency Department with mild head trauma,and to assess its impact on patient management.Additionally, the study investigated the rate of newly developed or progressive intracranial pathologies on repeat imaging and their association with clinically important traumatic brain injury(ciTBI),need for surgical intervention,neurosurgical consultation,hospital length of stay, and observation processes.

Material & Method: In this retrospective study,patients aged 1 month to 18 years with mild head trauma who underwent repeat cranial CT between November 2, 2023,and November 20, 2025,were included.Patients with moderate to severe trauma,multiple trauma,suspected abuse,risk factors for TBI (e.g., brain tumors,shunts,coagulopathy,anticoagulant use),or prior TBI diagnosis were excluded. Mild head trauma was defined as a Glasgow Coma Scale (GCS) score of 14–15. Imaging indications,radiological findings,neurosurgical consultations,and clinical outcomes were analyzed.Statistical significance was set at $p < 0.05$.

Results: A total of 413 patients were included; 67.6% were male, with a median age of 96 months(Table 1). Falls were the most common mechanism (54.5%)(Table 1). Most patients were asymptomatic at presentation, with normal examinations and GCS 15. Initial CT findings were significantly associated with age and injury mechanism.Newly detected TBI on repeat CT was rare (2.2%) but more frequent in patients without initial TBI ($p = 0.028$)(Table 2). Radiological progression occurred in 4.8% and was higher in those with initial TBI ($p < 0.001$)(Table 2).ciTBI was identified in 11.8% and strongly correlated with initial CT findings, while repeat CT findings were not associated with ciTBI. Surgical intervention was uncommon, and no mortality was observed (Table 3).

Table 1. Demographic Characteristics and Trauma

VARIABLE	N(%)
Age	

≤24 months	99 (24%)
≥25 months	314 (76%)
Sex	
Female	134 (32.4%)
Male	279 (67.6%)
Mechanism of Injury	
Falls	225(%54,5)
Motorcycle accidents	51 (12.3%)
In-vehicle traffic accidents (IVTA)	40 (9.7%)
Bicycle accidents	28 (6.8%)
Head impact against a hard object	30 (6.5%)
Assault	21 (5.1%)
Out-of-vehicle traffic accidents (OVTA)	18 (4.4%)
Presentation Time	
During working hours	141 (34.1%)
Outside working hours	272 (65.9%)

Table 2. The relationship between the initial CT findings and radiological progression on the second CT

Initial CT findings	**Radiological progression absent n (%)**	**Radiological progression present n (%)**	**Total**
normal	265 (%98,9)	3 (%1,1)	268

TBI	41 (%77,4)	12 (%22,6)	53
non TBI	87 (%94,6)	5 (%5,4)	92
Total	**393 (%95,2)**	**20 (%4,8)**	**413**

Table 3. Characteristics of Operated Patients

Patient	Sex / Age(months)	Mechanism of Injury	Number of CT scans	Initial CT findings
1	F / ≥25	Head impact against a hard object	3	Subdural Hematoma
2	F / ≤24	Falls	3	Epidural Hematoma
3	M / ≥25	Bicycle accidents	2	Epidural Hematoma
4	M / ≥25	Bicycle accidents	2	Subdural Hematoma
5	M / ≥25	Falls	2	Epidural Hematoma

M: Male F:Female

Conclusion: Repeat cranial CT should not be routinely performed in all pediatric patients with mild head trauma but should be reserved for selected cases based on clinical course and risk factors, reducing unnecessary radiation exposure while maintaining safe patient management.

Keywords: Traumatic brain injury, minor head trauma, PECARN, clinically important traumatic brain injury, pediatric

OP - 017

FACTORS AFFECTING MORTALITY IN THE PEDIATRIC CARDIAC INTENSIVE CARE UNIT

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Aim: Congenital heart surgery offers the possibility of repair or palliation, enabling a near-normal life expectancy. Therefore, perioperative management is critical and requires a multidisciplinary approach. This study aimed to identify factors associated with increased mortality in the Pediatric Cardiac Intensive Care Unit and to highlight potentially preventable and modifiable risk factors.

Material & Method: We retrospectively reviewed the records of patients who underwent surgery for congenital heart disease over a two-year period. Demographic characteristics, preoperative and intraoperative data, postoperative course, complications, and in-hospital mortality were recorded. The primary outcome was in-hospital mortality and associated factors.

Results: Among 1053 patients, 99 (9.4%) died. Neonates comprised 21.4% of the cohort and had significantly lower survival ($p < 0.001$). Lower body weight was also associated with decreased survival ($p < 0.001$). Patients requiring preoperative mechanical ventilation (MV) had significantly lower survival, and prolonged postoperative MV duration was associated with increased mortality ($p < 0.001$). Re-intubation was not directly associated with mortality; however, infection rates were higher in these patients, and infected patients had lower survival ($p < 0.05$). Survival was significantly lower in patients with STAT score 5, delayed sternal closure, and those requiring renal replacement therapy or ECMO ($p < 0.05$). Patients undergoing univentricular palliation had lower survival compared to those with biventricular repair ($p < 0.05$). A vasoactive inotropic score > 20 was associated with decreased survival ($p < 0.05$). Mortality was significantly higher in patients requiring reoperation due to residual or additional lesions ($p < 0.05$).

Conclusion: Despite advances in perioperative care, congenital heart surgery remains associated with significant mortality. Identification of risk factors and high-risk patients, meticulous perioperative management, and timely decisions regarding re-intervention or ECMO before organ failure or cardiac arrest may improve outcomes.

Keywords: Pediatric cardiac intensive care, Congenital heart disease, Mortality, Risk factors

OP - 018

PEDIATRIC BRAIN DEATH: EPIDEMIOLOGY AND OUTCOMES FROM A SINGLE CENTER

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Aim: Brain death (BD) in children presents unique diagnostic and ethical challenges, with organ donation rates varying significantly across countries and regions. This study analyzed the epidemiology, complications, and organ donation outcomes of pediatric BD over 10 years at a tertiary center in Turkey.

Material & Method: This retrospective cohort study included all children diagnosed with BD in a tertiary pediatric intensive care unit between 2015-2025. Demographic data, clinical scores, etiology, diagnostic timelines, ancillary tests, post-BD complications, and organ donation outcomes were analyzed. Patients were compared by etiology (traumatic vs. non-traumatic).

Figur 1. Flowchart of the study

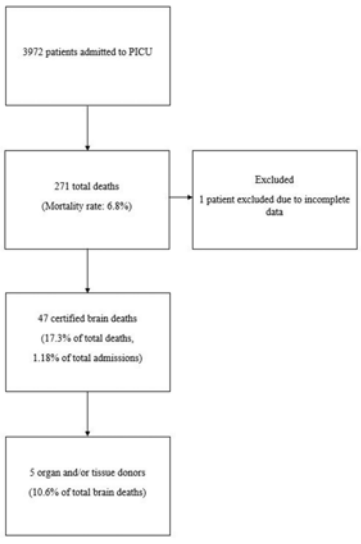


Table 1. Baseline Demographic and Clinical Characteristics

Variable	n = 47
Age, months, median (IQR)	66 (18-127)
Sex, n (%)	
Male	31 (66.0%)
Female	16 (34.0%)
Admission GCS, median (IQR)	3 (3-6)
Pre-illness PCPC, n (%)	
PCPC 1 (Normal)	34 (72.3%)
PCPC 2 (Mild disability)	13 (27.7%)
Pre-existing neurological dysfunction, n (%)	7 (14.9%)
Pre-existing chronic condition, n (%)	12 (25.5%)
Primary Etiology of Brain Injury, n (%)	
Traumatic brain injury	21 (44.7%)
Hypoxic-ischemic related	8 (17.0%)
Metabolic	6 (12.8%)
Intracranial hemorrhage	3 (6.4%)
CNS infection	3 (6.4%)
Status epilepticus	1 (2.1%)
Other	5 (10.6%)
PRISM score, median (IQR)	27 (14-34)
PELOD score, median (IQR)	26 (19-34)
PICU length of stay, days, median (IQR)	12 (5-20)
Total hospital length of stay, days, median (IQR)	14 (6-22)

IQR, interquartile range; GCS, Glasgow Coma Scale; PCPC, Pediatric Cerebral Performance Category; CNS, central nervous system; PRISM, Pediatric Risk of Mortality; PELOD, Pediatric Logistic Organ Dysfunction; PICU, pediatric intensive care unit.

Results: During the study period, 47 patients were diagnosed with BD (median age 66 months; 66.0% male) (Figure 1). Most patients had normal pre-illness neurological function (PCPC 1, 72.3%). The leading etiology was traumatic brain injury (TBI) in 21 patients (44.7%), followed by hypoxic–ischemic causes (17.0%) and metabolic disorders (12.8%) (Table 1). The median time from PICU admission to BD diagnosis was 3 days (IQR 2–6), and the median time from clinical suspicion to declaration was 24 hours (IQR 12–48). At least one ancillary test was used in 95.7% of patients (Table 2). Post-BD complications were frequent: hemodynamic instability occurred in 100%, vasoactive support was required in 95.7%, diabetes insipidus in 66.0%, hyperglycemia in 57.4%, and coagulopathy in 55.3% (Table 2; Figure 2). Compared with non-traumatic cases, patients with TBI had a lower prevalence of pre-existing neurological dysfunction (0% vs 26.9%, p=0.012) and a higher frequency of hyperglycemia (76.2% vs 42.3%, p=0.037) (Table 3). Organ donation occurred in 5 patients (10.6%), with no donations between 2020 and 2022 (Figure 3).

Figure 2. Frequency of physiological complications following brain death

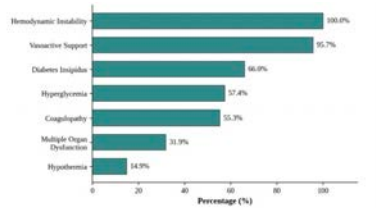


Figure 3. Annual distribution of pediatric brain death cases and organ donations



Table 2. Brain Death Diagnostic Process, Complications, and Organ Donation

Variable	n = 47
Timing Variables	
PICU admission to BD diagnosis, days, median (IQR)	3 (2-6)
Suspicion to BD declaration, hours, median (IQR)	24 (12-48)
Survival after BD diagnosis, days, median (IQR)	5 (2-16)
Number of BD examinations, median (IQR)	1 (1-2)
Ancillary Tests, n (%)	
Apnea test	43 (91.5%)
CT Angiography (CTA)	45 (95.7%)
Transcranial Doppler (TCD)	4 (8.5%)
Electroencephalography (EEG)	1 (2.1%)
≥1 ancillary test used	45 (95.7%)
Radiologic Findings, n (%)	
Cerebral edema/herniation	39 (83.0%)
Complications after Brain Death, n (%)	
Hemodynamic instability	47 (100.0%)
Hypotension requiring vasoactive support	45 (95.7%)
Diabetes insipidus	31 (66.0%)
Hyperglycemia	27 (57.4%)

Variable	n = 47
Coagulopathy	26 (55.3%)
Multiple organ dysfunction	15 (31.9%)
Hypothermia	7 (14.9%)
Surgical Intervention, n (%)	
Decompressive craniectomy	3 (6.4%)
Organ Donation, n (%)	5 (10.6%)

IQR, interquartile range; PICU, pediatric intensive care unit; BD, brain death; CTA, computed tomography angiography; TCD, transcranial Doppler ultrasonography; EEG, electroencephalography.

Table 3. Comparison of Traumatic and Non-Traumatic Brain Injury Groups

Variable	Traumatic (n=21)	Non-Traumatic (n=26)	p-value
Demographics			
Age, months, median (IQR)	78 (22-135)	59 (11.5-118.2)	0.585
Male sex, n (%)	17 (81.0%)	14 (53.8%)	0.068
Clinical Scores			
Admission GCS, median (IQR)	3 (3-4)	3 (3-12.8)	0.066
Pre-illness PCPC 1, n (%)	0 (0%)	13 (50%)	<0.001*
Comorbidities			
Pre-existing neuro dysfunction, n (%)	0 (0%)	7 (26.9%)	0.012*
Complications			
Hyperglycemia, n (%)	16 (76.2%)	11 (42.3%)	0.037*
Outcomes			
Organ donation, n (%)	1 (4.8%)	4 (15.4%)	0.362
Decompressive craniectomy, n (%)	3 (14.3%)	0 (0%)	0.082

IQR, interquartile range; GCS, Glasgow Coma Scale; PCPC, Pediatric Cerebral Performance Category.
*Statistically significant ($p < 0.05$).

Conclusion: Pediatric BD commonly resulted from traumatic injury with frequent physiological complications. Despite timely diagnosis, organ donation rates remained low, indicating the need for better donor management and family communication in PICUs.

Keywords: brain death, pediatric intensive care, organ donation, traumatic brain injury

OP - 019

SYMPTOMATIC NEONATAL POLYCYTHEMIA: CLINICAL PROFILE AND SHORT-TERM NICU COURSE

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Aim: The aim of this study was to characterize the clinical profile and short-term NICU course of symptomatic neonates with polycythemia requiring partial exchange transfusion (PET).

Material & Method: This retrospective case series included 20 symptomatic neonates with polycythemia who underwent PET in a tertiary neonatal intensive care unit (NICU) between January 2022 and April 2026. Demographic characteristics, perinatal factors, presenting clinical features, laboratory findings, imaging results, respiratory support requirements, and length of NICU stay were recorded. Data were analyzed descriptively due to the limited sample size.

Results: All neonates were symptomatic at the time of intervention. The mean maternal age was 31.8 ± 5.2 years; 60% of neonates were delivered vaginally, and 50% were female. Mean birth weight was 2819.5 ± 525.3 g and mean gestational age was 37.3 ± 2.1 weeks. The most common presenting clinical findings were tachypnea (35%) and hypoglycemia (30%), followed by feeding intolerance (15%) and cyanosis (10%). Most patients presented with more than one clinical finding, indicating multi-system involvement. At admission, median hemoglobin and hematocrit levels were 23.7 g/dL (IQR: 22.1–26.0) and 70.5% (IQR: 65.0–78.0), respectively. Respiratory support requirements varied, with 15% requiring non-invasive and 10% invasive support, while the remaining infants were managed on room air. The median length of hospital stay was 12 days (IQR: 3–30). Imaging findings were largely unremarkable. Clinical findings were controlled during follow-up, and no new complications were observed. All were discharged.

Conclusion: Symptomatic neonatal polycythemia represents a heterogeneous, multi-system clinical condition rather than an isolated laboratory abnormality. In this cohort, most cases presented with multiple concurrent clinical findings, reflecting a variable disease burden. These findings highlight the importance of comprehensive clinical evaluation and reflect the short-term NICU course of this patient population.

Keywords: Polycythemia, Partial exchange transfusion, NICU, Neonate

OP - 020

LIVER ENZYME CHANGES DURING PHOTOTHERAPY IN NEONATAL HYPERBILIRUBINEMIA: A SINGLE-CENTER NEONATAL INTENSIVE CARE UNIT EXPERIENCE

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Aim: Neonatal hyperbilirubinemia is one of the most common causes of neonatal hospitalization, and phototherapy remains the first-line treatment according to current guidelines. Although phototherapy is considered safe and well tolerated, its potential systemic biochemical effects, particularly on hepatic enzymes, remain incompletely understood. This study aimed to evaluate the effects of phototherapy on liver enzyme levels in neonates with isolated hyperbilirubinemia.

Material & Method: This retrospective study included 44 clinically stable neonates treated with phototherapy for isolated hyperbilirubinemia in a single-center neonatal intensive care unit. Neonates with suspected infection, metabolic disease, congenital hepatobiliary anomalies, or incomplete clinical/laboratory data were excluded. Demographic characteristics (sex, gestational age, birth weight, length, and head circumference), feeding type, total serum bilirubin levels, duration of phototherapy, and liver enzymes (AST, ALT, GGT) were recorded. Pre- and post-treatment values were compared using paired statistical analyses. A p-value < 0.05 was considered statistically significant.

Results: The mean total serum bilirubin level was 13.2 mg/dL, and the mean duration of phototherapy was 6.3 days. No statistically significant associations were identified between demographic characteristics, feeding patterns, or duration of phototherapy and clinical outcomes ($p > 0.05$). Mean AST levels decreased from 38.5 to 29.8 U/L, mean ALT levels from 15.0 to 12.5 U/L, and mean GGT levels from 150.8 to 105.9 U/L following phototherapy. Paired analyses demonstrated a downward trend in hepatic enzyme levels; however, these reductions did not reach statistical significance ($p > 0.05$). No biochemical or clinical evidence of hepatotoxicity was observed.

Conclusion: Phototherapy was not associated with elevations in hepatic enzyme levels and appears biochemically safe in neonates with isolated hyperbilirubinemia. The observed decrease in liver enzyme levels supports the favorable safety profile of phototherapy. Larger prospective studies are warranted to further evaluate its systemic biochemical effects.

Keywords: Neonatal hyperbilirubinemia; Phototherapy; Liver enzymes; Neonatal intensive care; Neonatal outcomes

OP - 021

EVALUATION OF HOSPITALIZATIONS AND TREATMENT COSTS OF PATIENTS DIAGNOSED WITH ROTAVIRUS GASTROENTERITIS BETWEEN ONE MONTH AND FIVE YEARS OF AGE

Meltem Günalay Taş[1], İlknur Fidancı[1], Medine Ayşin Taşar[1]

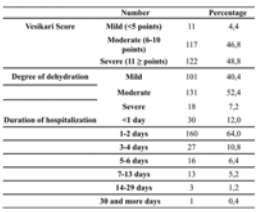
[1]Ankara Training and Research Hospital

Aim: The aim of this study is to compare and evaluate the hospital admissions, hospitalization and treatment costs of children diagnosed with RVGE between the ages of one month and five years and the costs of rotavirus vaccination.

Material & Method: This is a prospective and cross-sectional study.During the study period, cases aged between one month and five years, diagnosed with AGE,rotavirus detected in stool sample and not vaccinated against rotavirus were included in the study. Consent forms were obtained from the parents of the patients that met the criteria for acceptance into the study and sociodemographic characteristics, dehydration findings, vital signs, presence and duration of fever, vomiting and diarrhea symptoms, World Health Organization dehydration degree, Vesikari Score and patient laboratory values were recorded.The calculation of the cases was obtained from the hospital billing unit by the physician conducting the study. While the cost of two doses of vaccination with Rotarix was determined as 107.25 US dollars, the cost of three doses of vaccination with Rotateq was determined as 103.94 US dollars.The distributions of patients according to Vesikari score, degree of dehydration, and duration of hospitalization, as well as total costs according to age groups, Vesikari score, and degree of dehydration, are presented in Figures 1 and 2.

Results: 250 patients were included in the study. It was seen that 54.8% of the patients admitted in the spring season. The median age of the cases was determined to be 24 months (min-max=3-59). It was determined that 123 of the cases were between one month and two years old.

Figure 1. Distribution of patients' Vesikari Score, dehydration degree and duration of Hospitalization



		Number	Percentage
Vesikari Score	Mild (<5 points)	11	4,4
	Moderate (6-10 points)	117	46,8
	Severe (11 ≥ points)	122	48,8
Degree of dehydration	Mild	101	40,4
	Moderate	131	52,4
	Severe	18	7,2
Duration of hospitalization	<1 day	30	12,0
	1-2 days	160	64,0
	3-4 days	27	10,8
	5-6 days	16	6,4
	7-13 days	13	5,2
	14-29 days	3	1,2
	30 and more days	1	0,4

Figure 2. Distribution of total cost according to patients' age groups, Vesikari Score and dehydration degree

			Total Cost (US Dollars)		p
			Median	(Min-Max)	
Age	1 Month-6 Months		162,35	53,28-8294,79	0,013
	>6 Months-12 Ay		154,54	55,36-973,8	
	>12 Months -18 Ay		142,14	56,06-561,11	
	>18 Months -24 Ay		144,73	47,54-728,65	
	>24 Months -36 Ay		98,48	10,75-428,69	
	>36 Months -48 Ay		137,24	54,57-306,29	
	>48 Months -60 Ay		90,85	48,86-356,03	
Gender	Male		142,43	10,742-8294,79	0,335
	Female		118,36	47,54-1019,65	
Season of Admission	Winter		143,76	56,06-728,65	0,016
	Spring		119,46	10,75-561,11	
	Summer		275,26	60,48-8294,79	
	Autumn		121,56	47,54-973,80	
Degree of dehydration	Mild		81,33	10,75-561,11	<0.001
	Moderate		147,22	70,91-728,65	
	Severe		335,11	141,13-8294,79	
Vesikari Score	Mild (<5 points)		81,33	47,54-561,11	<0.001
	Moderate (6-10 points)		85,55	48,86-690,76	
	(11 ≥ points)		151,01	10,75-8294,78	

Conclusion: 80.3% of cases admitted to the pediatric emergency clinic due to RVGE were treated as inpatients. The high hospitalization rates in developing countries, the high cost of rotavirus vaccines and the limited vaccination rates in regions with low socioeconomic status significantly increase the treatment costs of RVGE. The inclusion of rotavirus vaccination in the national vaccination program will contribute to the reduction of these costs, as well as strengthen individual and community immunity and thus enable more efficient use of national health resources.

Keywords: Rotavirus, Vaccination, Vesikari, Dehidration, Gastroenteritis

OP - 022

EARLY NEONATAL OUTCOMES IN ADOLESCENT PREGNANCIES

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Aim: Adolescent pregnancy remains an important public health problem associated with increased maternal and neonatal morbidity. This study aimed to evaluate neonatal outcomes in adolescent pregnancies and compare them with those of adult pregnancies.

Material & Method: This retrospective study included adolescent pregnant women aged 14–19 years and adult pregnant women aged > 19 years who delivered at a quaternary care center between January 2024 and January 2026, along with their newborns. Maternal and neonatal data were retrospectively obtained from hospital records. Demographic characteristics, maternal clinical features, delivery outcomes, and neonatal outcomes were evaluated and analyzed using appropriate statistical methods.

Results: A total of 382 mothers and their newborns were included in the study: 175 (45.8%) in the adolescent group and 207 (54.2%) in the adult group.The mean maternal age was 18.68±0.87 years in the adolescent group and 25.37±6.13 years in the adult group (p < 0.001). Mean gestational age was significantly higher in the adolescent group than in the adult group (37.5±2.9 vs. 36.6±3.5 weeks, p=0.024), whereas the cesarean delivery rate was significantly higher in the adult group (55.4% vs. 69.1%, p=0.006). Mean head circumference at birth was significantly higher in the adolescent group (33.0±2.65 vs. 32.75±3.17 cm, p=0.038). Hypoglycemia was significantly less frequent in the adolescent group than in the adult group (5.1% vs. 10.1%, p=0.045). Birth weight, length, Apgar scores, umbilical cord blood gas parameters, need for delivery room resuscitation, respiratory morbidities, congenital anomalies, hypernatremic dehydration, hyperbilirubinemia, NICU admission, and mortality rates were similar between the groups. However, the requirement for phototherapy was significantly higher in the adolescent group (13.1% vs. 6.8%, p=0.027) (Table 1).

Table 1. Maternal and neonatal characteristics of the study groups

	Adolescent Group (n=175)	Adult Group (n=207)	p value
Maternal age (y), mean ±SD	18.68±0.87	25.37±6.13	<0,001
Gravidity, mean ±SD	1.34±0.59	1.98±1.27	<0,001

Parity, mean ±SD	1.46±2.6	1.67±2.5	0.366
Cesarean delivery (n, %)	97 (%55.4)	143 (%69.1)	0.006
Gestational age (weeks), mean ±SD	37.5±2.9	36.6±3.5	0.024
Birthweight (g), mean ±SD	2725.7±776.9	2650.1±868.8	0.098
Length (cm), mean ±SD	46.0±4.35	45.6±5.1	0.073
Head circumference (cm), mean ±SD	33.0±2.65	32.75±3.17	0.038
Apgar score 1st min, mean ±SD	8.04±1.544	7.7.±1.73	0.06
Apgar score 5th min, mean ±SD	9.03±1.32	8.81±1.29	0.66
Umbilical cord pH, mean ±SD	7.29±0.69	7.30±0.07	0.56
BE, mean ±SD	-3.57±4.19	-2.04±4.64	0.052
Delivery room resuscitation, n (%)	14 (%1.8)	21 (%10.1)	0.75
Respiratory distress syndrome, n (%)	8 (%4.6)	7 (%3.4)	0.25
Transient tachypnea of the newborn, n (%)	7 (%4)	4 (%1.19)	0.164
Congenital anomaly, n (%)	11 (%6.3)	9 (%4.3)	0.594
Hypoglycemia, n (%)	9 (%5.1)	21 (%10.1)	0.045
Hypernatremic dehydration, n (%)	5 (%2.86)	5 (%2.4)	0.06
Hyperbilirubinemia, n (%)	36 (%20.6)	37 (%17.9)	0.089
Hyperbilirubinemia requiring phototherapy, n (%)	23 (%13.1)	14 (%6.8)	0.027
NICU admission, n (%)	49 (%28)	58 (%28)	0.948
Mortality, n (%)	3 (%1.7)	4 (%1.9)	0.268

Conclusion: Most neonatal outcomes in adolescent pregnancies were similar to those in adult pregnancies. However, the higher requirement for phototherapy among newborns of adolescent mothers suggests the need for closer monitoring for hyperbilirubinemia. Regular antenatal follow-up and careful early postnatal evaluation may help reduce neonatal morbidity and improve short-term outcomes.

Keywords: Adolescent pregnancy, high-risk pregnancy, neonatal outcome, newborn, phototherapy

OP - 023

NEONATAL OUTCOMES FOLLOWING PROLONGED RUPTURE OF MEMBRANES

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Aim: To evaluate the association between PROM duration, early acute phase reactant (APR) positivity, and clinical outcomes in neonates admitted to the NICU with a history of PROM.

Material & Method: This retrospective study included neonates with a history of PROM who were admitted to the NICU between January 1, 2022, and January 1, 2025. PROM duration was analyzed both as a continuous variable and using a 48-hour threshold. APR positivity was defined according to postnatal age-adjusted C-reactive protein (CRP ≥10 mg/L) and procalcitonin cutoff values. Clinical outcomes included length of hospital stay (LOS) and respiratory status.

Results: The duration of PROM exhibited a weak but statistically significant positive correlation with LOS (Spearman's p=0.18, p=0.017). Categorical analysis using a 48-hour threshold demonstrated that neonates with > 48 hours of PROM exposure had a significantly prolonged hospital stay compared to those with < 48 hours (median 12 vs. 8 days, p < 0.001). APR positivity was detected in 63.2% of infants; however, no significant association was found between APR positivity and LOS (p=0.61). Similarly, no significant difference was observed between groups regarding respiratory morb idity.

Conclusion: In NICU-admitted neonates with PROM, duration of membrane rupture was associated with prolonged hospital stay, particularly among infants born at ≥34 weeks of gestation. Early APR positivity demonstrated limited value in predicting clinical burden in this high-risk population.

Keywords: Prolonged rupture of membranes, Neonatal intensive care unit, C-reactive protein, Procalcitonin

OP - 024

BLOOD GAS–ECHOCARDIOGRAPHY CORRELATION IN EARLY POSTNATAL RESPIRATORY INSTABILITY

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Aim: Early postnatal respiratory instability is a common cause of neonatal intensive care unit admission. This study investigated the association between early blood gas alterations and echocardiographic transitional findings in neonates with early postnatal respiratory instability.

Material & Method: This retrospective observational study included 22 neonates admitted to the neonatal intensive care unit with early postnatal respiratory instability. Blood gas samples obtained within approximately one hour before echocardiographic evaluation were analyzed together with echocardiographic transitional findings. Demographic characteristics, respiratory support requirements, blood gas parameters, echocardiographic findings, and clinical outcomes were evaluated. Statistical analyses were performed using chi-square, Fisher exact, and Mann–Whitney U tests. A p value of < 0.05 was considered statistically significant.

Results: A total of 22 neonates were included. Ten infants required respiratory support, while 12 remained in room air. Respiratory support was associated with cesarean delivery (p=0.015), delivery room oxygen requirement (p=0.009), surfactant administration (p=0.029), and delivery room respiratory support (p=0.019). These infants also had prolonged transition to room air ($p < 0.001$), delayed enteral feeding (p=0.004), and longer intravenous fluid requirement (p=0.003). Blood gas pH values were lower in the respiratory support group, without statistical significance (p=0.119). Additional echocardiographic findings beyond isolated PFO were observed in 3 infants. (Table 1).

Table 1. Comparison of demographic, respiratory, blood gas, echocardiographic and clinical characteristics according to respiratory support requirement

Variable	Respiratory Support (+) n=10	Respiratory Support (-) n=12	p value
Gestational age, weeks	37.0 (36.6–37.9)	38.5 (37.2–40.0)	0.069
Birth weight, g	2792.5 (2665–3372.5)	3417.5 (2730–3865)	0.222
Birth length, cm	49.5 (49–50.8)	52.2 (50–53.2)	0.022

Head circumference, cm	34.8 (34–36)	36.0 (35–36.1)	0.145
Cesarean delivery	10/10 (100%)	6/12 (50%)	0.015
Delivery room oxygen requirement	9/10 (90%)	3/12 (25%)	0.004
Surfactant administration	4/10 (40%)	0/12 (0%)	0.029
Delivery room respiratory support	6/10 (60%)	0/12 (0%)	0.003
Time to room air, days	6.0 (4–7)	1.0 (1–1)	<0.001
TPN duration, days	2.5 (1–4)	0 (0–0)	<0.001
IV fluid + enteral transition, days	3.0 (2–4)	0.5 (0–2)	0.003
Full enteral feeding day	7.0 (5–8.8)	1.5 (1–3)	0.004
Blood gas pH	7.38 (7.30–7.43)	7.41 (7.38–7.44)	0.119
Blood gas pH	7.38 (7.30–7.43)	7.41 (7.38–7.44)	0.119
Blood gas CO_2	39.5 (38.4–42.7)	35.7 (28.5–40.5)	0.156
Blood gas lactate	2.7 (1.9–3.3)	2.0 (1.4–3.1)	0.467
Blood gas HCO_3	22.1 (21.2–25.6)	24.5 (23.1–25.3)	0.716
Additional echocardiographic finding beyond isolated PFO	2/10 (20%)	1/12 (8.3%)	0.571
Antibiotic duration, days	10.0 (9–10)	8.5 (7–10)	0.313
NICU stay, days	10.0 (9–11.8)	9.0 (7.8–10.2)	0.335

Conclusion: Early postnatal respiratory instability may reflect impaired transitional cardiopulmonary adaptation in neonates requiring NICU admission. Lower blood gas pH values and transitional echocardiographic findings were more commonly observed among infants requiring respiratory support and prolonged nutritional transition. Combined evaluation of blood gas parameters and echocardiographic assessment may be useful during neonatal transition.

Keywords: Neonate, Blood Gas Analysis, Echocardiography, Respiratory Instability, Transitional Circulation

OP - 026

PREDICTIVE PERFORMANCE OF THE RSIG SCORE FOR INTENSIVE CARE UNIT ADMISSION AND TRANSFUSION REQUIREMENT IN PEDIATRIC TRAUMA PATIENTS

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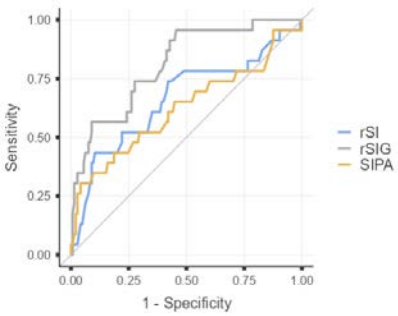
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Aim: The aim of this study was to compare the prognostic performance of the age-adjusted Pediatric Shock Index (SIPA), the Reverse Shock Index (rSI), and the index obtained by multiplying the Reverse Shock Index by the Glasgow Coma Scale (rSIG) in predicting clinical outcomes and transfusion requirements in pediatric patients with multiple trauma.

Material & Method: In this retrospective observational study, 168 pediatric patients with multiple traumatic injuries who presented to the Emergency Department of Başakşehir Çam and Sakura City Hospital between 1 June 2020 and 1 June 2022 were evaluated. Patients were divided into two groups based on their rSIG values: normal (n=85) and abnormal (n=83). rSIG classification was performed using age-specific cutoff points (1-6 years ≤13.1, 7-12 years ≤16.5, 13-17 years ≤20.1). Performance in predicting intensive care unit (ICU) admission, transfusion requirement, and surgical intervention was evaluated using ROC analysis.

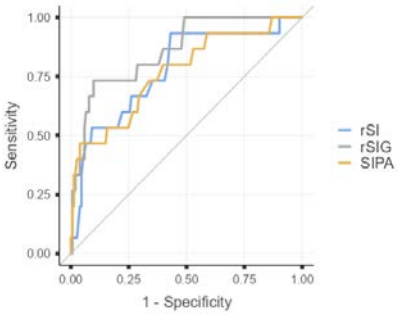
Results: The AUC of rSIG for predicting ICU admission was 0.811 (95% CI: 0.719-0.903), significantly higher than that of rSI (AUC: 0.664) and SIPA (AUC: 0.623) ($p < 0.001$) (Figure 1). The AUC of rSIG for predicting transfusion needs was 0.861 (95% CI: 0.767–0.956), while for surgical intervention it was 0.610 (95% CI: 0.524–0.696) (Figures 2 and 3). Logistic regression analysis showed that each 1-point increase in rSIG was associated with a 22% decrease in the odds of ICU admission (OR: 0.780, 95% CI: 0.652–0.933, $p = 0.006$).

Figure 1. Receiver operating characteristic (ROC) curves for predicting intensive care unit admission.



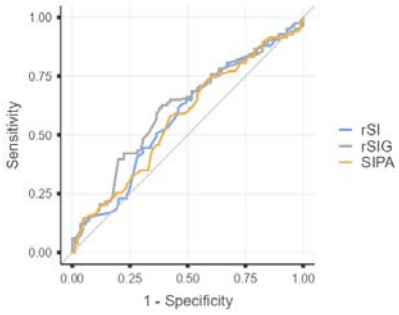
Note: ROC: receiver operating characteristic; rSI: Reverse Shock Index; rSIG: Reverse Shock Index multiplied by Glasgow Coma Scale; SIPA: Shock Index, Pediatric Age-Adjusted; ICU: intensive care unit.

Figure 2. Receiver operating characteristic (ROC) curves for predicting transfusion requirement.



Note: ROC: receiver operating characteristic; rSI: Reverse Shock Index; rSIG: Reverse Shock Index multiplied by Glasgow Coma Scale; SIPA: Shock Index, Pediatric Age-Adjusted

Figure 3. Receiver operating characteristic (ROC) curves for predicting surgical intervention.



Note: ROC: receiver operating characteristic; rSI: Reverse Shock Index; rSIG: Reverse Shock Index multiplied by Glasgow Coma Scale; SIPA: Shock Index, Pediatric Age-Adjusted.

Conclusion: rSIG demonstrated superior discriminatory performance compared with SIPA and rSI for predicting ICU admission. Although rSIG showed higher AUC values for transfusion requirement, these difference did not reach statistical significance. rSIG may serve as a practical tool for rapid risk stratification and transfer decisions in emergency departments.

Keywords: pediatric trauma, shock index, rSIG, SIPA, intensive care unit

OP - 027

ANTIMICROBIAL RESISTANCE PATTERNS AND CLINICAL OUTCOMES IN GRAM-NEGATIVE EARLY-ONSET NEONATAL SEPSIS

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Aim: Gram-negative early-onset neonatal sepsis (EOS) remains a significant cause of morbidity and mortality, particularly among preterm neonates. Increasing antimicrobial resistance has reduced the effectiveness of empirical antibiotic therapy and further complicated clinical management. This study aimed to evaluate the clinical characteristics, distribution of causative microorganisms, antimicrobial resistance patterns, and clinical outcomes of neonates with culture-proven gram-negative EOS.

Material & Method: This retrospective descriptive study included neonates diagnosed with culture-proven gram-negative early-onset sepsis and followed in a tertiary neonatal intensive care unit. Early-onset sepsis was defined as bloodstream infection occurring within the first 72 hours of life. Demographic and clinical characteristics, maternal risk factors, laboratory findings, causative microorganisms, antimicrobial resistance patterns, and clinical outcomes were retrospectively reviewed from medical records.

Results: A total of 44 neonates with culture-proven gram-negative EOS were included. Median gestational age was 29.0 (26.2–33.7) weeks and median birth weight was 1320 (862.5–2032.5) g. Of the infants, 86.4% were delivered by cesarean section. The most common maternal risk factors were intrapartum antibiotic exposure (65.9%), premature rupture of membranes (56.8%) and urinary tract infection (36.4%). Sepsis developed within the first 24 hours of life in 45.5% of cases. The most frequently isolated microorganisms were Escherichia coli (38.6%) and Klebsiella spp. (34.1%). Extended-spectrum beta-lactamase (ESBL) production was detected in 65.9% of isolates, while multidrug resistance and carbapenem resistance were observed in 50% and 27.3% of isolates, respectively. All Acinetobacter spp. isolates were multidrug-resistant and carbapenem-resistant. The 7-day mortality rate was 40.9%.

Conclusion: Gram-negative early-onset neonatal sepsis was associated with high antimicrobial resistance rates and substantial early mortality. The high prevalence of ESBL production and multidrug resistance highlights the importance of local microbiological surveillance in guiding empirical antibiotic therapy. Regular monitoring of resistance patterns in neonatal intensive care units may contribute to the optimization of empirical treatment strategies.

Keywords: Early-onset sepsis, Gram-negative bacterial infections, Neonate, multidrug resistance, neonatal intensive care unit

OP - 028

DIAGNOSTIC CHALLENGE, IMMUNOMODULATORY TREATMENT PATTERNS, AND OUTCOMES BEYOND MORTALITY IN PEDIATRIC HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS

Zeynep Kemer Aktas[1], Alper Koker[2], Funda Tayfun Kupesiz[3], Nazan Ulgen Tekerek[2], Elif Guler[3], Alphan Kupesiz[3], Elif Comak[4], Gulsah Kaya Aksoy[4], Murat Erdal[2], Mustafa Koyun[4], Sema Akman[4], Tugce Tural Kara[5], Oguz Dursun[2]

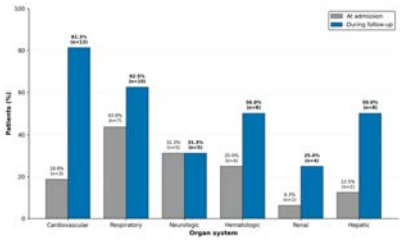
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Aim: Hemophagocytic lymphohistiocytosis (HLH) is a hyperinflammatory syndrome that is difficult to recognize in the pediatric intensive care unit (PICU) because of clinical overlap with sepsis, and it carries high mortality. We described the clinical features, etiologic distribution, organ-failure trajectory, initial immunomodulatory patterns, and short-term outcomes (mortality and functional status) of pediatric HLH cases managed in a tertiary PICU.

Material & Method: Sixteen PICU patients fulfilling HLH-2004 criteria between January 2018 and December 2023 were retrospectively analyzed. Disease severity was assessed by PELOD, PRISM-III, and the Vasoactive-Inotropic Score (VIS); functional outcome was assessed by the Pediatric Overall Performance Category (POPC). Continuous variables were compared with the Mann-Whitney U test (exact) and categorical variables with the Fisher exact test (two-sided).

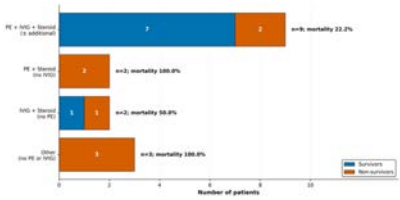
Results: Median age was 13.1 years (IQR 6.3–16.0); 50% (8/16) were adolescents (≥12 years) and 12.5% (2/16) were infants. Mortality was 50.0% (8/16); 75% had been followed under a presumptive sepsis diagnosis. Cardiovascular failure rose from 18.8% at admission to 81.3% during follow-up, and hepatic failure from 12.5% to 50.0% (Figure 1). Although VIS (median 53.5 vs 6.9), PELOD (14.0 vs 4.5), and invasive mechanical ventilation (5.5 vs 0.0 days) were markedly higher among non-survivors, none reached statistical significance; age did not differ between groups (p=0.959). Among categorical variables, only IVIG-containing initial therapy was significantly associated with survival (8/8 vs 3/8; p=0.026) (Figure 2); however, the high concurrent use of IVIG and plasma exchange precluded disentangling their independent effects. Of 8 survivors, 5 (62.5%) were discharged with normal functional status (POPC Category 1).

Figure 1. Comparison of organ failure proportions at admission and during follow-up in the patient cohort (N=16).



For each organ system, frequencies at admission (grey bars) and during follow-up (blue bars) are presented side by side; the percentage of patients and the absolute number (n) are indicated above each bar. Cardiovascular failure showed an approximately four-fold increase from admission to follow-up (from 18.8% to 81.3%) and hepatic failure an approximately four-fold increase (from 12.5% to 50.0%); the rate of neurologic failure remained unchanged during follow-up.

Figure 2. Initial immunomodulatory combination patterns and mortality (N=16).



Patients are grouped according to the immunomodulatory combination received as initial therapy. The blue segment of each bar indicates the number of survivors and the orange segment the number of non-survivors; the labels on the right show the total number of patients (n) and the observed mortality rate for each group. Mortality in the PE + IVIG + Steroid group (22.2%) was the lowest among the combination groups; however, this comparison cannot be interpreted causally because of sample-size limitations (each group ≤9) and confounding-by-indication. PE = plasma exchange (plasmapheresis); IVIG = intravenous immunoglobulin.

Conclusion: In this PICU cohort, pediatric HLH was frequently preceded by a working diagnosis of sepsis and characterized by progressive cardiovascular and hepatic dysfunction. All survivors received early multi-component IVIG-containing immunomodulatory therapy—an observation that warrants prospective evaluation.

Keywords: hemophagocytic lymphohistiocytosis, pediatric intensive care, plasmapheresis, functional outcome, intravenous immunoglobulin

OP - 029

INCIDENCE, ETIOLOGY AND RISK FACTORS OF RESPIRATORY DISTRESS IN TERM NEONATES: A 10-YEAR, SINGLE-CENTER EXPERIENCE

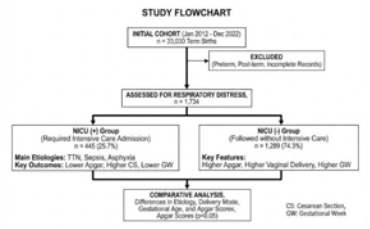
Şeyma İrem Afacan[2], Evrim Kıray Baş[1], Ali Bülbül[1], Ebru Türkoğlu Ünal[1], Alper Divarcı[1], Hasan Avşar[1], Sinan Uslu[1], Umut Zübarioğlu[1]

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Aim: Respiratory distress in a newborn is a common and challenging situation for any clinician both in terms of diagnosing and managing. Turkish Neonatology Associations's "Respiratory Distress Diagnosis, Treatment and Prevention Guideline for Term Newborns (2021)" indicates the absence of a national data about the frequency of respiratory distress in term newborns in Turkey. We aimed to find out the incidence, etiology and risk factors of respiratory distress of term newborns by doing this study.

Material & Method: Term newborns born at the University of Health Sciences Şişli Hamidiye Etfal Training and Research Hospital between January 1, 2012 and December 31, 2022, were included in the study. Respiratory distress incidence and etiology, management in the delivery room and newborn intensive care unit, need for resuscitation, and other epidemiologic factors related to mother and the newborn were evaluated. The patient selection process, initial cohort screening and group allocations are summarized in Figure 1.

Figure 1: Study Flowchart



Results: 1734 out of 33030 term babies, born between 2012-2022 in our faculity, had respiratory distress in their early postnatal hours. Incidence of respiratory distress in term newborns was found to be 5.29%. Most frequent diagnosis were TTN 354 (%20,42), septicemia 90 (%5,19), asphyxia 54 (%3,11), RDS 27 (%1,56), respectively. Need for hospitalization was found to be statistically higher in the 37-38 gestational week group compared to the ≥39 gestational week group (p=0.038). Need for hospitalization was found to be statistically higher in the cesarean delivery group (p=0.002). 1. and 5. Minute apgar score averages were found to be lower in hospitalized newborns(p=0,0001). Male term newborns were found to be more often hospitalized due to respiratory distress compared to female gender (p=0,012).

Conclusion: Respiratory distress incidence in term newborns is found to be 5.29%. The most common diagnosis was found to be transient tachypnea of newborn. Male gender, early term birth (birth at 37-38 gestational weeks), meconium stained amniotic fluid were found to be risk factors for hospitalization.

Keywords: respiratory distress, term neonate, incidence, transient tachypnea of the newborn, cesarean section

OP - 030

PREDICTING FACTORS FROM THE FIRST WEEK OF LIFE FOR SEVERE BPD DEVELOPMENT IN EXTREME PREMATURE INFANTS

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Aim: Bronchopulmonary dysplasia(BPD) incidence is still increasing with more immature infants surviving and stays as one of the main long term morbidity and mortality reason.There are many well defined risk factors for the development of BPD, but in this study we checked for the presence of some potential clinical and laboratory data as new risk factors in extremely preterm infants.

Material & Method: This study included preterm infants born at < 28 weeks of gestation who were admitted to our Neonatal Intensive Care Unit between January 2021 and December 2024. Infants who did not reach 36 weeks of postmenstrual age were excluded.Demographic characteristics, biochemical parameters at 24 hours of life, weight changes at 24 and 72 hours, presence of patent ductus arteriosus(PDA) and pulmonary hypertension(PH), and BPD status were recorded.Patients with moderate and severe BPD were classified as Group I(severe BPD group), while those with no BPD or mild BPD were classified as Group II(mild/no BPD).

Results: Sixty-nine patients were enrolled. Birth weight and gestational age were significantly lower in Group I (n=29) than Group II (n=40) (740±183g vs 953±227g and 25,8±1,3 vs 26,5±1,1wks)($p < 0.05$). SGA, preeclampsia, 3-day surfactant/inotrope needs, and 24-hour pulmonary hypertension rates were significantly higher in Group I ($p < 0.05$). Other demographic characteristics did not differ. At 24 hours, Group I had significantly lower platelets, albumin, and phosphorus levels, but higher MPV ($p < 0.05$). Greater 24-hour weight loss significantly associated with lower severe BPD incidence ($p < 0.05$).

Conclusion: Lung immaturity, SGA/preeclampsia-induced impaired vascular development, early surfactant/inotrope needs, and 24-hour pulmonary hypertension predict severe BPD.Lower platelets, albumin, phosphorus, and higher MPV support the role of inflammation, disrupted vascularization, and growth restriction in pathogenesis. Greater initial weight loss associated with less severe BPD suggests that optimal early fluid management prevents pulmonary edema, promoting lung development and helping identify high-risk preterms early.

Keywords: Bronchopulmonary dysplasia, preterm infants, albumin

OP - 031

REGIONAL PULMONARY AND CEREBRAL OXYGENATION IN BABIES WITH TRANSIENT TACHYPNEA OF THE NEWBORN: ASSOCIATIONS WITH LUNG ULTRASOUND SEVERITY AND PULMONARY HEMODYNAMICS

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Aim: Transient tachypnea of the newborn (TTN) is characterized by delayed clearance of fetal lung fluid, which can affect pulmonary hemodynamics and tissue oxygenation. The relationship between lung ultrasound severity, pulmonary artery acceleration time (PAT), and regional oxygenation remains incompletely understood. To investigate the associations among lung ultrasound score (LUS), pulmonary hemodynamics, pulmonary tissue oxygenation, and cerebral oxygenation in neonates with TTN.

Material & Method: A prospective observational study was conducted including 23 neonates with TTN and 21 healthy controls. Demographic characteristics, lung ultrasound findings, PAT, PET, eccentricity index measurements, regional pulmonary oxygenation (apical and lateral lung NIRS), and bilateral cerebral oxygenation were recorded.Correlation analyses were performed between LUS, pulmonary doppler measurements, pulmonary NIRS, and cerebral NIRS measurements.

Results: Twenty-three neonates with TTN and 21 healthy controls were enrolled.Neonates with TTN had gestational age (37±1.7vs.37.8 ±1.2 weeks) and birth weight (2995 ± 470 vs. 3140 ± 490 g) than controls. Total lung ultrasound scores were higher in the TTN group (4.7± 1.1 vs. 2.4±1.9).Lung ultrasound scores were higher in the TTN group,indicating greater pulmonary fluid burden and more pronounced respiratory involvement. Neonates with higher lung ultrasound scores demonstrated lower pulmonary artery acceleration times, suggesting increased pulmonary vascular loading.Regional pulmonary oxygenation measurements obtained by NIRS were generally lower in infants with more severe lung ultrasound abnormalities.Similarly, cerebral oxygenation values were lower in neonates with higher LUS scores,particularly in first 24 hours.Pulmonary and cerebral oxygenation measurements showed parallel trends throughout the monitoring period, with lower pulmonary oxygenation generally accompanied by lower cerebral oxygenation. Collectively, these findings suggest an association between pulmonary disease severity, pulmonary hemodynamics,and regional tissue oxygenation in neonates with TTN.

Conclusion: The observed relationships among lung ultrasound severity, pulmonary artery acceleration time, and regional oxygenation measurements suggest that delayed pulmonary fluid clearance in TTN may influence both pulmonary hemodynamics and tissue oxygenation during early neonatal adaptation.

Keywords: Transient tachypnea of the newborn; Lung ultrasound; Near-infrared spectroscopy; Cerebral oxygenation; Pulmonary artery acceleration time

OP - 032

EXAGGERATED EXTRAUTERINE GROWTH RESTRICTION IN VERY LOW BIRTH WEIGHT INFANTS WITH SUSPECTED COW'S MILK PROTEIN ALLERGY

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Aim: Optimal nutrition is crucial for growth and neurodevelopment in very low birth weight (VLBW) infants. Cow's milk protein allergy (CMPA) is increasingly recognized in preterm infants and may present with feeding intolerance, abdominal distension, and eosinophilia, often mimicking sepsis or necrotizing enterocolitis. This study aimed to evaluate the effects of dietary modifications for suspected CMPA on discharge growth parameters in VLBW infants.

Material & Method: VLBW infants hospitalized between January and December 2025 were retrospectively evaluated. Infants with congenital anomalies or death before discharge were excluded. Infants who developed feeding intolerance, abdominal distension, and eosinophilia (> 5%) without evidence of sepsis and whose symptoms resolved after discontinuation of human milk fortifier, maternal elimination diet, and initiation of hydrolyzed formula were classified as Group I (suspected CMPA). Remaining infants comprised Group II. Perinatal characteristics, nutritional outcomes, and anthropometric measurements were compared.

Results: Among 56 VLBW infants admitted, 44 met the inclusion criteria and were included in the analysis. Six infants were classified as Group I (suspected CMPA) and 38 as Group II. Gestational age was significantly lower in Group I (27.3 vs 30.1 weeks, $p < 0.05$), whereas birth anthropometric parameters were similar between groups. Group I achieved full enteral feeding later [42.5 (15–85) vs 15.0 (7–66) days, $p=0.003$], required longer total parenteral nutrition [32.0 (13–60) vs 11.0 (6–58) days, $p < 0.001$]. At discharge, weight and length percentiles and z-scores were significantly lower in Group I. Declines in weight and length z-scores from birth to discharge were greater in Group I ($p=0.020$ and $p=0.025$, respectively), whereas head circumference growth was relatively preserved.

Conclusion: VLBW infants with suspected CMPA requiring hydrolyzed formula exhibited delayed nutritional progression, poorer weight gain, and impaired linear growth, resulting in exaggerated extrauterine growth restriction at discharge. Close growth surveillance and tailored nutritional strategies may improve outcomes in this vulnerable population.

Keywords: Very low birth weight infant; Cow's milk protein allergy; Prematurity; Extrauterine growth restriction; Growth failure

OP - 033

COMPARATIVE ANALYSIS OF PRISM-III, PELOD-2, AND PHOENIX SEPSIS SCORES IN CRITICALLY ILL CHILDREN WITH CONFIRMED SEPSIS DIAGNOSES

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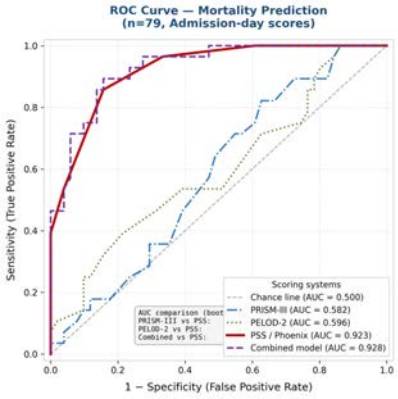
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Aim: To compare the mortality prediction performance of PRISM-III, PELOD-2, and Phoenix Sepsis Score (PSS) in PICU patients with confirmed sepsis, and to introduce an original multi-score calculator (1, 2, 3).

Material & Method: 79 patients with confirmed sepsis admitted to PICU between 05/2023–05/2026 were included. Scores were calculated using an original simultaneous calculator. Mann-Whitney U and chi-square tests were used for group comparisons. Mortality prediction was assessed by ROC analysis with bootstrap confidence intervals; optimal cut-offs were determined by Youden index.

Results: Mortality was 35.4% (n=28). Septic shock was present in all non-survivors vs 33.3% of survivors ($p < 0.001$). IMV, ECMO, and CRRT requirements were significantly higher in non-survivors. Lactate and albumin differed significantly between groups ($p < 0.001$ and $p=0.036$). PSS demonstrated superior discrimination (AUC: 0.923; 95% CI: 0.860–0.967) versus PRISM-III (AUC: 0.582) and PELOD-2 (AUC: 0.596), both $p < 0.001$ (Table 1). Optimal cut-off PSS ≥5 yielded sensitivity 85.7%, specificity 84.3%, NPV 91.5%. The combined model (AUC: 0.928) provided no significant additional benefit over PSS alone (ΔAUC: +0.006; $p=0.424$) (Figure 1).

Figure 1. ROC curves comparing the discriminative performance of PRISM-III, PELOD-2, Phoenix Sepsis Score (PSS), and a combined logistic regression model for in-hospital mortality prediction in critically ill children with confirmed sepsis (n=79).



AUC: area under the curve; ROC: receiver operating characteristic. Optimal cut-off values were determined using the Youden index. Confidence intervals were calculated by 1,000-iteration bootstrap resampling.

Table 1. Pairwise AUC Comparisons Between Scoring Systems for In-Hospital Mortality Prediction (Bootstrap Analysis)

Comparison	**AUC Values**	**ΔAUC**	**p-value**	**p-value**
PRISM-III vs PELOD-2	0.582 vs 0.596	−0.014	0.828	No significant difference
PRISM-III vs PSS	0.582 vs 0.923	−0.341	**< 0.001 ***	**PSS significantly superior**
PELOD-2 vs PSS	0.596 vs 0.923	−0.327	**< 0.001 ***	**PSS significantly superior**
Combined vs PSS	0.596 vs 0.923	+0.006	**0.424**	**Combined model offers no additional benefit**

* p < 0.05, statistically significant. p-values calculated by bootstrap resampling (n = 1,000 iterations). ΔAUC: difference between AUC values. PSS: Phoenix Sepsis Score. AUC: area under the receiver operating characteristic curve.

Conclusion: PSS markedly outperformed PRISM-III and PELOD-2 in this confirmed sepsis cohort. The lower performance of the latter two scores likely reflects our cohort's unique composition ,exclusively confirmed sepsis cases with predominantly septic shock, unlike heterogeneous suspected-infection populations in which these scores were originally validated, where reported AUC values range widely (0.59-0.90) depending on cohort composition (4). The combined model offered no incremental benefit, suggesting PSS alone is sufficient. These findings support PSS ≥5 as the primary mortality risk stratification tool in high-acuity pediatric sepsis populations.References: 1. Pollack MM, Patel KM, Ruttimann UE. PRISM III: an updated Pediatric Risk of Mortality score. Crit Care Med 1996;24(5):743-52. 2. Leteurtre S, Duhamel A, Salleron J, Grandbastien B, Lacroix J, Leclerc F; Groupe Francophone de Réanimation et d'Urgences Pédiatriques (GFRUP). PELOD-2: an update of the PEdiatric logistic organ dysfunction score. Crit Care Med 2013;41(7):1761-73. 3. Sanchez-Pinto LN, Bennett TD, DeWitt PE, Russell S, Rebull MN, Martin B, et al; Society of Critical Care Medicine Pediatric Sepsis Definition Task Force. Development and validation of the Phoenix criteria for pediatric sepsis and septic shock. JAMA 2024;331(8):675-86. 4. Xing D, Xiao Z, Liu B, Xu J, Liang Y. Comparison of Phoenix Sepsis Score and traditional scoring systems in predicting mortality in PICU patients with suspected infection. Sci Rep 2026;16:16060.

Keywords: PRISM-III, PELOD-2, Mortality, Phoenix Sepsis Score

OP - 034

ASSOCIATION BETWEEN SHIFT FREQUENCY AND DYSBIOSIS-RELATED SYMPTOMS AMONG EMERGENCY DEPARTMENT PERSONNEL WORKING IN ROTATING SHIFTS

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Aim: Circadian rhythm disruption may contribute to alterations in the gut microbiota and the development of dysbiosis. Night shifts and rotating work schedules, in particular, may lead to the emergence of gastrointestinal and immunological symptoms among healthcare workers. This study aimed to evaluate the relationship between monthly shift frequency and dysbiosis-related gastrointestinal symptoms as well as allergic symptom burden among emergency department personnel working in rotating shifts.

Material & Method: This cross-sectional study included 336 healthcare professionals working in the adult and pediatric emergency departments of Bursa City Hospital. Participants completed an online questionnaire assessing shift frequency, bowel function changes, gastrointestinal symptom management, allergic symptom burden measured by the Mini Rhinoconjunctivitis Quality of Life Questionnaire (Mini-RQLQ), and anxiety levels measured by the Generalized Anxiety Disorder-7 (GAD-7). Statistical analyses included chi-square, ANOVA, Kruskal–Wallis, and Spearman correlation tests.

Results: Among the participants, 41.7% reported working more than five shifts per month. Evaluation of post-shift bowel function revealed that 26.5% experienced constipation, while 15.8% reported increased bowel activity. Gastrointestinal dysfunction increased significantly with higher monthly shift frequency ($p < 0.001$). Mini-RQLQ assessments demonstrated significant increases in nasal symptoms, ocular symptoms, activity limitations, and total quality-of-life scores as shift frequency increased (all $p \leq 0.002$). Symptom burden was particularly pronounced among employees working more than five shifts monthly. While no significant association was found between professional experience and symptom scores, symptom burden was significantly associated with current shift intensity.

Conclusion: Increased shift frequency is associated with dysbiosis-related gastrointestinal symptoms and a higher allergic symptom burden among emergency department personnel working in rotating shifts. These findings suggest that circadian rhythm disruption may affect not only sleep and fatigue but also gut health and quality of life. Further prospective studies investigating the gut–brain axis and microbiota-related mechanisms in healthcare workers are warranted.

Keywords: Shift Work; Circadian Rhythm; Dysbiosis; Gastrointestinal Symptoms; Emergency Healthcare Workers

OP - 035

TRANSCOBALAMIN II DEFICIENCY IN AN ADOLESCENT: DEEP PANCYTOPENIA DUE TO TREATMENT NON-COMPLIANCE AND LITERATURE REVIEW

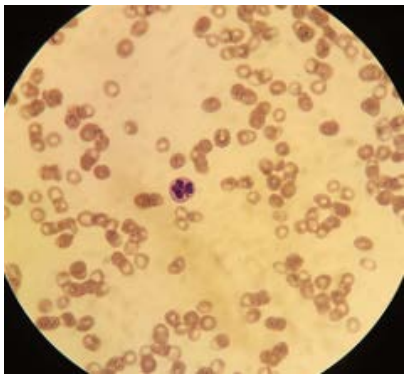
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Aim: This report describes 13-y patient with a known diagnosis who presented with life-threatening pancytopenia and severe menorrhagia following treatment noncompliance. Despite normal serumB12 and homocysteine the patient showed rapid hematological recovery upon resuming parenteral cyanocobalamin therapy. This case emphasizes the necessity of lifelong parenteral treatment and the importance of clinical suspicion even when metabolic markers appear normal.

Case: A 13-y girl presented petechial rash, fever, menstrual bleeding lasting 15 days. Her medical history was significant for TCII deficiency, for which she had been prescribed weekly intramuscular(IM) vitaminB12 injections. However, further history revealed that the patient had recently been noncompliant, occasionally skipping doses or attempting to take the medication orally. Upon admission, the patient exhibited severe hematological distress but no neurological deficits. Peripheral blood smear demonstrated neutrophil hypersegmentation (Figure 1). Bone marrow aspiration revealed megaloblastic changes with no evidence of malignancy. The patient was started on a re-induction regimen of cyanocobalamin. Following parenteral B12therapy, patient showed rapid and dramatic hematological response. The menorrhagia ceased, and the patient was discharged on a maintenance dose of 1mgIM cyanocobalamin weekly.

Figure 1. Hypocellular peripheral patch and neutrophil hypersegmentation



Results: VitaminB12 levels are normal because the majority of circulating B12 is bound to haptocorrin. Furthermore, while elevated homocysteine and methylmalonic acid(MMA) are standard metabolic markers, our case highlights that these markers can occasionally remain within normal limits. This underscores the fact that clinical symptoms and a history of the disorder should take precedence over biochemical markers in known patients. Regarding bonemarrow findings, megaloblastic changes are the hallmark of TCIIdeficiency. The relapse in this patient was directly linked to the transition from parenteral to oralB12 and general noncompliance. Sources confirm that oral treatment is generally insufficient in TCIIdeficiency because transport mechanism for absorption and cellular entry is bypassed only by highdose parenteral administration.

Conclusion: This case reinforces that lifelong, uninterrupted parenteral treatment is mandatory to prevent life-threatening hematological relapses, especially during the transition into adolescence when treatment compliance may decline.

Keywords: Intramuscular treatment, Adolescent, Transcobalamin-2 deficiency, malignancy

OP - 036

BUDGERIGAR-INDUCED HYPERSENSITIVITY PNEUMONITIS MISDIAGNOSED AS ASTHMA: A CASE REPORT

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Aim: Hypersensitivity pneumonitis (HP) is a rare interstitial lung disease caused by inhalation of environmental antigens. In children, it most commonly presents with dry cough and exertional dyspnea. We report a case of budgerigar-associated HP initially misdiagnosed as asthma.

Case: A 12-year-old girl presented with progressively worsening exertional dyspnea over two years. She had been treated elsewhere with inhaled corticosteroids and long-acting beta-agonists for asthma without clinical improvement. She denied cough, sputum production, and fever. Detailed environmental history revealed close contact with a pet budgerigar kept at home for approximately three years. On examination, oxygen saturation was 96% on room air. Breath sounds were diminished bilaterally, while tachypnea and digital clubbing were absent.

Results: Pulmonary function tests demonstrated severe restrictive impairment (FEV1 26%, FVC 32%, FEV1/FVC 93.6%). High-resolution computed tomography (HRCT) showed bilateral mosaic attenuation, air trapping, ground-glass opacities, and centrilobular nodules (Figure 1). Bronchoalveolar lavage revealed a CD4/CD8 ratio of 0.76, consistent with lymphocytic alveolitis. Infectious, granulomatous, immunologic, and autoimmune disorders were excluded. Serum precipitating antibodies against budgerigar, pigeon, and dove antigens were positive. Based on clinical, radiological, and immunological findings, HP was diagnosed. Following complete antigen avoidance and two courses of pulse methylprednisolone, exercise tolerance improved. Follow-up pulmonary function tests showed improvement in FEV1 from 26% to 32% and FVC from 32% to 39%.

Figure 1. Axial high-resolution computed tomography(HRCT)



Axial high-resolution computed tomography (HRCT) image showing bilateral diffuse centrilobular micronodules and mild patchy ground-glass opacities, predominantly involving the upper

Conclusion: Although rare in childhood, HP may be mistaken for asthma. In children with progressive dyspnea and restrictive pulmonary function impairment despite appropriate inhaled therapy, detailed environmental exposure history is essential. In this case, the diagnosis was established without surgical lung biopsy based on bird exposure, characteristic HRCT findings, and positive serum precipitating antibodies. Early recognition and antigen avoidance are critical to prevent irreversible lung damage.

Keywords: Hypersensitivity Pneumonitis, Budgerigar Exposure, Interstitial Lung Disease, Asthma Misdiagnosis

OP - 037

DIFFUSE PULMONARY ARTERIOVENOUS MALFORMATIONS IN PEDIATRIC HEREDITARY HEMORRHAGIC TELANGIECTASIA

Nesrin Havare[1], Gülay Bilgin[1], Sinem Can Oksay[1], Saniye Girit[1]

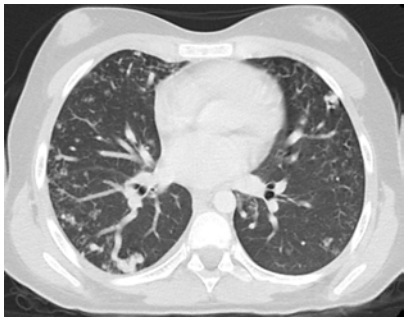
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Aim: Hereditary hemorrhagic telangiectasia (HHT) is a rare vascular disorder associated with arteriovenous malformations. Diffuse pulmonary AVMs are uncommon and may cause severe hypoxemia. We present a child with diffuse PAVMs and challenging disease management.

Case: A 9-year-old girl was referred with progressive dyspnea, cyanosis, and exercise intolerance. Her medical history was notable for recurrent epistaxis since 18 months of age and left hemiparetic cerebral palsy diagnosed at 2 years of age. Physical examination revealed oxygen saturation of 82% on room air, marked cyanosis, digital clubbing, and telangiectatic lesions on the oral mucosa. Breath sounds were normal on auscultation.

Results: Laboratory evaluation demonstrated secondary polycythemia (hemoglobin 17.8 g/dL). Pulmonary function tests and transthoracic echocardiography were normal. Contrast echocardiography demonstrated rapid intrapulmonary right-to-left shunting. Computed tomography angiography revealed bilateral diffuse pulmonary microvascular malformations and extensive tortuous vascular structures consistent with diffuse PAVMs (Figure 1). Brain magnetic resonance imaging demonstrated a cystic lesion compatible with previous intracranial hemorrhage, whereas abdominal screening was unremarkable. Genetic testing identified a pathogenic mutation in the ENG gene, confirming the diagnosis of HHT.Multidisciplinary evaluation concluded that embolization and surgical intervention were not feasible because of the diffuse distribution and small caliber of the lesions. Bevacizumab therapy was initiated; however, no meaningful improvement in oxygenation or exercise capacity was observed. During follow-up, hypoxemia progressed, with oxygen saturation declining to 65%, accompanied by significant growth failure. Lung transplantation was considered but declined by the family.

Figure 1. Axial Chest CT Angiography Demonstrating bilateral diffuse pulmonary arteriovenous malformations.



Conclusion: HHT should be considered in children with recurrent epistaxis, unexplained cyanosis, and severe hypoxemia. Diffuse PAVMs represent a rare and challenging phenotype in which conventional interventions may not be feasible. Early diagnosis, genetic confirmation, screening for extra-pulmonary involvement, and multidisciplinary management are essential for optimizing outcomes.

Keywords: Pulmonary Arteriovenous Malformation Hypoxemia ENG Mutation Pediatrics

OP - 039

THE EFFECTIVENESS OF PARTIAL SPLENIC EMBOLIZATION IN HYPERSPLENISM AND VARICEAL BLEEDING IN CHILDREN

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Aim: Partial splenic artery embolization (PSAE) is a significant alternative for managing hypersplenism, preventing esophageal variceal bleeding, and avoiding the risks ofsplenectomy in cases where surgery is infeasible. This study aims to present the short- andlong-term outcomes of PSAE performed on 11 children.

Case: Eleven patients, who were being followed up with a diagnosis of portal hypertension(PHT)and hypersplenism and underwent interventional splenic artery embolization, were includedin the study.Demographic data,clinical courses and complications were evaluated. Afterbeing stabilized post-procedure,the patients were monitored every three months withabdominal ultrasound (USG), blood counts, and liver function tests The children werefollowed for 1 to 48 months (median 25th-75th percentile: 6-36 months)

Results: Eleven patients(7 males)were included in the study.Ages ranged from 1 to 17 years (medianage 5 years). All patients had hypersplenism and 8 patients had recurrent esophagealvariceal bleeding. Underlying diseases included extrahepatic PHT in 7 patients(3 with portalvein thrombosis) and intrahepatic PHT in 4 patients due to biliary atresia,Wilson's disease,Gaucher disease and bile acid synthesis disorder Early complications commonly observedwere minor issues such as fever and pain. The average hospital stay due to thesecomplications was 22 days.No cases of severe sepsis or splenic abscess were observedfollowing partial splenic artery embolization.Following PSAE,hematological values normalized in 10 of 11 patients with hypersplenism.Recurrence observed in only one patient. The frequency of esophageal variceal bleedingdecreased from an average of 1.8 per year to 0.25 ($p<0.05$). Some patients experienced nobleeding during follow-up periods ranging from 4 to 40 months. Variceal bleeding significantlyimproved in patients with portal vein thrombosis.

Figure 1

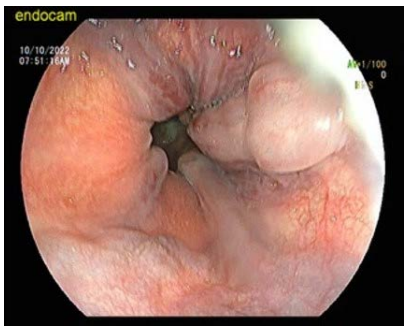


Figure 1. Pre-embolization image

Figure 2



Figure 2. Post-embolization image

Conclusion: This study demonstrates that PSAE is an important method in managing portal hypertensionin selected patients, effectively managing hypersplenism and variceal bleeding whilereducing the need for splenectomy.

Keywords: VARICEAL BLEEDING, PORTAL HYPERTENSION, SPLENIK ARTERY EMBOLIZATION

OP - 040

GASTROINTESTINAL-RENAL INVOLVEMENT IN IGA VASCULITIS: THREE CASES

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Aim: IgA vasculitis, formerly known as Henoch-Schönlein purpura, is the most common small-vessel vasculitis in childhood.Although it usually follows a self-limiting course, it may present as a multisystem disease involving the skin, joints, gastrointestinal system, and kidneys.The optimal treatment approach for gastrointestinal and renal involvement remains unclear.In this study, we aimed to evaluate management strategies through three cases of IgA vasculitis with severe gastrointestinal and/or renal involvement.

Case: Three patients diagnosed with IgA vasculitis in 2024 were included.The patients were 6, 7, and 13 years old; two were male and one was female. All patients presented with abdominal pain and non-blanching purpuric rash.Gastrointestinal involvement was present in all cases. One patient required surgical manual reduction due to recurrent ileoileal intussusception.Two patients developed intestinal ischemia/perforation and underwent intestinal resection with stoma formation.During follow-up, hematochezia, abdominal distension, intra-abdominal free fluid, acute abdomen findings, and the need for intensive immunosuppressive treatment were prominent.Two patients developed proteinuria/IgA vasculitis nephritis, two developed nephrolithiasis-caliectasis/hydronephrosis, one developed pancreatitis, and one developed appendicitis. Heterozygous M694V mutation was detected in one patient, and CMV PCR positivity was detected in another.

Results: All patients received pulse methylprednisolone and colchicine. Intravenous immunoglobulin and plasmapheresis were administered to two patients.Additional treatments included azathioprine, mycophenolate mofetil, and cyclophosphamide in selected cases. One patient required intensive care.During follow-up, one patient continued outpatient follow-up with colchicine, while the other two continued follow-up without medication or with reduced treatment.

Conclusion: In IgA vasculitis, persistent abdominal pain, hematochezia, abdominal distension, and deterioration in general condition should alert clinicians to the possibility of intussusception, ischemia, and perforation.Since renal involvement determines long-term prognosis, regular monitoring of proteinuria, blood pressure, and renal function tests is required.In the absence of a standardized treatment algorithm, a patient-centered, early multidisciplinary, and, when necessary, aggressive treatment approach may reduce morbidity.

Keywords: Pediatric IgA vasculitis, gastrointestinal involvement, renal involvement, perforation

OP - 041

CLINICAL RISK FACTORS FOR PROLONGED HOSPITAL STAY, REINTUBATION REQUIREMENT, AND VENTILATOR DEPENDENCY IN NEONATES UNDERGOING ARTERIAL SWITCH OPERATION

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Aim: This study was designed to investigate the relationship between demographic, clinical, and procedural factors and postoperative complications in neonates undergoing arterial switch operation

Material & Method: A retrospective analysis was performed on 30 neonates who underwent ASO.The evaluated variables included gestational age, birth weight (defined as low birth weight when < 2,500 grams), age at surgery, mode of delivery, congenital anomalies, cardiopulmonary bypass(CPB) duration, extracorporeal membrane oxygenation(ECMO) use, infections, neurodevelopmental sequelae, preoperative and postoperative laboratory values, and whether balloon atrial septostomy(BAS) was performed. Multivariate logistic regression and Cox proportional hazards models were used to identify risk factors for prolonged length of stay (LOS), reintubation requirement, and prolonged ventilator support. Subgroup analyses were performed to evaluate interactions between predictors.

Results: Multivariate analysis identified several significant predictors associated with adverse outcomes. For prolonged LOS, strong associations were found with low birth weight (OR 2.3;$p < 0.01$), congenital anomalies(OR 1.9; p=0.02), additional surgical procedures performed during ASO (OR 3.1; $p < 0.001$), and prolonged CPB duration (> 180 minutes) (OR 2.8; $p < 0.01$).The need for reintubation was independently associated with prolonged preoperative ventilation exceeding 48 hours (OR 2.5; p=0.01),ECMO use (OR 3.8; $p < 0.001$),postoperative infections(OR 2.7; p=0.03), and prolonged CPB duration (OR 2.4; p=0.02).Prolonged ventilator support was associated with prematurity(OR 2.2; p=0.04), elevated preoperative creatinine levels (OR 1.5; p=0.03), preoperative ECMO use (OR 3.5;$p < 0.001$), older age at surgery (> 10 days) (OR 1.8; p=0.04), and prolonged CPB duration (OR 2.6; p=0.01).Notably, balloon atrial septostomy (BAS) was not significantly associated with prolonged LOS, reintubation, or ventilator dependency ($p > 0.05$), suggesting that the benefit of BAS may be more related to preoperative stabilization rather than postoperative recovery.

Conclusion: Multiple clinical factors influence postoperative outcomes after ASO. Early surgical intervention, minimizing CPB duration, and multidisciplinary management of high-risk neonates may improve postoperative recovery.

Keywords: Arterial switch operation, prolonged hospital stay, neonate

OP - 042

THE CALLY SCORE MAY BE ASSOCIATED WITH DISEASE SEVERITY AND MALNUTRITION IN CHILDREN WITH CHRONIC LIVER FAILURE

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Aim: Objective:The C-reactive protein (CRP), albumin, and lymphocyte count–based CALLY score is a novel biomarker that reflects inflammation, nutritional status, and immune response together. In this study, the relationship of the CALLY score with disease severity and nutritional status in pediatric liver patients was investigated.

Material & Method: Patients evaluated retrospectively were divided into three groups according to the CALLY score (< 1, 1–2, > 2). PELD score, weight Z score, height Z score, and degree of malnutrition were compared between the groups. Kruskal–Wallis and chi-square tests were used in statistical analyses.

Results: A total of 76 patients were included in the study (Table 1). A statistically significant difference was found between the groups in terms of PELD score (p=0.007) (Table 2), weight Z score (p=0.008), height Z score (p=0.019), and degree of malnutrition (p=0.048). In patients with low CALLY scores, higher PELD scores and worse nutritional parameters were observed (Table 3).

Table 1. Distribution of Diseases in the Study Population

Table 1. Distribution of Diseases in the Study Population

Disease Diagnosis	n	%
Biliary atresia	34	44.7
Autoimmune hepatitis	12	15.8
ALF (Acute liver failure)	10	13.2
Cryptogenic cirrhosis	7	9.2
Wilson disease	7	9.2
PFIC (all types)	6	7.9
Alagille syndrome	4	5.3
Congenital hepatic fibrosis	3	3.9

Crigler-Najjar type 1	4	5.3
Caroli disease	3	3.9
Primary hyperoxaluria	2	2.6
Portal vein thrombosis	2	2.6
Abernethy malformation	2	2.6
Glycogen storage disease	2	2.6
Budd-Chiari syndrome	1	1.3
Citrullinemia type 1	1	1.3
HCC	1	1.3
Total	76	100

Table 2. PELD Score According to CALLY Groups

Table 2. PELD Score According to CALLY Groups

Group	n	PELD score (Median [IQR])	p value
CALLY <1	24	18 (14–24)	
CALLY 1–2	28	12 (9–16)	
CALLY >2	24	8 (6–11)	
Overall comparison			0.0075

Table 3. Distribution of Malnutrition According to CALLY Groups

Distribution of Malnutrition According to CALLY Groups

Malnutrition	CALLY <1 n (%)	CALLY 1–2 n (%)	CALLY >2 n (%)	p value
Normal	3 (12.5%)	8 (28.6%)	12 (50%)	
Mild	5 (20.8%)	9 (32.1%)	7 (29.2%)	
Moderate	9 (37.5%)	7 (25%)	4 (16.7%)	
Severe	7 (29.2%)	4 (14.3%)	1 (4.1%)	
Overall comparison				0.048

Conclusion: The CALLY score is a simple and effective biomarker that reflects both disease severity and nutritional status in pediatric liver patients.

Keywords: CALLY score, pediatric liver disease, PELD, malnutrition

OP - 043

FROM SKIN TO SIGHT: OCULAR ASSOCIATIONS OF CUTANEOUS CAPILLARY HEMANGIOMAS IN PEDIATRIC PATIENTS

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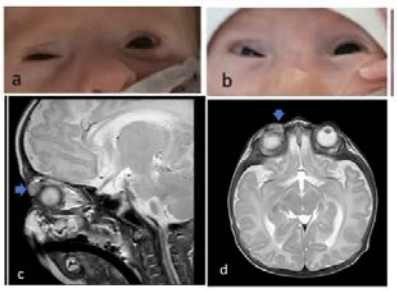
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Aim: To investigate ocular findings associated with cutaneous capillary hemangiomas in pediatric patients.

Material & Method: In this retrospective study, medical records of cases identified during routine ophthalmic examinations or retinopathy of prematurity (ROP) screening were reviewed. Demographic characteristics, lesion location and extent, and ocular findings were analyzed. Ocular assessments included anterior segment and fundus examinations, refraction, and, when available, imaging studies.

Results: The mean age of the patients was 15 ± 8.7 months (range, 1–25 months). A total of 287 patients had documented cutaneous lesions in the head region; 148 lesions were located in the periocular region (deep orbital hemangioma shown in Figure 1 and midline, symmetric eyelid involvement shown in Figure 2). Multiple lesions were present in 78% (n = 224) of cases. Among the ocular findings, refractive errors—predominantly astigmatism—were the most common, occurring in 55% (n = 158) of patients. Other findings included periocular skin dryness or irritation in 17% (n = 49), eyelid asymmetry, swelling, or ptosis in 11% (n = 32), strabismus in 10% (n = 29), proptosis in 8% (n = 23), and posterior segment findings or vascular anomalies in 1% (n = 3) (cutaneous hemangioma accompanied by choroidal vascular lesions; Figure 3). Intracranial lesions were present in 2.8% (n = 8) of patients

Figure 1. A deep-seated hemangioma in the right orbit with associated right-sided ptosis, detected during retinopathy of prematurity (ROP) screening.



(a) Eyelid appearance at 39 weeks of gestational age before therapy. (b) Eyelid appearance at 40 weeks of gestational age. (c) Sagittal orbital magnetic resonance imaging (MRI). (d) Axial orbital MRI; blue arrows indicate the location and extent of the mass.

Figure 2. A patient with a midline defect and infantile spasms.



(a) Neonatal period and (b) approximately 1 year of age, demonstrating midline and symmetric eyelid involvement. (c) Sagittal MRI shows a markedly thinned corpus callosum, most prominent at the genu (white arrow). (d) A vascular lesion causing signal void is observed at the level of the right mastoid/otic capsule (purple arrow).

Figure 3. A 2-month-old patient with cutaneous and ocular hemangiomas.



(a) At 1 month of age, a hemangioma is noted in the mandibular region. (b) By 2 months, the lesion has increased in size and become more elevated. (c) A large hemangioma is visible on the medial upper thigh. Wide-field fundus imaging of the right eye demonstrates a round-to-oval, dark choroidal hemangioma located near the macula, measuring approximately four optic disc diameters. (d) At 1 month, the lesion appears well-defined. (e) By 2 months, evident enlargement with blurred margins is observed. (f) Orbital ultrasonography reveals thickening of the choroidal vasculature.

Conclusion: Previous studies indicate that infantile hemangiomas are not randomly distributed, with a marked predilection for the midline face and periocular region, where a large proportion cluster along the ocular axis; this pattern corresponds to the facial segmentation into S1, S2, S3, and S4. The periorbital area, located at the junction of these segments, is characterized by relatively thin skin and limited subcutaneous fat, factors that may contribute to both lesion predilection and clinical impact. Importantly, cutaneous capillary hemangiomas, even when located outside the periocular region, may be associated with a spectrum of ocular findings in pediatric patients. Careful ophthalmic evaluation is therefore warranted in all cases, and incorporation of ocular assessment into routine pediatric screening may facilitate early detection of vision-threatening conditions and improve clinical outcomes.

Keywords: Capillary hemangioma, Ocular manifestations, Pediatric ophthalmology, Refractive errors, Strabismus

OP - 044

LOW-DOSE CARDIAC CTA IN MAPCA MAPPING: AGREEMENT ANALYSIS WITH CATHETER ANGIOGRAPHY

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Aim: To compare the diagnostic accuracy of prospective ECG-triggered low-dose cardiac computed tomography angiography (CTA) with catheter angiography in pediatric patients with congenital heart disease and major aortopulmonary collateral arteries (MAPCAs), and to evaluate its value for transcatheter and pre-surgical planning.

Material & Method: This retrospective single-center study included 171 pediatric patients evaluated between January 2019 and December 2025. All patients underwent prospective ECG-triggered low-dose cardiac CTA before catheter angiography for preprocedural roadmap planning. Catheter angiography served as the reference standard. MAPCA number, origin, and diameter on CTA were compared with catheter angiography. Agreement was assessed using Spearman's correlation coefficient, intraclass correlation coefficient (ICC), Cohen's κ, and Bland–Altman analysis.

Results: Median age was 56 months (IQR: 12–84), and median body weight was 16 kg (IQR: 7–18). Diagnoses included tetralogy of Fallot (30.4%), complex congenital heart disease (27.4%), pulmonary atresia with ventricular septal defect (18.7%), transposition of the great arteries (TGA, 13.4%), double-outlet right ventricle (7%), and congenitally corrected TGA (3%). A total of 711 MAPCAs were evaluated, with a median of 4 MAPCAs per patient. MAPCAs originated from the descending thoracic aorta (75%), aortic arch (12.9%), and subclavian arteries (12.1%). Median MAPCA diameter was 2.39 mm (IQR: 1.87–3.01) on CTA and 2.29 mm (IQR: 1.75–2.99) on catheter angiography. Agreement was high (Spearman ρ=0.989, $p < 0.001$; ICC=0.990; exact MAPCA count agreement 94.7%; Cohen's κ=0.96). Bland–Altman mean bias was 0.079 mm (95% limits of agreement, −0.294 to 0.451 mm). Median dose-length product was 44.1 mGy·cm (IQR: 39.9–49.9).

Conclusion: Prospective ECG-triggered low-dose cardiac CTA shows high agreement with catheter angiography for pediatric MAPCA mapping and is reliable for pre-procedural transcatheter roadmapping and pre-surgical assessment of MAPCA number, origin, and anatomy. In selected patients, CTA alone may suffice as a non-invasive pre-surgical imaging modality. Integration into transcatheter procedures may reduce fluoroscopy, contrast, and procedural time; prospective studies are warranted.

Keywords: Pulmonary atresia, MAPCAs, computed tomography angiography, congenital heart disease, transcatheter intervention

OP - 045

DEVELOPMENT AND VALIDATION OF A PREDICTIVE MODEL FOR ACUTE KIDNEY INJURY IN NEONATES UNDERGOING ARTERIAL SWITCH OPERATION

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Aim: Acute kidney injury (AKI) is a common complication in neonates undergoing arterial switch operation (ASO), with an incidence of up to 50%, and is associated with increased morbidity, prolonged hospitalization, and higher mortality. Early identification of high-risk patients may enable targeted interventions and improve outcomes. This study aimed to develop and validate a predictive model for AKI in neonates undergoing ASO.

Material & Method: A retrospective analysis was performed on 30 neonates who underwent ASO. Collected variables included gestational age, birth weight, cardiopulmonary bypass (CPB) duration, preoperative extracorporeal membrane oxygenation (ECMO) use, early postoperative fluid overload, postoperative serum creatinine changes, and infection status. AKI was defined according to Kidney Disease: Improving Global Outcomes (KDIGO) criteria. A logistic regression model was constructed due to its interpretability and suitability for moderate sample sizes.

Results: The model achieved 76.3% accuracy, 78.5% sensitivity, 74.2% specificity, and a ROC-AUC of 0.82. Prolonged CPB duration (> 120 minutes) emerged as the strongest predictor of AKI. A postoperative serum creatinine increase > 50% was also strongly associated with AKI and reflected early renal dysfunction. Lower gestational age and birth weight increased susceptibility, indicating higher vulnerability in preterm and low birth weight neonates. Postoperative infections moderately elevated AKI risk, while early fluid overload within the first 24 hours contributed to renal impairment. The ROC curve demonstrated balanced discrimination. Feature importance analysis highlighted CPB duration, creatinine increase, and gestational age as the most influential variables.

Conclusion: This model offers a practical tool for early identification of neonates at high risk of AKI following ASO. Clinically relevant strategies include minimizing CPB duration, close renal monitoring, optimized fluid management, and strict infection control.

Keywords: Arterial switch operation, acute kidney injury, neonate

OP - 046

AIRWAY COMPLICATIONS IN PEDIATRIC PATIENTS UNDERGOING AORTIC ARCH SURGERY FOR CONGENITAL HEART DISEASE

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Aim: Children undergoing surgery for congenital heart disease are at increased risk of postoperative airway complications. Aortic arch procedures, due to the close anatomical relationship between the aortic arch and airway structures, may predispose patients to a higher incidence of airway abnormalities. If unrecognized, these complications can lead to prolonged mechanical ventilation, delayed recovery, and increased morbidity. This study aimed to evaluate airway complications in pediatric patients undergoing aortic arch surgery.

Material & Method: A retrospective single-center study was conducted at a tertiary pediatric cardiac center between January 2020 and December 2024. Patients aged 0–16 years who underwent aortic arch surgery were included. Data collected included demographic characteristics, surgical details, cardiac intensive care unit (CICU) course, airway evaluations (e.g., laryngobronchoscopy, computed tomography), and interventions performed. Primary outcomes were the incidence of airway anomalies and their association with extubation failure, duration of mechanical ventilation, and CICU length of stay.

Results: A total of 39 patients underwent aortic arch surgery during the study period. Median (IQR) body weight at surgery was 4.0 kg (3.5–4.9), and median age was 53 days (9–117). The median CICU length of stay was 17 days (10–28). Seventeen patients (43.5%) experienced at least one episode of extubation failure. Airway anomalies were identified in 16 patients (41%), most commonly detected by laryngobronchoscopy or computed tomography. Four patients (10%) required surgical intervention, with posterior aortopexy being the most frequently performed procedure. Patients with airway anomalies had significantly higher rates of extubation failure, as well as longer durations of mechanical ventilation and CICU stay compared to those without anomalies.

Conclusion: Routine airway evaluation and early multidisciplinary management in this high-risk population may facilitate recovery and reduce respiratory morbidity

Keywords: aortic arch surgery, airway, pediatric patients

OP - 047

MATERNAL AND NEONATAL RISKS ASSOCIATED WITH ADOLESCENT PREGNANCY: A SINGLE- TERTIARY CENTER STUDY

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Aim: Pregnancies in adolescents are frequently associated with adverse maternal, perinatal, and neonatal outcomes. This study aims to assess the maternal and neonatal outcomes of singleton pregnancies among adolescents and to compare these outcomes with those of women aged 20–25 years. We hypothesized that adolescent pregnancies, particularly among early adolescents, would be associated with a higher risk of adverse maternal and neonatal outcomes compared to young adult pregnancies.

Material & Method: This retrospective, cross-sectional study was conducted at a tertiary hospital with a quaternary neonatal intensive care unit (NICU) and included 741 singleton pregnancies delivered after 20 weeks. Participants were stratified by maternal age: adolescents (n=371), subdivided into early (13–16 years; n=81) and late adolescence (17–19 years; n=290), and a control group (20–25 years; n=370).Hospital records and patient files were reviewed to assess the demographic and clinical characteristics of all included pregnant women and their neonates.

Results: Between 2018–2021, the adolescent pregnancy rate was 8.5%. Adolescent mothers (mean age 17.6 ± 0.5 years) had significantly higher rates of preterm birth, low birth weight (< 2500 gram [g]), and breastfeeding compared with controls (mean age 21.3 ± 2.1 years) ($p < 0.001$). Early adolescents had the lowest antenatal care utilization and highest preterm delivery rates. Controls had higher rates of gestational diabetes, cesarean section, prior abortion/fetal loss, and macrosomia (> 4000 g) ($p < 0.001$). Birth trauma was more common in late adolescents and controls. No significant group differences were noted in preeclampsia, chorioamnionitis, placental/cord abnormalities, or amniotic fluid disorders. Prematurity and transient tachypnea were the leading NICU admission causes ($p=0.015$). Neonatal resuscitation rates did not differ.

Conclusion: Adolescent pregnancy is associated with increased risks of inadequate antenatal care, prematurity, and low birth weight, yet higher breastfeeding rates suggest protective behaviors. Early, age-sensitive prenatal care is essential to address vulnerabilities and optimize outcomes.

Keywords: adolescent pregnancy, birth trauma, early neonatal outcome, maternal outcome, premature birth.

OP - 048

INVESTIGATION OF THE SOCIODEMOGRAPHIC, CLINICAL, AND LABORATORY CHARACTERISTICS OF CHILDREN DIAGNOSED WITH {HELICOBACTER PYLORI} GASTRITIS AND DETERMINATION OF THE OPTIMAL GASTRIC MUCOSAL BIOPSY SITE FOR HISTOPATHOLOGICAL DIAGNOSIS

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Aim: This study aimed to evaluate the sociodemographic, clinical, and laboratory characteristics of children with {H. pylori} gastritis and to identify the optimal gastric biopsy site for histopathological diagnosis. Although current guidelines recommend biopsies from both the antrum and corpus, we investigated whether antrum-only biopsies could provide sufficient diagnostic accuracy for {H. pylori} detection.

Material & Method: Medical records of 2,752 children who underwent esophagogastroduodenoscopy between 2020 and 2024 at Başakşehir Çam and Sakura City Hospital, Pediatric Gastroenterology, Hepatology and Nutrition Clinic, were retrospectively reviewed. A total of 763 patients with biopsies obtained from both the antrum and corpus and with at least one positive {H. pylori} result were included. Sociodemographic, anthropometric, clinical, endoscopic, and histopathological findings were retrospectively analyzed.

Results: The prevalence of {H. pylori} was 36.6%. The mean age of the study population was 12.16 ± 4.3 years, with females comprising 54.3% of the patients. The most common presenting symptom among positive cases was epigastric pain (53.6%). Endoscopic evaluation revealed antral hyperemia (89.8%) and nodularity (54.1%) as the most frequent findings, while duodenal ulcer was detected in 8% of cases. Histopathological examination demonstrated significantly higher {H. pylori} density, inflammation, and activity scores in the antrum compared to the corpus, whereas atrophy and intestinal metaplasia were rarely observed in childhood. Antral biopsy showed high diagnostic performance, with sensitivity, specificity, and negative predictive value rates of 94.4%, 100%, and 97.1%, respectively. The Phi correlation coefficient was +0.957, indicating a strong and statistically significant positive correlation between antral biopsy positivity and overall {H. pylori} positivity ($p < 0.001$).

Conclusion: This study represents one of the largest pediatric series on {H. pylori} infection reported from Türkiye. Antrum-only biopsies demonstrated high diagnostic accuracy, with excellent sensitivity, specificity, and predictive values, suggesting that this approach may be sufficient for the histopathological diagnosis of {H. pylori} infection in children.

Keywords: Helicobacter pylori, endoscopy, antral biopsy, pediatrics, histopathology

OP - 049

SOMALIAN MOTHERS' PERSPECTIVES ON BREAST MILK WHILE THEIR INFANTS ARE CARED FOR IN THE NEONATAL INTENSIVE CARE UNIT: A QUALITATIVE STUDY

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Aim: This study aimed to explore the lived experiences, perceptions, and breastfeeding practices of Somali mothers regarding breast milk while their infants were hospitalized in the NICU.

Material & Method: A descriptive phenomenological design was employed. Data were collected through individual, semi-structured, in-depth interviews with 12 mothers whose infants were receiving care in the NICU of a tertiary hospital in Mogadishu, Somalia. Participants were selected via purposive sampling. Interviews were audio-recorded, transcribed verbatim, and analyzed using thematic content analysis following the eight-step framework of Downe-Wamboldt. The study was conducted in accordance with COREQ reporting guidelines.

Results: Four main themes emerged: (1) Breast Milk as an Absolute Good but a Vague Knowledge Domain — mothers viewed breast milk as beneficial yet lacked biomedical knowledge and did not perceive formula feeding as a health risk; (2) Milk Production Shaped More by Living Conditions Than by the Maternal Body — absence of refrigeration, storage containers, and reliable transport led to frequent milk disposal, while pumping was largely confined to hospital visits; (3) Breastfeeding Knowledge Learned Through Trial and Error Rather Than Intergenerational Transfer — mothers relied on bodily experience rather than professional guidance, with significant gaps in knowledge regarding safe storage and pumping frequency; (4) Motherhood as a Well-Intentioned but Poorly Supported Effort — despite strong emotional motivation, mothers received minimal informational or practical support from healthcare professionals.

Conclusion: Breastfeeding during NICU hospitalization in Somalia is shaped more by structural and health-system constraints than by maternal motivation or hysiological capacity. Positive attitudes toward breast milk alone are insufficient to sustain lactation without consistent professional guidance and basic infrastructure support. NICU nurses should deliverstructured, skills-based lactation counseling on pumping, milk handling, andtransport, and ensure access to practical resources to minimize milk lossand support breastfeeding continuity in low-resource settings.

Keywords: Breastfeeding; Mothers' perceptions; Lactation support; Qualitative study

OP - 050

The Mutual Storytelling Technique as a Therapeutic Communication Intervention in a Child with Febrile Seizure: A Case Report

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Aim: Febrile seizure is a fever-associated neurological condition that can make emergency care, diagnostic procedures, and hospitalization distressing for both children and their families. Therapeutic communication may help children express and cope with these experiences. This case report explores the hospitalization experiences of a 9-year-old child with febrile seizure using the Mutual Storytelling Technique and discusses its implications for pediatric nursing care.

Case: E.Y., a 9-year-old boy (weight: 25.5 kg; height: 130 cm), was admitted following his first febrile seizure. His vital signs remained stable throughout hospitalization (HR: 84 bpm, RR: 24/min, BP: 104/66 mmHg, temperature: 36.6°C). Diagnostic evaluation included blood tests, ultrasonography, magnetic resonance imaging (MRI), and sleep-deprived EEG. During hospitalization, he received antibiotic and antiepileptic treatment.

Results: The Mutual Storytelling Technique facilitated the child's expression of fears related to repeated blood sampling, MRI examinations, intravenous procedures, and sleep disruption. The nurse developed a therapeutic narrative emphasizing coping, safety, and recovery. After the intervention, the child reported emotional relief and greater comfort in expressing his experiences. The patient was discharged after normal diagnostic findings.

Conclusion: This case highlights the psychosocial impact of febrile seizure and hospitalization on a child. The Mutual Storytelling Technique enabled the child to express fears related to invasive procedures, sleep disruption, and hospitalization. The use of therapeutic communication in pediatric nursing may reduce emotional distress, facilitate adaptation to hospitalization, and support coping. These findings suggest that the Mutual Storytelling Technique is a valuable supportive intervention in pediatric nursing practice

Keywords: Febrile seizure; hospitalization; mutual storytelling technique; pediatric nursing; therapeutic communication.

OP - 051

EFFECTS OF WHITE NOISE AND BUZZY ON INFANT VACCINATION PAIN: RANDOMIZED CONTROLLED TRIAL

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Aim: To determine the effects of white noise and the Buzzy device on pain during vaccination in infants.

Material & Method: This was a three-arm randomized controlled trial. The study was conducted between January and May 2026 at a family health center in Istanbul, Türkiye, with 108 infants scheduled to receive the hexavalent vaccine (DTaP-IPV-Hib-HepB). Infants were randomly assigned to the White Noise (n=36), Buzzy (n=36), and Control (n=36) groups using stratified randomization. Data were collected using an Information Form and the FLACC Pain Scale through assessments made by mothers and an independent nurse. Data were analyzed using SPSS version 30.0. Ethical approval and written parental informed consent were obtained prior to the study. The trial was registered at ClinicalTrials.gov (NCT07286721). This study was supported by the Scientific Research Projects Coordination Unit of Istanbul Arel University (ArelBAP 2025-ST-006).

Results: The groups were similar in terms of infants' descriptive characteristics ($p > 0.05$). According to both mothers' and nurses' evaluations, pain scores during the procedure were significantly lower in the White Noise group (mother: 2.47±1.25; nurse: 2.28±1.19) and the Buzzy group (mother: 3.56±1.78; nurse: 3.19±1.37) compared with the Control group (mother: 5.42±1.32; nurse: 4.92±0.87) (mother: $F=36.995$; nurse: $F=47.914$; $p < 0.001$). Pain scores in the White Noise group were significantly lower than those in both the Buzzy and Control groups, while pain scores in the Buzzy group were significantly lower than those in the Control group ($p < 0.05$).

Conclusion: White noise and Buzzy interventions were effective in reducing vaccination-related pain in infants compared with the control group. In addition, white noise was found to be more effective than the Buzzy device in pain management. In line with the philosophy of atraumatic care, integrating white noise and Buzzy interventions into routine nursing practices during vaccination is recommended to reduce pain in infants.

Keywords: Buzzy, nursing, pain, vaccination, white noise

OP - 052

COMPASSION FATIGUE IN PEDIATRIC INTENSIVE CARE NURSES PROVIDING END-OF-LIFE CARE

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Aim: Nurses who care for children are at risk of developing compassion fatigue due to routine exposure to the traumatic aspects of a child's illness or death, injuries, or medical treatment, as well as to the emotional reactions of families to the illness. In this context, the study aims to reveal the compassion fatigue experiences and perceptions of pediatric intensive care nurses working in the end-of-life care process, the effects of this situation on their professional/personal lives, and their coping strategies.

Material & Method: A qualitative study was conducted through in-depth interviews and thematic analysis. Interviews with nurses were held for 30-45 minutes in the pediatric intensive care unit, without interrupting the interview, and the total scores of nurses' compassion intensity were determined using the Compassion Fatigue-Brief Scale. The sample of the study consisted of 18 nurses working in pediatric intensive care.

Results: 94.4% of the nurses participating in the study are women and their pediatric intensive care experience varies between 1-8 years. In addition, the average total score of the nurses on the Compassion Fatigue-Brief Scale is at a medium level, 86.2 out of 130. Thematic analysis of the data yielded six themes: emotional challenges", "psychosomatic complaints", "communication patterns", "interaction with families", "perception of compassion fatigue" and "needs of pediatric intensive care nurses".

Conclusion: Compassion fatigue in pediatric intensive care nurses is a multidimensional experience, and nurses' well-being should be supported and institutional and psychosocial support systems should be developed to meet their needs.

Keywords: Pediatric intensive care, nurse, compassion fatigue, end-of-life care

OP - 053

EFFECTIVENESS OF VIDEO-BASED EDUCATION ON DIAPER DERMATITIS: A RANDOMIZED CONTROLLED TRIAL

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Aim: This study evaluated the effect of a video-based diaper dermatitis care education program for primiparous mothers on infants' diaper dermatitis severity scores and mothers' knowledge levels. It aimed to assess the effectiveness of a video-assisted educational approach in the prevention and management of diaper dermatitis.

Material & Method: This randomized controlled pretest–posttest study was conducted between September 2 and 15, 2025, in the pediatric outpatient clinics of a city hospital in Istanbul. The sample consisted of 74 primiparous mothers with infants aged 0–6 months, who were randomly assigned to the intervention (n=37), control (n=37) groups. The intervention group received video-based diaper dermatitis care education, while the control group received routine care education. Data were collected before the intervention and 7 days later using a Maternal Information Form, a Diaper Dermatitis Knowledge Questionnaire, and a Diaper Dermatitis Severity Assessment Scale. Following the study, the control group also received the video-based education in accordance with ethical principles.

Results: Mothers demonstrated a need for education regarding diaper dermatitis. While baseline knowledge levels were similar between groups ($p > 0.05$), diaper dermatitis severity was higher in the intervention group ($p < 0.01$). Following the intervention, knowledge and care practices significantly improved and diaper dermatitis severity significantly decreased in the intervention group ($p < 0.001$), whereas no improvement in knowledge and an increase in dermatitis severity were observed in the control group. Post-test results showed higher knowledge levels and lower dermatitis severity in the intervention group ($p < 0.001$). A strong negative correlation was found between maternal knowledge and diaper dermatitis severity ($r \approx -0.75$, $p < 0.001$).

Conclusion: Video-based diaper dermatitis care education was found to improve primiparous mothers' knowledge and care practices and reduce diaper dermatitis severity in infants. These findings suggest that video-assisted parental education is an effective approach for the prevention and management of diaper dermatitis.

Keywords: Newborn, Child, Diaper dermatitis, Video, Mother

OP - 054

RELATIONSHIP BETWEEN PARENTS' VACCINE ATTITUDES AND DIGITAL HEALTH INFORMATION ACCESS

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Aim: This study aimed to examine the relationship between parental attitudes toward childhood vaccinations and health information-seeking behavior in digital environments.

Material & Method: This study employed a descriptive correlational design. The target population consisted of parents residing in Turkey with children aged 0–4 years, and the sample comprised 106 mothers. Data were collected online via Google Forms using three instruments: a Participant Information Form developed by the researchers, the Parent Attitudes about Childhood Vaccines Scale (PACV) (scores above 50 indicate vaccine hesitancy), and the Digital Health Information Acquisition and Confirmation Behaviors Scale (higher scores indicate greater preference for web-based health information). Data were analyzed using SPSS v27 with parametric tests.

Results: The mean PACV score was 40.65±20.22 (range: 3–93); 65.1% of parents were classified as non-hesitant and 34.9% as vaccine-hesitant. The mean subscale scores for the digital health information acquisition and confirmation behaviors scale were as follows (subscale range: 1–5): Web 1.0 health information acquisition: 2.53±0.96; Web 2.0 health information acquisition: 1.95±0.73; and digital verification: 3.03±1.05. No statistically significant association was found between the PACV scores and Web 1.0 or Web 2.0 health information acquisition ($p > 0.05$). However, a statistically significant moderate negative correlation was identified between digital verification behavior and total PACV scores ($p < 0.01$).

Conclusion: Non-hesitant parents demonstrated better digital health information verification habits than hesitant parents did. Given the linear relationship observed between parental digital verification levels and childhood vaccine attitudes, restricting inaccurate vaccine-related content in digital environments is recommended to prevent the adverse effects of misinformation on parental attitudes toward vaccines.

Keywords: vaccination, childhood, parental attitude, digital environment, obtaining health information

OP - 055

EFFECTS OF AUDITORY STIMULI ON HEEL LANCE PAIN IN NEWBORNS

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Aim: This study was conducted to determine the effects of white noise, heartbeat sounds, and music on pain, physiological parameters, and crying duration during heel lance procedures in newborns hospitalized in a neonatal intensive care unit.

Material & Method: This randomized controlled experimental study was conducted between October 2020 and January 2021 in a neonatal intensive care unit. The sample consisted of 84 newborns born between 28–42 gestational weeks. Infants were randomly assigned to white noise, heartbeat sound, music, and control groups, with 21 newborns in each group. White noise, heartbeat sounds, or maternal prenatal music were initiated 10 minutes before the heel lance procedure, continued during the procedure, and maintained for 20 minutes after the procedure. Pain levels were evaluated using the Neonatal Infant Pain Scale (NIPS) and the Neonatal Infant Acute Pain Assessment Scale (NIAPAS). In addition, heart rate, respiratory rate, oxygen saturation, and crying duration were assessed before, during, and after the procedure.

Results: The groups were similar regarding demographic and clinical characteristics. During the heel lance procedure, no statistically significant difference was found between the groups in terms of heart rate and respiratory rate averages ($p > 0.05$). The white noise group had significantly lower NIPS and NIAPAS pain scores compared with the control group ($p < 0.05$). Crying duration was significantly shorter in the heartbeat sound and music groups than in the control group ($p < 0.05$). Furthermore, oxygen saturation levels in the music group were significantly higher compared with the control group ($p < 0.05$).

Conclusion: White noise, heartbeat sounds, and music were found to be effective in reducing pain and improving comfort during heel lance procedures in newborns. These non-pharmacological interventions may be safely incorporated into neonatal clinical practice to support pain management during painful procedures.

Keywords: Newborn, pain, white noise, music, heartbeat sound

OP - 056

PERIOPERATIVE NURSING CARE IN PEDIATRIC HAND SURGERY: A SINGLE-CENTER EXPERIENCE

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Aim: Pediatric hand surgery requires specialized perioperative nursing owing to the distinct anatomical and psychosocial characteristics of the pediatric patient. This study aims to describe the perioperative nursing protocols of a dedicated pediatric hand and upper extremity surgery unit and to evaluate associated clinical outcomes.

Material & Method: Perioperative nursing records of patients aged ≤18 years who underwent hand and upper extremity surgery between January 2023 and December 2024 were retrospectively reviewed. Patient demographics, diagnosis categories, surgical duration, tourniquet application time and pressure, intraoperative positioning, postoperative pain assessment (FLACC scale), splint/cast care, and caregiver education practices were recorded and analyzed.

Results: A total of 165 patients (94 male, 71 female; mean age 7.5 ± 4.9 years; range 0–16) were included. Most frequent diagnosis categories were congenital hand anomalies (75 patients, 45.5%), including polydactyly) (Figure 1 and 2), syndactyly, congenital trigger finger, and hypoplastic thumb; traumatic injuries involving tendon, nerve, and vascular structures (33 patients, 20.0%); fractures (21 patients, 12.7%); cerebral palsy (10 patients, 6.1%); and soft tissue masses (11 patients, 6.7%). Remaining cases comprised burn/scar contractures (3.6%), obstetric brachial plexus palsy (1.8%), peripheral nerve injuries (1.2%). Mean operative time was 47.6 minutes. Pneumatic tourniquet was utilized in the majority of cases with a mean application time of 37.1 minutes; pressure was individualized according to patient weight and limb circumference. Standardized nursing protocols encompassed preoperative family reception, pediatric-specific sterile field preparation, and structured postoperative caregiver education including splint and wound care instruction.

Figure 1. Postoperatively photo, bone and soft tissue procedure (on-top plasty on each finger and ligament reconstructions)



Figure 2. Preoperative photo, thumb abnormality (five finger hand + camptodactyly + extensor insuffiency+ 1th web space narrowing); blocks the ability to hold and grasp something



Conclusion: Structured perioperative nursing protocols are essential for the safety and quality of pediatric hand surgery. Our two-year single-center experience across a broad diagnostic spectrum demonstrates that subspecialty-trained scrub nursing contributes substantially to intraoperative safety, surgical workflow efficiency, and family-centered postoperative care. Multidisciplinary collaboration between the operating surgeon and the perioperative nursing team should be regarded as a standard of care in specialized pediatric hand surgery units.

Keywords: nursing care, hand surgery, nursing

OP - 057

NURSES' EXPERIENCES OF MANAGING MATERNAL ANXIETY DURING KANGAROO MOTHER CARE: A QUALITATIVE STUDY IN THE NEONATAL INTENSIVE CARE UNITS

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Aim: The technologically intensive neonatal intensive care unit (NICU) environment often triggers substantial maternal anxiety. While kangaroo mother care (KMC) is a gold-standard intervention, its success depends heavily on the nurse's role in managing the mother's emotional burden and facilitating adaptation. This study aimed to explore neonatal nurses' experiences, perceptions, and strategies related to managing maternal anxiety during KMC.

Material & Method: A qualitative descriptive design was employed with 15 NICU nurses in Türkiye selected through criterion sampling. Data were collected via semi-structured, in-depth interviews on an online platform. Analysis followed Braun and Clarke's six-stage thematic method using MAXQDA 2020 software. Methodological rigor was maintained through data saturation, investigator triangulation, and adherence to COREQ guidelines. Ethical approval was secured, prioritizing participant anonymity and voluntary informed consent.

Results: Five overarching themes emerged: Manifestations of maternal anxiety, its effects on the care process, nurses' anxiety management strategies, the emotional and professional impact on nurses, and clinical requirements for effective care. Nurses reported that anxiety most commonly stemmed from fear of harming the infant and concerns related to medical devices, often accompanied by observable emotional and physical distress. Anxiety occasionally limited participation in KMC and reduced the duration or quality of sessions. Effective management strategies included transparent information-sharing, therapeutic communication, involvement of fathers, and peer modeling. While successful anxiety regulation enhanced nurses' professional satisfaction, environmental limitations and insufficient training that undermined professional confidence were identified as key systemic barriers.

Conclusion: Nurses function as critical external co-regulators who transform maternal fear into self-efficacy. Effective management requires a holistic integration of therapeutic communication, professional competence, and supportive NICU environments. Future initiatives should prioritize simulation-based training focused on the emotional dimensions of care and the ergonomic redesign of NICUs to support maternal mental health.

Keywords: Kangaroo mother care, Maternal anxiety, Neonatal nursing, Neonate, Newborn

OP - 058

THE EFFECT OF USING A DRAGON-THEMED NEBULIZER MASK ON TREATMENT APPLICATION DURATION, ADHERENCE, AND FEAR IN CHILDREN PRESENTING TO THE EMERGENCY DEPARTMENT: A RANDOMIZED CONTROLLED TRIAL

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Aim: This study was conducted to evaluate the effect of using a dragon-themed nebulizer mask on treatment duration, treatment adherence, and fear levels in children aged 3–6 years receiving inhaler therapy in the emergency department.

Case: This randomized controlled trial with parallel groups was conducted in the Pediatric Emergency Department of a public hospital in Istanbul. Children aged 3–6 years who presented to the emergency department with respiratory problems requiring inhaler therapy were included in the study. A total of 140 children were randomly assigned to the experimental group (n = 70; dragon-designed nebulizer mask) and the control group (n = 70; standard nebulizer mask) using stratified randomization. Data were collected using the Pediatric Fear Scale, the Treatment Duration and Compliance Assessment Form, and the Demographic Information Form.

Results: No significant difference was found between the experimental and control groups in terms of pre-treatment fear levels. However, it was determined that children using the dragon-designed nebulizer mask during treatment had significantly lower fear levels compared to the control group. It was found that treatment application times were shorter and treatment compliance was higher among children in the experimental group. It was determined that the differences between the groups regarding treatment duration, treatment compliance, and fear levels were statistically significant.

Conclusion: This study demonstrates that the use of child-friendly and gamified medical equipment in the emergency department setting improves treatment compliance among pediatric patients, shortens treatment duration, and reduces fear levels. The findings highlight the importance of promoting child-centered approaches in pediatric emergency care practices.

Keywords: Pediatric emergency, nebulizer therapy, fear, treatment compliance

OP - 059

THE EFFECTS OF HEALTH LITERACY ON CAREGIVING AND DISEASE MANAGEMENT IN PARENTS OF CHILDREN WITH EPILEPSY

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Aim: The effectiveness of these responsibilities is directly correlated with the parents' level of "Health Literacy (HL)."Objective: This study aims to examine the role of parental HL levels in epilepsy management and its impact on caregiving behaviors in literature data.

Material & Method: This study is a comprehensive literature review examining the effect of HL on disease management among parents of children with epilepsy. Data collection was performed by searching PubMed, Google Scholar, CoHE Thesis Center, and Turk Medline databases using the keywords "epilepsy," "health literacy," "parental care," and "disease management." Current research articles, systematic reviews, and clinical guidelines published over the last 20 years (2006–2026) were evaluated with priority. Studies focusing on childhood epilepsy and measuring parents' knowledge levels or self-care behaviors were selected as the inclusion criteria.

Results: Parental HL appears to be a decisive variable in epilepsy management. Inadequate seizure management by low-HL parents consequently increased recurrent pediatric emergency department visits. Conversely, an adequate HL level significantly increases adherence to antiepileptic drugs and enhances parents' self-monitoring skills, such as keeping a seizure diary. From a psychosocial perspective, a high HL level was found to reduce care burden, anxiety, and depression levels by strengthening the parents' perception of control over the disease. Parental education programs established support networks, improving children's achievement and self-esteem. The findings demonstrate that nurse-led, HL-focused training is one of the most effective tools for reducing medical errors and ensuring treatment compliance.

Conclusion: Enhancing parents' health literacy capacity is the most cost-effective way to improve seizure control and reduce parental anxiety in epilepsy management. Integrating HL assessment and development protocols into chronic disease monitoring processes by healthcare professionals, particularly nurses, will improve both the clinical outcomes of children and the quality of life of families.

Keywords: Childhood Epilepsy, Parental Care, Disease Management, Nursing Care, Health Literacy

OP - 060

THE EFFECT OF DISTRACTION METHODS ON CHILDREN'S EMOTIONAL STATE BEFORE DAY-SURGERY PROCEDURES

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Aim: Although day surgery reduces hospital stays, it still causes significant anxiety for children and parents. For common procedures like circumcision or tonsillectomy, tailored developmental preparation is essential for surgical success. This study aims to evaluate the positive effects of supportive methods used in the preoperative period on children and their families in literature

Material & Method: This study is a literature review examining the effectiveness of methods used in the preoperative preparation processes of children undergoing day surgery. The literature search was conducted across the PubMed, CINAHL, Google Scholar, and Turk Medline databases, covering the last 10 years (2016–2026). The keywords 'day surgery', 'pediatrics', 'preoperative preparation', 'therapeutic play', and 'family anxiety' were utilized in the search. Studies focusing on day-surgery procedures (circumcision, tonsillectomy, etc.), evaluating the psychological preparation processes of children and parents, the materials used (puppets, videos, toys, etc.), and the clinical outcomes of these methods (pain, anxiety levels) were selected as inclusion criteria. The obtained data were synthesized through thematic analysis.

Results: Structured preoperative preparation—including puppets, play, and visuals—multidimensionally improves outcomes by lowering pain and anxiety in children under 7. Children who are fully prepared psychologically were found to cope more effectively with hospital adaptation issues and the surgical process. Furthermore, the decrease in the child's anxiety level directly mirrors the parents' anxiety levels and contributes to preserving family integrity. These findings prove that preoperative preparation is not merely a clinical procedure, but an integral part of family-centered care.

Conclusion: Preoperative supportive and developmentally focused practices improve the surgical experience of not only the child but also the family. Disseminating these practices across all healthcare institutions by healthcare professionals and integrating them into standard care protocols will enhance the clinical success of surgical processes and increase patient satisfaction.

Keywords: Family Anxiety, Child, Day Surgery, Preoperative Preparation, Therapeutic Play

OP - 061

THE EFFECT OF THE WHITE CURTAIN USED DURING PHOTOTHERAPY ON THE BILIRUBIN LEVEL OF THE NEWBORN

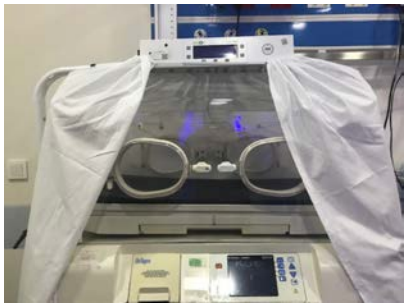
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Aim: The study was conducted as a "randomized controlled trial" designed to determine the effect of white curtain usage during phototherapy on the bilirubin level in newborn infants.

Material & Method: The study was conducted as a "randomized controlled trial" designed to determine the effect of white curtain usage during phototherapy on the bilirubin level in newborn infants.The study sample of consisted of 60 infants (experimental group = 30; Control group = 30), who was at 38-42 weeks of gestation, who were admitted to NICU for significant hyperbilirubinemia and research hospital in Istanbul between 18 November 2021 and 11 June 2022. The babies in the experimental group were used with a White Curtain to wrap them on three sides of the phototherapy device, while only single phototherapy was applied to the control group. "Information Form" and "Registration Form" were used to collect data. The use of the white curtain during phototherapy is shown in Figure 1.

Figure 1. White Curtain Used During Phototherapy



Results: The descriptive characteristics of infants and mothers were similar (p > ,05). While there was no significant difference between the mean duration of discharge time (hours) (p > ,05), the mean duration of phototherapy was significantly shorter in favor of the study group (p < ,05). These findings are presented in Table 1. Within groups, it was found that there was a significant increase in body temperature from the onset of phototherapy to the end of the 12th hour for each groups (p < ,05). The bilirubin levels at phototherapy initiation, after 4 hours, and after 12 hours are presented in Table 2.

Table 1. Distribution and Comparison of Infant Discharge Time and Phototherapy Stay Duration According to Groups (N=60)

Characteristics	Experimental group (n=30) Ort ± SS	Control (n=30) Ort ± SS	t*	sd	p
Discharge Time (hours)	31,533 ± 12,966	37,967 ± 14,507	-1,811	58	0,075
Duration of Phototherapy (hours)	21,833 ± 10,459	28,500 ± 13,232	-2,165	58	0,035

Table 2. Comparison of Bilirubin Levels in Infants by Groups

Groups	Experimental group (n=30) Ort ± Ss	Control group (n=30) Ort±Ss	ta	p
Bilirubin Phototherapy Initiation	14,133±3,343	13,920±3,676	0,234	0,816
Bilirubin after 4 hours	13,656±2,668	13,586±2,984	0,095	0,924
Bilirubin after 12 hours	11,541±2,423	11,983±2,243	-0,733	0,466

Conclusion: In conclusion, we determine that the use of white curtain during phototherapy for babies with hyperbilirubinemia significantly reduced the duration of phototherapy but did not affect the decrease of bilirubin levels.

Keywords: Hyperbilirubinemia, Phototherapy, Term newborn, White curtain

OP - 062

MALNUTRITION AND ASSOCIATED FACTORS IN PEDIATRIC ONCOLOGY PATIENTS

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Aim: Body Mass Index (BMI) and mid-upper arm circumference (MUAC) are recommended for assessing nutritional status. The aim was to evaluate the nutritional status of pediatric oncology patients using anthropometric measurements; and to investigate the association between malnutrition and various demographic and clinical factors such as hospitalization, surgery, and relapse.

Material & Method: This cross-sectional study was conducted with 146 pediatric oncology patients aged 2–18 years. Nutritional status was evaluated using anthropometric measurements, including BMI, and MUAC. The prevalence of malnutrition was determined based on standardized anthropometric indices: a BMI-Z-score of less than -2 standard deviations (SD) and a MUAC value below the 5th percentile for age and gender.

Results: The participants' mean age was 8.97±4.96 years, 54.8% were male, 59.6% were diagnosed with hematologic malignancies, and 62.3% were outpatients. Of the participants, 70.5% had received inpatient treatment within the last six months, 32.9% had undergone cancer-related surgery, and 14.4% had experienced a relapse. Malnutrition prevalence was 7.5% according to BMI-Z-score and 12.3% by MUAC, with a high correlation between these two metrics ($r=0.739$, $p < 0.001$). A significant association was found between malnutrition identified by BMI-Z-score and diagnosis ($p < 0.05$); patients with solid tumors had a higher prevalence of malnutrition (15.3%) compared to those in the leukemia-lymphoma group (2.3%). However, malnutrition by BMI-Z-score showed no significant relationship with age, gender, treatment unit, history of hospitalization, surgery, or relapse ($p > 0.05$). In contrast, malnutrition identified by MUAC was significantly associated with gender, diagnosis, history of hospitalization, cancer-related surgery, and relapse status ($p < 0.05$), while it did not vary significantly by age or treatment unit ($p > 0.05$).

Conclusion: MUAC was a good parameter for identifying malnutrition and showed significant associations with hospitalization, surgery, and relapse. Incorporating MUAC into routine screening protocols is essential for a more comprehensive nutritional assessment in pediatric oncology patients.

Keywords: Children, Malnutrition, Neoplasms, Nutritional assessment, Nutritional status

OP - 063

THE EFFECT OF CHARACTER-FIGURED IV BAG COVERS ON ANXIETY, EMOTIONAL STATUS, AND PHYSIOLOGICAL PARAMETERS IN CHILDREN RECEIVING CHEMOTHERAPY: A RANDOMIZED CONTROLLED TRIAL

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Aim: This study aimed to determine the effects of using character-figured IV bag covers during chemotherapy on children's anxiety levels, emotional states, and physiological parameters.

Material & Method: This randomized controlled experimental study was conducted between February and August 2022 in the pediatric hematology-oncology ward of a city hospital in Istanbul. The sample consisted of 70 children (experimental group, n=35; control group, n=35) aged 4–10 years, undergoing their first or second chemotherapy cycle, with no chronic diseases (other than cancer) or mental/neurological disabilities. Institutional and ethical approvals were obtained for this study. The character-figured IV bag covers (32x42 cm, washable cotton) featured gender-specific designs ("Kemosu" for girls and "Kemocan" for boys). Data were collected using an Information Form, the Children's Emotional Manifestation Scale (CEMS), and the Children's State Anxiety (CSA). Physiological parameters and CSA were measured 5 min before and after chemotherapy, and physiological parameters and CEMS were assessed at the 5th and 30th minutes during treatment. Data were analyzed using SPSS version 29.0.

Results: No significant differences were found between the groups in terms of descriptive characteristics, body temperature, or oxygen saturation ($p > 0.05$). However, heart rates in the experimental group were significantly lower than those in the control group across all measurement intervals ($p < 0.05$). Post-chemotherapy anxiety levels were also significantly lower in the experimental group ($p= 0.001$). While no difference was found in CEMS scores at the 5th minute, the experimental group showed significantly lower scores (better emotional status) at the 30th minute ($p < 0.001$).

Conclusion: The use of character-figured IV bag covers during chemotherapy reduced anxiety, improved emotional status, and lowered heart rate in children compared with routine practice. It is recommended to use age- and sex-appropriate visual stimuli to mitigate the adverse emotional effects of treatment in pediatric oncology patients.

Keywords: chemotherapy, character-figured IV bag, anxiety, emotional state, child

OP - 064

EFFECT OF MULTIPLEFFECT OF NON-PHARMACOLOGICAL METHODS FOR PAIN MANAGEMENT DURING EYE EXAMINATION FOR RETINOPATHY OF PREMATURITY IN PRETERM INFANTS

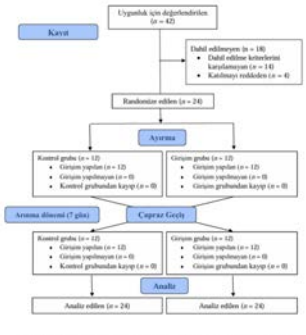
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Aim: This study was conducted to determine the effect of applying multiple non-pharmacological methods to premature infants during retinopathy of prematurity (ROP) examinations on pain and physiological parameters.

Material & Method: It was carried out in the Neonatal Intensive Care Unit (NICU) of a university hospital in Istanbul between July 2024 and July 2025, using a crossover randomised controlled design. The sample consisted of 24 premature infants who met the inclusion criteria. Participants were assigned to groups using a blocked randomisation method. The control group (n = 24) underwent a ROP examination according to the NICU's routine practice. The intervention group (n = 24) underwent a ROP examination using multiple non-pharmacological methods (25% dextrose solution+ a pacifier+ swaddling). Data were collected using the Information Form, Follow-up Form and Premature Infant Pain Profile Scale-Revised Form (PIPP-R). The data were analyzed using the appropriate tests in the SPSS 25.0 software package. Ethical approval and official permission were obtained, informed consent was obtained from families, and the protocol was registered (NCT06959290).

Figure 1. Consort flow diagram of participant enrollment, allocation, and follow-up



Results: In the ROP-1 and ROP-2 examinations, the intervention group experienced lower pain levels than the control group at the time of the procedure (T2), two minutes afterwards (T3) and five minutes afterwards (T4) ($p < 0.05$). The intervention group cried for a shorter amount of time than the control group ($p < 0.05$). The duration of the ROP examination was similar for both groups ($p > 0.05$). At T4, the mean SpO_2 values of the intervention group were higher than those of the control group ($p < 0.05$). At T3 and T4, the mean KTA/min values of the control group were higher than those of the intervention group ($p < 0.05$).

Conclusion: The multiple non-pharmacological methods applied to premature infants during the ROP examination were found to be effective in reducing pain levels.

Keywords: Procedural Pain, Prematurity Retinopathy, Nonpharmacological Methods., Premature Infant

OP - 065

EVALUATION OF THE EFFECTS OF CAFFEINE THERAPY ON CEREBRAL ACTIVITY USING AEEG IN PRETERM INFANTS

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Aim: Caffeine is widely used in preterm infants for the treatment of apnea and may exert neurophysiological effects on brain activity. However, its effects on amplitude-integrated EEG (aEEG) pattern scores remain incompletely characterized. This study aimed to evaluate the effects of caffeine therapy on aEEG pattern scores over time in preterm infants.

Material & Method: This single-center study included preterm infants (30–34^{+6} weeks of gestation) admitted to the neonatal intensive care unit and treated with caffeine for apnea of prematurity. Infants with major neurological, metabolic, or perinatal complications were excluded. Caffeine was administered as a loading dose of 20 mg/kg followed by a maintenance dose of 5 mg/kg/day. Serial aEEG recordings were obtained before and after caffeine administration (pre-caffeine, 1 hour, and 36 hours post-treatment). Pre- and post-caffeine aEEG parameters, including pattern scores, amplitude margins, bandwidth, and sleep–wake cycling, were evaluated using a structured scoring system. Subgroup analysis was performed in infants with low baseline pattern scores.

Results: A total of 42 preterm infants were included (45.2% male, 54.8% female). The mean gestational age was 33.3 ± 1.2 weeks, and the mean birth weight was 1960 ± 360 g. In the overall cohort, no significant differences were observed in the evaluated aEEG parameters. However, subgroup analysis demonstrated a significant improvement in pattern scores following caffeine therapy in infants with low baseline pattern scores (p=0.009). Post hoc pairwise comparisons indicated that this effect emerged in the later period, between the 1-hour and 36-hour measurements. Electrographic seizure activity did not differ significantly following caffeine therapy (p=0.867).

Conclusion: In preterm infants, caffeine therapy was associated with improvement in aEEG pattern scores, particularly in those with low baseline activity. The neurophysiological effects of caffeine on cerebral activity became more evident at 36 hours than at the early post-treatment assessment, while no increase in electrographic seizure activity was observed.

Keywords: caffeine, preterm, aEEG, cerebral activity

OP - 066

A SILENT THREAT PEDIATRIC LEFT VENTRICULAR NONCOMPACTION CARDIOMYOPATHY EXPERIENCE FROM A SINGLE CENTER

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Aim: Left ventricular noncompaction cardiomyopathy (LVNC) is a rare cardiomyopathy characterized by prominent trabeculations and deep intertrabecular recesses. Clinical presentation ranges from asymptomatic cases to severe systolic dysfunction, malignant arrhythmias and thromboembolic complications.

Material & Method: Methods Fifteen pediatric patients with LVNC followed at our center were retrospectively evaluated.Demographic characteristics, echocardiographic findings, cardiac MRI, Holter monitoring, exercise testing, genetic analyses and follow-up data were reviewed.

Results: A total of 15 pediatric patients with LVNC were included. Ten patients were female (66.7%) and five were male (33.3%). Median age was 13 years (IQR: 8–18 years). Palpitations were the most common presenting symptom. Echocardiographic evaluation demonstrated LVNC pattern in all patients. Left ventricular systolic function showed a wide clinical spectrum with a median shortening fraction (SF) of 33% (IQR: 18–36%). While most patients had mild-to-moderate systolic dysfunction, two patients demonstrated severe systolic dysfunction and dilated cardiomyopathy phenotype. Shortening fractions in these patients were 18% and 12%, respectively, and both required intensive heart failure therapy. Cardiac magnetic resonance imaging revealed a median noncompacted/compacted (NC/C) ratio of 3.5 (IQR: 3–4.2). One patient had an NC/C ratio of 10. Holter monitoring demonstrated short PR, supraventricular ectopy(SVE), supraventricular tachycardia (SVT) and junctional ectopic tachycardia (JET). Exercise-related ventricular arrhythmia was observed in one patient. MYH7 was the most frequently detected genetic variant. CACNA1C and TNNT2 variants were also identified. Positive family history was present in several patients. Median follow-up duration was 2 years (IQR: 1–3 years). Intracardiac thrombus developed in two patients during follow-up.

Conclusion: Our study demonstrates that pediatric LVNC is associated not only with morphological abnormalities but also with significant arrhythmic and thromboembolic complications. The presence of two patients with severe systolic dysfunction suggests that LVNC may be associated with a dilated cardiomyopathy phenotype in pediatric patients. The predominance of MYH7 variants in our cohort was consistent with the current literature.

Keywords: cARDİYOMYOPATHY, ARİTMİ, lvnc, cardiyomayopathy, pediatric cardiology, arrrhytmia, heart failure

OP - 067

DAPAGLIFLOZIN AND SACUBITRIL/VALSARTAN IN PEDIATRIC HEART FAILURE

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Aim: The use of novel heart failure therapies such as dapagliflozin and sacubitril/valsartan has increased in pediatric cardiology practice in recent years; however, data regarding their efficacy and safety in children remain limited. This study aimed to evaluate the short-term clinical, laboratory, and echocardiographic effects of these therapies in pediatric heart failure patients.

Material & Method: This retrospective single-center study included pediatric heart failure patients treated with dapagliflozin and/or sacubitril/valsartan. Laboratory and echocardiographic parameters obtained before treatment initiation and at 3- and 6-month follow-up visits were compared. Renal and hepatic function tests, B-type natriuretic peptide (BNP) levels, and left ventricular ejection fraction (EF) measured by both two-dimensional echocardiography and Simpson's method were evaluated.

Results: A total of 45 patients were included. Baseline mean EF values were 40.2±8.0% by two-dimensional echocardiography and 38.5±8.7% by Simpson's method. At 6-month follow-up, mean EF values improved to 56.8±10.7% and 55.3±10.1%, respectively ($p < 0.001$ for both). Median BNP levels showed a marked decline during follow-up, decreasing from baseline values at both 3 and 6 months ($p < 0.001$). Renal and hepatic function parameters remained stable throughout follow-up without clinically significant deterioration. Dapagliflozin therapy was temporarily discontinued in two patients because of urinary tract infection. No severe adverse events requiring permanent treatment discontinuation were observed, and therapies were generally well tolerated.

Conclusion: Our early single-center experience suggests that dapagliflozin and sacubitril/valsartan therapy may provide favorable short-term clinical and echocardiographic outcomes in pediatric heart failure patients with an acceptable safety profile. Larger prospective multicenter studies are needed to further define long-term efficacy and safety in children.

Keywords: Pediatric heart failure, Dapagliflozin, Sacubitril/valsartan, Heart failure therapy

OP - 068

PERIOPERATIVE HYPERSENSITIVITY IN CHILDREN: REAL-WORLD OUTCOMES OF A STRUCTURED ALLERGY EVALUATION STRATEGY

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Aim: Perioperative hypersensitivity reactions to anesthetics pose a significant patient safety concern in pediatrics due to their potential severity and the limitations of drug provocation testing. Although skin prick testing (SPT) and intradermal testing (IDT) are widely used in clinical algorithms, robust evidence regarding their real-world preventive efficacy in children remains limited.

Material & Method: We retrospectively analyzed pediatric patients evaluated for suspected drug or anesthetic hypersensitivity (2020–2025) at a tertiary-care pediatric allergy and immunology center. Clinical characteristics, laboratory biomarkers, and SPT/IDT results were recorded.

Results: Among 40 pediatric patients evaluated for suspected anesthetic hypersensitivity, 125 skin prick and intradermal tests were performed. A history of clinical reaction during previous surgery was present in 25/37 (67.6%) patients, most commonly skin manifestations (40.5%) and anaphylaxis (10.8%). Overall prick test positivity was observed in 13/125 tests (10.4%), whereas intradermal test (IDT) positivity at any dilution occurred in 29/125 tests (23.2%), with the highest positivity observed at the 1/10 dilution (25/125, 20.0%). The highest agent-specific IDT positivity rates were observed for ketamine (7/9, 77.8%), rocuronium (12/22, 54.5%), and sugammadex (2/4, 50.0%), while midazolam (7.1%), propofol (3.6%), and fentanyl (4.3%) showed low positivity rates. Patient-level IDT positivity was detected in 24/40 patients (62.5%). Eosinophil, basophil count, and total IgE levels did not differ between patients with and without IDT positivity (p=0.355, p=0.732, and p=0.360, respectively). IDT and prick test positivity rates were similar regardless of atopic status (p=0.560 and p=0.547) and presence of previous perioperative reactions (p=0.824 and p=1.000). Omitting testing would expose 62.5% of patients to test-positive anesthetics, whereas test-guided drug selection successfully prevented all recurrent perioperative reactions.

Conclusion: In this real-world pediatric cohort, structured IDT-guided evaluation effectively predicted and reduced perioperative hypersensitivity reactions. These findings support skin testing as a crucial risk-mitigation strategy rather than a mere diagnostic tool.

Keywords: Children, Skin testing, Perioperative hypersensitivity, Allergy, Anesthetic agents

OP - 069

RECOGNIZING PRIMARY CILIARY DYSKINESIA: CLINICAL CLUES FOR PEDIATRICIANS

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Aim: Primary ciliary dyskinesia (PCD) is a rare genetic disorder with heterogeneous clinical manifestations that frequently overlap with common pediatric diseases, potentially delaying recognition. We aimed to describe the clinical characteristics of our PCD patients and highlight early features that may increase disease awareness among pediatricians.

Material & Method: This retrospective single-center study included children diagnosed with PCD. Demographic characteristics, neonatal history, clinical manifestations, Primary Ciliary Dyskinesia Rule (PICADAR) and associated anomalies were evaluated descriptively.

Results: Thirty-two children with PCD were included. Consanguinity was present in 62.5% of patients. Neonatal respiratory symptoms and neonatal hospitalization were observed in 53.1% and 53.1%, respectively. Situs anomalies were present in 50% of patients, while congenital heart disease was identified in 21.9%. Year-round persistent rhinitis were present in 59.4%, chronic ear disease in 62.5%, recurrent lower respiratory tract infections in 90.6%, and bronchiectasis in 40.6% (Table 1). Median PICADAR score was 8. Current guidelines emphasize that PCD symptoms often begin early in life and recognition of symptom patterns remains crucial for diagnosis.

Table 1. Demographic and Clinical Characteristics of Children with Primary Ciliary Dyskinesia (n=32)

Table 1. Demographic and Clinical Characteristics of Children with Primary Ciliary Dyskinesia (n=32)	
	Patients (n=32)
PICADAR score	8 (2–12)
Consanguinity, n (%)	20 (62.5)
Term birth, n (%)	30 (93.8)
Neonatal respiratory symptoms, n (%)	17 (53.1)
Neonatal hospitalization, n (%)	17 (53.1)
Situs anomaly, n (%)	16 (50.0)
Congenital heart disease, n (%)	7 (21.9)
Year-round persistent rhinitis, n (%)	19 (59.4)
Chronic ear disease, n (%)	20 (62.5)
Recurrent lower respiratory tract infections, n (%)	29 (90.6)
Nasal polyposis, n (%)	3 (9.4)
Bronchiectasis, n (%)	13 (40.6)
Continuous variables are presented as median (minimum–maximum); categorical variables are presented as n (%).	

Conclusion: Children with PCD demonstrate characteristic clinical patterns beginning early in life, including neonatal respiratory manifestations, chronic ear disease, recurrent respiratory infections, and laterality defects. The high median PICADAR score further highlights the value of symptom-based screening tools in raising clinical suspicion for PCD. Increased awareness of these symptom clusters may facilitate earlier suspicion and referral for diagnostic evaluation.

Keywords: Primary ciliary dyskinesia, PICADAR, Bronchiectasis

OP - 070

WHEN SHOULD PEDIATRICIANS SUSPECT CHILDHOOD INTERSTITIAL LUNG DISEASE? PRESENTING FEATURES OF CHILDREN WITH CHILD

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Aim: Childhood interstitial lung diseases (chILD) are rare disorders that often present with nonspecific respiratory symptoms, leading to delayed diagnosis. We aimed to describe the presenting characteristics of children with chILD and identify clinical clues that may facilitate earlier recognition by general pediatricians.

Material & Method: This retrospective descriptive study included children diagnosed with chILD and followed at a tertiary pediatric pulmonology center. Demographic characteristics, age at symptom onset, age at referral, presenting symptoms, and physical examination findings were analyzed.

Results: Seventy-four children with available symptom data were included. Median age at symptom onset was 23.5 months, whereas median age at first referral was 60 months, indicating a considerable delay between symptom onset and specialist evaluation (Table 1). The most common presenting complaints were cough (60.8%), recurrent respiratory tract infections (41.9%), dyspnea (40.5%), wheezing (39.2%), and tachypnea (37.8%). Less frequent symptoms included gastrointestinal complaints (13.5%), fever (12.2%), feeding difficulties (10.8%), chest pain (6.8%), and hemoptysis (4.1%). On physical examination, crackles were present in 37.8% of patients, followed by rhonchi (23.0%) and retractions (21.6%). Digital clubbing was observed in 8.1% of patients (Table 2). Growth failure was identified in 28.4%, while 21.6% required supplemental oxygen at presentation. Consanguinity was present in one-third of the cohort (33.8%), and a family history of chronic lung disease was reported in 13.5%.

Table 1. Demographic and baseline characteristics of children with chILD (n=74)

Variable	Value
Male sex, n (%)	39 (52.7)
Consanguinity, n (%)	25 (33.8)
Family history of chronic lung disease, n (%)	10 (13.5)
Age at symptom onset, months, median (IQR)	23.5 (88.5)
Age at referral, months, median (IQR)	60.0 (118.0)
Gestational age, weeks, median (IQR)	38 (2)
Birth weight, g, median (IQR)	3300 (690)
Cesarean delivery, n (%)	46 (62.2)
NICU admission history, n (%)	22 (29.7)
Mechanical ventilation during NICU stay, n (%)	9 (12.2)
Growth failure, n (%)	21 (28.4)
Oxygen requirement at presentation, n (%)	16 (21.6)
Echocardiographic abnormalities, n (%)	11 (14.9)
Associated systemic disease, n (%)	23 (31.1)

Abbreviations: chILD, childhood interstitial lung disease; NICU, neonatal intensive care unit; IQR, interquartile range.

Table 2. Presenting symptoms and physical examination findings in children with chILD (n=74)

Variable	n (%)
PRESENTING SYMPTOMS	
Cough	45 (60.8)
Recurrent respiratory tract infections	31 (41.9)
Dyspnea	30 (40.5)
Wheezing	29 (39.2)
Tachypnea	28 (37.8)
Gastrointestinal symptoms	10 (13.5)
Fever	9 (12.2)
Feeding difficulties	8 (10.8)
Chest pain	5 (6.8)
Hemoptysis	3 (4.1)
Cyanosis	1 (1.4)
Aspiration history	3 (4.1)
PHYSICAL EXAMINATION FINDINGS	
Crackles	28 (37.8)
Rhonchi	17 (23.0)
Retractions	16 (21.6)
Chest wall deformity	13 (17.6)
Wheezing on auscultation	9 (12.2)
Decreased breath sounds	6 (8.1)
Digital clubbing	6 (8.1)
Hepatosplenomegaly	6 (8.1)
Cardiac murmur	2 (2.7)
Stridor	1 (1.4)
Nasal flaring	3 (4.1)

Abbreviations: chILD, childhood interstitial lung disease; RTI, respiratory tract infection.

Conclusion: Children with chILD most commonly present with persistent cough, recurrent respiratory infections, dyspnea, wheezing, and tachypnea. The marked interval between symptom onset and referral highlights the ongoing challenge of early recognition. General pediatricians should consider chILD in children with persistent respiratory symptoms, growth failure, hypoxemia, or crackles on auscultation, even when symptoms appear nonspecific.

Keywords: chILD, childhood interstitial lung disease, hypoxia, chronic lung disease, pediatric pulmonology

OP - 071

CLINICAL, ENDOSCOPIC, AND HISTOPATHOLOGICAL EVALUATION OF PEDIATRIC EOSINOPHILIC ESOPHAGITIS PATIENTS

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Aim: To retrospectively evaluate the clinical, endoscopic, and histopathological characteristics of pediatric patients diagnosed with eosinophilic esophagitis (EoE) and to examine their response to the treatments, including proton pump inhibitors (PPIs), elimination diets, and/or topical corticosteroids.

Material & Method: After ethics committee approval, 19 pediatric patients with EoE were included in the study. The patients' demographic characteristics, symptoms, EoE Histology Scoring System (EoEHSS), and EoE Endoscopic Reference Score (EREFS) data were retrospectively reviewed. The treatments administered, including PPIs, topical corticosteroids, and/or elimination diet, treatment durations, were recorded. Treatment response was evaluated based on changes in EREFS, EoEHSS, and peak eosinophil count on follow-up endoscopy, with remission defined as ≤15 eosinophils per high-power field.

Results: The mean age of the patients at diagnosis was 9.32±4.15 years, and 63.2% (n=12) were male. The most common symptoms were dysphagia (68.4%) and food impaction (68.4%). Concomitant allergic disease was present in 36.8% of the patients. Pathological findings were observed on the initial endoscopy in 89.5% of cases. Thirteen patients received PPIs, five patients received PPI plus fluticasone propionate, and one patient received PPI, fluticasone propionate, and an elimination diet. After treatment, there was a statistically significant improvement in the median EREFS (from 3.0 to 1.0; p=0.048), peak eosinophil count (from 37.5 to 1.0; p=0.030), and EoEHSS (from 0.31 to 0.08; p=0.018). A significant positive correlation was found between the initial EREFS and peak eosinophil count (r=0.462, p=0.046) and between peak eosinophil count and EoEHSS (r=0.829, p < 0.001).

Conclusion: PPI, topical corticosteroid, and elimination diet therapies used in the management of pediatric EoE are effective in achieving endoscopic and histopathological remission. The strong correlation of EREFS and EoEHSS with peak eosinophil count supports the use of these scoring systems as reliable tools for monitoring disease severity and treatment response.

Keywords: eosinophilic esophagitis, children, erefs, eoehss, treatment

OP - 072

INCREASING BMI Z-SCORE IS ASSOCIATED WITH MORE SEVERE OBSTRUCTIVE SLEEP APNEA AND NOCTURNAL HYPOXEMIA IN CHILDREN EVALUATED WITH POLYSOMNOGRAPHY

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Aim: Childhood obesity is a growing public health concern and a recognized risk factor for obstructive sleep apnea syndrome (OSAS). However, the extent to which increasing obesity severity influences sleep-disordered breathing in children remains incompletely defined. This study aimed to evaluate the association between obesity, Body Mass Index (BMI) z-score, and polysomnographic severity in children undergoing evaluation for suspected OSAS.

Material & Method: In this retrospective single-center study, 152 children referred for overnight polysomnography with symptoms suggestive of OSAS were included. Children with chronic respiratory diseases, neuromuscular disorders, or other major comorbidities were excluded. Participants were classified as obese(n=58) or non-obese(n=94) according to WHO BMI criteria. OSAS severity was categorized using the apnea-hypopnea index(AHI). Group comparisons were performed using Mann–Whitney U and Fisher's exact tests. Associations between BMI z-score and polysomnographic parameters were assessed using Spearman correlation analysis.

Results: Demographic characteristics were similar between groups (Table 1). Obese children had significantly greater OSAS severity than non-obese children (p=0.017), with severe OSAS observed in 24.1% and 8.5% of participants, respectively. Obese children demonstrated higher AHI, obstructive apnea-hypopnea index(oAHI), and oxygen desaturation index(ODI) values, together with lower mean and minimum oxygen saturation levels (all $p < 0.05$) (Table 2). BMI z-score correlated positively with AHI (r=0.22,p=0.011), oAHI (r=0.20,p=0.027), and ODI (r=0.29,$p < 0.001$), while showing inverse correlations with mean oxygen saturation (r=-0.38,$p < 0.001$) and minimum oxygen saturation (r=-0.26, p=0.001). A dose-response relationship was observed between increasing BMI z-score and OSAS severity (p=0.018). Sleep architecture did not differ significantly between groups.

Table-1: Comparison of demographic and respiratory findings in obese and non-obese pediatrics with OSA

variable	Obese group (n:58) median (IQR)	Non-obese group (n:94) median (IQR)	p-value
age (months)	102 (88.3)	91 (81)	0.365

gender, male, n (%)	37 (63.8)	57 (60.6)	0.697
weight (kg)	51.5 (60)	27 (23.8)	<0.001
weight z-score	3.16 (1.76)	0.31 (1.76)	<0.001
height (cm)	137 (41)	130 (39)	0.396
height z-score	0.53 (3.07)	-0.10 (2.13)	0.126
BMI (kg/m²)	30.8 (13.2)	17.2 (5.05)	<0.001
BMI z score	3.13 (1.28)	0.37 (1.44)	<0.001
prematurity, n (%)	13 (22.4)	25 (26.6)	0.563
OSA history in family, n (%)	44 (75.9)	70 (74.5)	0.714

Abbreviations: BMI, body mass index; OSA, obstructive sleep apnea; IQR, interquartile range.

Table-2: Comparison of Polysomnography findings (Sleep Architecture and RespiratoryVariables) in obese and non-obese pediatric patients with OSA

variable	**Obese Group (n:58)**	**Non-obese Group (n:94)**	**p-value**
OSAS, n (%)			
normal	8 (13.8)	26 (27.7)	
mild	19 (32.8)	38 (40.4)	**0.017**
moderate	17 (29.3)	22 (23.4)	
severe	14 (24.1)	8 (8.5)	
Central apnea, n (%)	12 (20.7)	10 (10.6)	0.087
Mix apnea, n (%)	4 (6.9)	9 (9.6)	0.566
Sleep latency (min), median (IQR)	18.3 (21)	18 (24)	0.861
mean (SpO_2), median (IQR)	95.6 (2.17)	96.6 (1.47)	**<0.001**
min. spO_2), median (IQR)	87 (10)	90 (6.8)	**0.005**
Sleep efficiency (%), median (IQR)	82.8 (18.3)	89.2 (13.9)	0.105
Total time of sleep (min), median (IQR)	366 (75.8)	390 (73.4)	0.054
AHI (events/h), median (IQR)	5.25 (7.58)	2.70 (4.15)	**0.005**
CAI (events/h), median (IQR)	0.25 (0.90)	0.20 (0.60)	0.359
ODI (events/h), median (IQR)	3.05 (7.13)	1.60 (2.58)	**<0.001**

OAHI (events/h), median (IQR)	4.30 (7.30)	2.50 (3.87)	**0.024**
N1 (%), median (IQR)	3.45 (3.97)	3.70 (4.25)	0.857
N2 (%) (mean ± SD)	41 ± 10.9	39.8 ± 12.8	0.542*
N3 (%), median (IQR)	27.4 (15)	31.5 (10.4)	0.055
REM (%), median (IQR)	11.6 (9.8)	13.8 (12.4)	0.198

Abbreviations: OSAS, obstructive sleep apnea syndrome; SpO_2, oxygen saturation measured by pulse oximetry; AHI, apnea-hypopnea index; CAI, central apnea index; ODI, oxygen desaturation index; OAHI, obstructive apnea-hypopnea index; N1, non-rapid eye movement sleep stage 1; N2, non-rapid eye movement sleep stage 2; N3, non-rapid eye movement sleep stage 3 (slow-wave sleep); REM, rapid eye movement sleep; SD, standard deviation; IQR, interquartile range.

Conclusion: Increasing BMI z-score was associated with progressively worse respiratory polysomnographic findings and greater nocturnal hypoxemia in children evaluated for suspected OSAS. While sleep architecture remained largely preserved, obesity was linked to a substantially higher burden of sleep-disordered breathing. These findings suggest that assessment of sleep-disordered breathing should be considered as part of the routine evaluation of obese children.

Keywords: pediatric obesity, obstructive sleep apnea, polysomnography, BMI z-score, Nocturnal hypoxemia

OP - 073

UROTHERAPY AND BIOFEEDBACK-ASSISTED REHABILITATION IN CHILDREN WITH DYSFUNCTIONAL VOIDING: PRELIMINARY FINDINGS

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Aim: This study aimed to investigate the preliminary effects of urotherapy and biofeedback-assisted pelvic floor rehabilitation on uroflowmetry parameters, post-void residual urine volume, and pelvic floor muscle activity in children with dysfunctional voiding.

Material & Method: Eight children diagnosed with dysfunctional voiding according to ICCS criteria were included. The mean age of the participants was 9.0±2.8 years. Maximum flow rate, average flow rate, voiding time, and voided volume were recorded using uroflowmetry. Post-void residual urine volume was assessed after voiding. Pelvic floor muscle activity was evaluated using a surface EMG biofeedback system based on contraction and relaxation phase amplitudes. All assessments were repeated before and after treatment. Statistical analyses were performed using SPSS v32. Pre- and post-treatment comparisons were analyzed with the Wilcoxon signed-rank test, and the statistical significance level was set at $p < 0.05$.

Results: EMG activity has significantly diminished. Maximum flow rate was 24.4±14.4 mL/s before treatment and 24.2±13.9 mL/s after treatment, with no significant change (p=0.938). Average flow rate increased from 16.1±7.2 mL/s to 16.4±7.3 mL/s (p=0.547). Voiding time changed from 17.4±7.2 s to 19.3±13.8 s (p=0.891), and voided volume changed from 276.4±169.9 mL to 287.4±160.3 mL (p=0.742). Post-void residual urine volume decreased significantly from 90.0±82.4 mL to 39.1±33.7 mL (p=0.008). Maximum EMG amplitude increased from 4029.8±2823.1 µV to 6738.0±4447.4 µV, but this change was not statistically significant (p=0.312). The rate of normal uroflow curve pattern increased from 50.0% to 87.5%.

Conclusion: These preliminary findings suggest that urotherapy and biofeedback-assisted pelvic floor rehabilitation may have favorable effects, particularly in reducing post-void residual urine volume, in children with dysfunctional voiding. The significant reduction in post-void residual urine volume indicates that this approach may represent a rehabilitation option to be considered in clinical practice for supporting bladder emptying efficiency.

Keywords: Pediatric urology; Pelvic floor rehabilitation; EMG biofeedback; Uroflowmetry; Voiding dysfunction

OP - 074

CLINICAL CHARACTERISTICS AND HOSPITALIZATION BURDEN OF PEDIATRIC PANCREATITIS: PRELIMINARY RESULTS FROM A TERTIARY CARE CENTER

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Aim: Pancreatitis is an important cause of hospitalization and morbidity in children. Recurrent attacks and prolonged hospital stays increase healthcare burden. This study aimed to evaluate treatment requirements and hospitalization characteristics in pediatric patients with pancreatitis.

Material & Method: We retrospectively reviewed pediatric patients hospitalized with pancreatitis at a tertiary center between January 2025 and January 2026. Data regarding pancreatitis subtype, analgesic and antibiotic use, number of attacks, and length of hospital stay were collected from electronic medical records. Descriptive analyses were performed using SPSS version 27.

Results: A total of 48 patients were included, of whom 30 (62.5%) were male. The median age was 11.5 years (range, 9–16 years). Twenty-two patients (45.8%) had acute pancreatitis, while 13 (27.1%) had acute recurrent pancreatitis and 13 (27.1%) had chronic pancreatitis. Analgesic therapy was required in 18 patients (37.5%), including 6 (12.5%) who required analgesics other than paracetamol. Antibiotic therapy was administered to 16 patients (33.3%). The mean length of hospital stay was 5.76 ± 2.1 days in patients with acute recurrent or chronic pancreatitis and 5.8 ± 3.1 days in those with acute pancreatitis. Twelve patients (25%) experienced more than three pancreatitis attacks. Among patients with acute recurrent or chronic pancreatitis, five required non-paracetamol analgesics and seven received antibiotic treatment. No significant association was observed between pancreatitis subtype and length of hospital stay.

Conclusion: In this preliminary cohort, pancreatitis subtype did not appear to influence hospital stay duration or antibiotic use; however, analgesic requirements were more prominent among patients with recurrent and chronic disease. The considerable proportion of acute recurrent and chronic pancreatitis highlights the need for close monitoring because of their potential long-term morbidity. Hospital stays approaching six days may also contribute to school absenteeism and increased healthcare burden, emphasizing the importance of early diagnosis and targeted management strategies.

Keywords: pancreatitis, chronic, hospital stay, pediatric

OP - 075

CLINICAL CHARACTERISTICS OF PEDIATRIC PANCREATITIS: A TWO-YEAR EXPERIENCE FROM A TERTIARY REFERRAL CENTER

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Aim: Pancreatitis in childhood may occur due to post-infectious, hereditary, and anatomical causes. Given its potential to result in prolonged hospital stays, significant comorbidities, and increased healthcare costs, pancreatitis remains a clinically important condition requiring timely and effective diagnosis and management.

Material & Method: As a tertiary referral center, we retrospectively evaluated pediatric patients hospitalized with a diagnosis of pancreatitis in our clinic between January 2024 and January 2026. Data regarding pancreatitis type, age, sex, presence of genetic mutations, and anatomical malformations were analyzed. Clinical information was obtained from patient histories recorded during hospitalization and follow-up visits. All data were extracted from the hospital electronic medical record system. Descriptive statistical analyses were performed using SPSS version 27.

Results: A total of 139 patients were followed during the two-year study period. Of these, 64 were female (46%) and 75 were male (54%). The median age was 12 (range: 7–16). Eighty-one patients (58.3%) were diagnosed with acute pancreatitis, 23 (16.5%) with acute recurrent pancreatitis, and 34 (24.5%) with chronic pancreatitis. Among patients with chronic pancreatitis, 15 (10.8%) were classified as having hereditary pancreatitis due to identified genetic mutations; eight of these patients were male. Anatomical malformations were detected in 18 patients (12.9%), of whom 12 were male.

Conclusion: We believe that a detailed evaluation of past medical history in patients diagnosed with acute pancreatitis is essential to identify potential cases of recurrent pancreatitis and to investigate underlying hereditary and anatomical etiologies.

Keywords: pancreatitis, childhood, chronic, pediatric

OP - 076

SPECIFIC LEARNING DISORDER COMORBIDITY IN A CHILD PSYCHIATRY INPATIENT UNIT

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Aim: To examine the sociodemographic, clinical, and pharmacological characteristics of children and adolescents with specific learning disorder (SLD) comorbidity hospitalized in a tertiary child and adolescent psychiatry inpatient unit.

Material & Method: This retrospective descriptive study reviewed records from 201 hospitalization episodes (163 unique patients). Thirty-six admissions (31 unique patients, 18.4% of all admissions) were identified as having SLD comorbidity based on clinical records. Sociodemographic features, admission indications, discharge diagnoses, psychometric scale scores at admission, and pharmacological treatments were analyzed.

Results: The SLD group was predominantly female (n=30, 83.3%), with a mean age of 16.3±1.5 years (range: 12–18). The most frequent discharge diagnoses were major depressive disorder (66.7%), post-traumatic stress disorder (33.3%), personality disorder (19.4%), and psychosis (13.9%). Homicidal risk (13.9%) and treatment non-adherence (8.3%) were among the admission indications. Mean hospitalization duration was 16.3±23.0 days. Beck Depression Inventory score at admission was 22.6±12.2 and SCARED score was 46.0±15.1. All patients received atypical antipsychotics (100%), followed by antidepressants (77.8%), mood stabilizers (63.9%), and benzodiazepines (50.0%). Stimulant and non-stimulant ADHD medications were not used in this group.

Conclusion: SLD comorbidity was identified in 18.4% of inpatient admissions, with a striking female predominance. Major depressive disorder was the dominant discharge diagnosis, and high rates of antipsychotic and polypharmacy use reflect the clinical complexity of this population. Routine neurodevelopmental screening including SLD assessment should be integrated into child psychiatry inpatient evaluation protocols.

Keywords: Specific learning disorder, inpatient psychiatry, comorbidity, major depressive disorder, child and adolescent psychiatry

OP - 077

THE IMPACT OF PARENTAL DEFENSE MECHANISMS, DEPRESSION, AND TEMPERAMENT ON CHILDREN'S SOCIAL-EMOTIONAL DEVELOPMENT

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Aim: The aim of this study is to examine the effects of parents' defense mechanisms, levels of depression, and infant temperament traits on early social-emotional development in children aged 24–49 months. The research specifically aims to reveal the relationship between maternal and paternal defense styles and the child's problem behaviors and social-emotional competencies.

Material & Method: Designed as a correlational cross-sectional study, the sample consisted of 20 children and their parents. Data collection tools included the Brief Infant-Toddler Social-Emotional Assessment (BITSEA), the Beck Depression Inventory (BDI), the Defense Mechanisms Test (SBT-40), the Rothbart Infant Behavior Questionnaire (IBQ-R), the Family Assessment Scale (FAS), and the Thomas-Chess Temperament Assessment were used. Data were analyzed using descriptive statistics, Pearson correlation analysis, and the independent samples t-test.

Results: A strong positive correlation was found between mothers' immature defense mechanisms and the BITSEA problem score ($r = .818$, $p = .004$). A significant relationship was also found between the mother's SBT total score and the problem score ($r = .729$, $p = .017$). The relationship between maternal depression scores and problem behaviors was marginally significant ($r = .608$, $p = .062$). A strong positive correlation was found between paternal depression and paternal immature defense mechanisms ($r = .778$, $p = .008$). Among Rothbart's temperament dimensions, smiling/laughing showed a significant negative relationship with problem behaviors ($r = -.700$, $p = .017$). No significant differences were found in BITSEA scores based on gender.

Conclusion: The findings indicate that mothers' immature defense mechanisms are a significant predictor of the infant's problem behaviors. Positive affect in infant temperament functions as a protective factor. It is recommended that early intervention programs focus not only on the child but also on parents' psychological functioning. Given the study's small sample size and cross-sectional design, the findings need to be supported by longitudinal studies with larger samples.

Keywords: Defense mechanisms, infant temperament, social-emotional development, parental depression, early childhood

OP - 078

SENSORY PROCESSING AND ALEXITHYMIA IN SPECIFIC LEARNING DISORDER: A PILOT STUDY ON THE ROLE OF LEARNING DIFFICULTY

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Aim: Children with Specific Learning Disorder (SLD) may experience difficulties beyond academic skills, including sensory processing, theory of mind performance, and emotion processing. This study aimed to examine the relationships between sensory processing, theory of mind, and alexithymia in children with SLD, and to investigate the potential mediating role of learning difficulty severity in the sensory processing-alexithymia relationship.

Material & Method: A total of 69 children aged 7-10 years were included: 47 children with SLD and 22 healthy controls. Sensory processing, learning difficulty severity, alexithymia, and theory of mind were assessed using the Dunn Sensory Profile, Mathematics, Reading and Writing Assessment Scale, Toronto Alexithymia Scale, and Reading the Mind in the Eyes Test, respectively. Group comparisons and within-group association analyses were performed. Mediation analyses were conducted.

Results: Children with SLD showed significantly lower sensory processing and theory of mind scores, and higher alexithymia compared with healthy controls (all $p < 0.05$). Within the SLD group, sensory processing significantly predicted alexithymia ($\beta = -0.477$, $p < 0.001$), whereas theory of mind was not a significant predictor ($p > 0.05$). The model explained 25.3% of the variance in alexithymia. Mediation analysis indicated that learning difficulty severity fully mediated the relationship between sensory processing and alexithymia (indirect effect $\beta = -0.233$, 95% CI [-0.456, -0.064]), while the direct effect was not significant.

Conclusion: Children with SLD may show difficulties in sensory processing and theory of mind performance, as well as higher levels of alexithymia. The relationship between sensory processing and alexithymia appears to be mediated by learning difficulty severity, suggesting that academic functioning may represent an important pathway linking sensory processing and alexithymia. To our knowledge, this is the first study to examine this mediation pathway in SLD. These findings suggest that interventions addressing both academic difficulties and sensory processing may help reduce alexithymia-related difficulties in this population.

Keywords: Specific Learning Disorder, Sensory Processing, Alexithymia, Children

OP - 079

PARENTAL SELF-STIGMA AND REGRET: CHILD MENTAL HEALTH OUTCOMES

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Aim: Parental internalized self-stigma may influence help-seeking processes and subsequent decision regret, potentially affecting child mental health outcomes. Since children with special needs often have greater functional impairments and increased contact with educational and mental health systems, stigma-related experiences may differ in these families. This study aimed to examine the associations between parental internalized self-stigma, help-seeking decision regret, and child psychiatric symptoms, and to investigate differences according to the presence of special needs.

Material & Method: This cross-sectional study included 296 children and adolescents and their parents who met the predefined inclusion and exclusion criteria. Participants were divided into two groups based on the presence (n=107) or absence (n=189) of special needs. Parental internalized self-stigma was assessed using the Parents' Internalized Stigma of Mental Illness Scale, help-seeking decision regret using the Decision Regret Scale, and child psychiatric symptoms using the Strengths and Difficulties Questionnaire. Group comparisons and correlation analyses were conducted.

Results: Parents of children with special needs reported significantly higher levels of parental internalized self-stigma, including alienation, stereotype endorsement, discrimination experience, and social withdrawal (all $p < 0.001$). Across both groups, higher parental internalized self-stigma was positively associated with child psychiatric symptoms, particularly peer problems and total difficulties ($r = 0.20$-0.41, $p < 0.01$). In the special needs group, social withdrawal was positively correlated with help-seeking decision regret ($r = 0.218$, $p = 0.046$).

Conclusion: Parental internalized self-stigma may represent a clinically relevant psychosocial burden in families of children with special needs and appears to be linked with broader child mental health difficulties. The co-occurrence of social withdrawal and help-seeking decision regret highlights the need to consider parents' emotional and social experiences after seeking psychiatric support. In clinical practice, assessing parental self-stigma may help identify families who need additional psychoeducation, emotional support, and engagement-focused interventions to sustain care and improve children's psychosocial outcomes.

Keywords: Internalized stigma, Decision regret, Children with special needs, Child mental health

OP - 080

CLINICAL CORRELATES OF AVOIDANT/RESTRICTIVE FOOD INTAKE DISORDER RISK AT A CHILD PSYCHIATRY OUTPATIENT CLINIC

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Aim: This study aimed to determine the risk prevalence of Avoidant/Restrictive Food Intake Disorder (ARFID) among children and adolescents in a child psychiatry outpatient setting and to examine its association with nutritional status, psychiatric comorbidity, and the level of agreement between parent and self-reports.

Material & Method: A cross-sectional study was conducted with 437 children and adolescents aged 8-18 and their mothers at a child psychiatry outpatient clinic. Participants completed the Nine-Item ARFID Screen (NIAS) in both self report (SR) and parent report (PR) formats, the Children's Eating Attitudes Test-26 (ChEAT-26), and the Revised Child Anxiety and Depression Scale (RCADS). Given the absence of validated Turkish cut offs, risk status for each ARFID subscale (Picky Eating, Appetite, Fear) was determined using sample derived mean scores.

Results: A substantial proportion of children and adolescents were identified as at risk for ARFID symptoms. No significant difference in Body Mass Index (BMI) was found between at risk and not at risk groups. However, children and adolescents with ARFID symptoms were significantly younger. Significant positive correlations were identified between all NIAS subscales and measures of anxiety. Inter rater agreement between parent and self-reports, assessed via Cohen's kappa, was moderate for Picky Eating (κ=0.522) but weaker for Appetite (κ=0.269) and Fear (κ=0.387).

Conclusion: ARFID risk is considerable in child psychiatry outpatient populations. Multi-informant assessments improve detection, particularly for internalized symptoms. Routine screening using validated instruments, culturally adapted cut-offs, and longitudinal monitoring are essential for early identification and targeted intervention.

Keywords: NIAS, ARFID, Avoidant/restrictive food intake disorder, Adolescent

OP - 081

HEALTHY LIVING SKILLS IN CHILDREN AGED 8–10 WITH ALLERGIC DISEASES: ASSOCIATIONS WITH ANXIETY, DEPRESSION, AND STRESS

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Aim: To compare healthy living skills and levels of depression, anxiety, and stress between children aged 8–10 years with allergic diseases and healthy controls, and to examine the relationship between healthy living skills and psychological symptoms.

Material & Method: This cross-sectional study included 259 children (127 with allergic diseases and 132 healthy controls). Children with physician-diagnosed asthma, allergic rhinitis, or atopic dermatitis were compared with age-, sex-, and socioeconomic status-matched controls. Healthy living skills were assessed using a validated scale, and psychological symptoms were evaluated using the Depression Anxiety Stress Scale for Youth (DASS-Y). Group comparisons were performed using appropriate statistical tests, and correlations and ANCOVA were used to assess associations and adjust for confounders.

Results: Children with allergic diseases had significantly lower healthy living skills scores than controls (86.58 ± 6.87 vs. 92.44 ± 9.49, $p < 0.001$), particularly in physical activity and nutrition domains. DASS-Y total and subscale scores were significantly higher in the allergic group (18.12 ± 8.42 vs. 8.61 ± 6.13, $p < 0.001$), with the most pronounced difference observed in anxiety (Table 1). Healthy living skills, especially nutrition, physical activity, and hygiene, showed significant negative correlations with psychological symptoms ($r = -0.20$ to -0.37, $p < 0.05$) (Table 2). Comparisons across asthma, allergic rhinitis, atopic dermatitis, and healthy controls are presented in Table 3. These associations remained significant after adjustment for place of residence and family income.

Table 1. Comparison of healthy lifestyle skills and DASS-Y scale subscale scores between the control and patient groups

	Control (n=132)	Patient (n=127)	p	ES Cohen's d
Health maintenance	24.97 ± 6.54 27 (20-30)	24,15 ± 4,76 25 (22-27)	0.016*	0.14
Cleanliness and hygiene	37.82 ± 2.73 39 (37-40)	36.18 ± 2.89 37 (34-39)	<0.001*	0.58
Sport and activity	16.85 ± 2.66 17 (16-18)	14.36 ± 2.65 14 (13-16)	<0.001*	0.94
Proper nutrition	12.80 ± 1.56 13 (12-14)	11.89 ± 1.38 12 (11-13)	<0.001*	0.62
Total life skills	92.44 ± 9.49 95 (86-100)	86.58 ± 6.87 87 (82-91)	<0.001*	0.71
Depression	1.71±2.04 1(0-2)	3.87±2.63 4(2-5)	<0.001*	0.92
Anxiety	1.82±2.18 1.00(0-2)	5.61±3.25 6(3-8)	<0.001*	1.37
Stress	5.08±2.63 5(3-6.50)	8.63±3.49 9(6-11)	<0.001*	1.15
Total DASS-Y	8.61±6.13 7(5-11)	18.12±8.42 18(13-23)	<0.001*	1.3

Comparisons between the two groups were performed using the Mann–Whitney U test. p<0.05

Table 2. Correlations between the subscales of life skills and the total and subscale scores of the DASS-Y in the group with allergies

	DASS-Y r (p)	Depression r (p)	Anxiety r (p)	Stress r (p)

Health maintenance	0.145 (0.103)	0.138 (0.122)	0.128 (0.151)	0.143 (0.108)
Cleanliness and hygiene	-0.330 (<0.001)	-0.363 (<0.001)	-0.329 (<0.001)	-0.216 (0.015*)
Sport and activity	-0.300 (0.001)	-0.202 (0.023)	-0.329 (<0.001)	-0.265 (0.003*)
Proper nutrition	-0.368 (<0.001)	-0.266 (0.002)	-0.373 (<0.001)	-0.339 (<0.001*)
Total life skills	-0.155 (0.081)	-0.144 (0.106)	-0.183 (0.039)	-0.095 (0.286)

Table 3. Comparison of healthy living skills and DASS-Y scores across diagnostic subgroups and controls

	Control (n=132) Mean±SD / Median (Q1–Q3)	**Asthma (n=40) Mean±SD / Median (Q1–Q3)**	**Allergic Rhinitis (n=56) Mean±SD / Median (Q1–Q3)**	**Atopic Dermatitis (n=31) Mean±SD / Median (Q1–Q3)**	**p**	**ES**
Health maintenance	24.97±6.54 / 27 (20–30)	24.75±4.42 / 26 (22.5–27)	24.09±4.16 / 25 (22.5–27)	23.48±6.08 / 25 (21–28)	0.099	0.008
Cleanliness and hygiene	37.82±2.73 / 39 (37–40)	35.70±2.84 / 36 (33–38)	36.59±2.97 / 38 (34–39)	36.06±2.78 / 37 (34–38)	<0.001	0.088
Sport and activity	16.85±2.66 / 17 (16–18)	13.18±2.37 / 13 (11.5–14.5)	14.61±2.70 / 14 (13–16)	15.45±2.36 / 15 (14–17)	<0.001	0.224
Proper nutrition	12.80±1.56 / 13 (12–14)	11.45±1.40 / 11 (10–12)	11.84±1.35 / 12 (11–13)	12.55±1.21 / 13 (12–13)	<0.001	0.122
Total life skills	92.44±9.49 / 95 (86–100)	85.07±6.89 / 85 (81–90.5)	87.13±6.20 / 88.5 (83–91)	87.55±7.86 / 87 (84–93)	<0.001	0.118
Depression	1.71±2.04 / 1 (0–2)	4.55±2.76 / 4 (3–6)	3.46±2.49 / 3 (2–4)	3.74±2.59 / 4 (1–6)	<0.001	0.193

Anxiety	1.82±2.18 / 1 (0–2)	7.13±2.90 / 7 (6–9)	5.18±3.03 / 5.5 (3–7)	4.45±3.45 / 4 (1–7)	<0.001	0.373
Stress	5.08±2.63 / 5 (3–6.5)	9.77±2.89 / 10 (8–11.5)	8.29±3.36 / 8 (6–10)	7.77±4.12 / 8 (4–11)	<0.001	0.275
Total DASS-Y	8.61±6.13 / 7 (5–11)	21.45±7.52 / 21.5 (17.5–25)	16.93±8.1* / 16 (13–20.5)	15.97±9.19 / 16 (7–23)	<0.001	0.331

Comparisons were performed using the Kruskal-Wallis test. ES: effect size (η^2). $p<0.05$.

Conclusion: Children with allergic diseases demonstrate lower healthy living skills and higher psychological distress compared to healthy peers. The observed inverse relationship between lifestyle behaviors and psychological symptoms suggests that healthy living skills may be relevant targets in the holistic management of pediatric allergic diseases. Integrating behavioral and psychological assessment into routine allergy care may support improved patient outcomes.

Keywords: Allergic diseases; Children; Healthy lifestyle behaviors; Anxiety; Depression

OP - 082

EVALUATION OF EATING BEHAVIOURS AND ATTITUDES IN ADOLESCENTS FROM THE PERSPECTIVE OF PARENT-ADOLESCENT RELATIONSHIP: A MULTICENTER CROSS-SECTIONAL STUDY

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Aim: To investigate the association between dietary behaviours and eating attitudes in adolescents and the quality of parent–adolescent relationships. Additionally, the effects of media use during meals and socioeconomic factors on these relationships were evaluated, focusing on identifying modifiable behavioural and relational determinants.

Material & Method: This multicentre cross-sectional study included 522 adolescents aged 11–18 years from various regions of Türkiye. Data were collected using structured face-to-face questionnaires, comprising a sociodemographic form, a dietary habits questionnaire, the Eating Attitudes Test-26 (EAT-26), and the Adolescent–Parent Relationship Scale. Non-parametric statistical tests (Mann–Whitney U, Kruskal–Wallis) and Spearman correlation analyses were conducted. A p-value of < 0.05 was considered statistically significant.

Results: The mean age of participants was 14.55 ± 2.14 years, and 53.6% were female. The mean EAT-26 score was 6.68 ± 9.72, with 9.6% of participants classified as high risk for disordered eating behaviours. Female adolescents had significantly higher EAT-26 scores than males ($p = 0.009$). Frequent media use during meals, meal skipping, and irregular breakfast habits were significantly associated with higher eating attitude scores ($p < 0.05$). In contrast, regular family meals were associated with a lower risk of disordered eating behaviours ($p = 0.001$). Comparisons of parent–adolescent relationship scores according to nutritional habits are presented in Tables 1 and 2. Lower scores in positive and communicative parent–adolescent relationships were significantly associated with higher risk, whereas socioeconomic variables had limited effects, with generally small effect sizes. Multivariable predictors of risky eating behaviour are presented in Table 3.

Table 1. Comparison of Adolescent–Father Relationship Scale by Nutritional Habits

Variable	Category	Positive (Mean±SD)	Negative (Mean±SD)	Total (Mean±SD)	p	Effect size
Media use during meals	Frequently Never Sometimes	19.3±6.35 23.16±5.09 20.52±5.82	18.4±6.35 22.34±5.27 20.29±6.14	15.96±6.03 12.45±5.34 14.28±5.41	<0.001	0.048
Type of media	TV Mobile phone Computer/tablet	22.02±5.63 19.43±5.96 20.95±6.33	21.58±5.85 18.92±6.14 20.12±6.51	13.55±5.28 15.39±5.73 13.92±6.21	<0.001	0.041
Breakfast frequency	Daily 3–5 days 0–2 days	21.32±6.23 20.42±4.94 18.12±6.68	21.38±6.17 19.01±5.24 17.35±6.99	13.39±5.22 15.89±5.78 15.67±6.43	<0.001	0.034
Fast food frequency	≤1/week 2–4/week ≥4/week	20.56±6.34 20.91±5.08 18±6.56	20.56±6.3 19.27±5.75 17.15±6.75	13.76±5.27 15.82±6.13 16.88±6.94	0.108	0.007
Fruit–vegetable intake	0–1 2–3 ≥4	19.93±6.07 21.04±5.94 22.71±5.34	19.32±6.18 20.57±6.18 22.32±6.01	15.37±5.56 13.63±5.8 12.97±5.56	0.009	0.016
Sugary beverage frequency	≤1/week 2–4/week ≥4/week	21.13±6.17 20.34±5.59 18.48±6.37	20.76±6.17 19.57±5.98 17.96±6.74	13.56±5.25 15.23±5.89 16.66±6.37	0.004	0.019
Snack frequency	≤1/week 2–4/week ≥4/week	21.57±5.76 20.21±6.1 19.51±6.03	21.11±5.91 19.58±6.24 19.06±6.49	13.39±5.48 14.83±5.6 15.94±6.19	0.008	0.017
Family meal frequency	Daily ≥3/week 1–2/week Weekends only	21.33±6.1 20.75±4.87 16.55±6.26 17.12±6.24	21.21±6.12 19.61±5.07 15±6.4 16.21±6.51	13.33±5.29 16.04±5.19 17.8±6.93 15.97±6.97	<0.001	0.059
Skipping meals	Daily ≥3/week 1–2/week Weekends only	19.25±6.97 18.75±5.39 21.28±5.83 22.21±5.31	19.29±7.33 18.35±5.24 20.62±5.99 21.16±6.18	13.93±5.65 16.02±5.81 14.6±5.67 13.16±5.47	<0.001	0.046

Mean±SD: Mean ± Standard Deviation; M: Median; Min–Max: Minimum–Maximum; p: Statistical significance; H: Kruskal–Wallis H test

Table 2. Comparison of Adolescent–Mother Relationship Scale by Nutritional Habits

Variable	Category	Positive (Mean±SD)	Negative (Mean±SD)	Total (Mean±SD)	p	Effect size
Media use during meals	Frequently Never Sometimes	24.09±5.66 26.39±4.21 25.29±4.8	23.12±5.65 25.01±4.36 24.4±4.94	15.81±5.97 11.77±5.47 14.75±5.47	0.004	0.019
Type of media	TV Mobile phone Computer/tablet	25.98±4.31 24.41±5.33 25.28±5.4	24.98±4.43 23.28±5.5 24.71±5.02	13.13±5.71 15.98±5.61 13.48±5.5	0.004	0.020
Breakfast frequency	Daily 3–5 days 0–2 days	25.9±4.74 24.75±4.16 22.94±6.89	25.07±4.7 23.4±4.64 22.11±6.64	14.03±5.84 14.71±5.5 16.49±5.81	0.001	0.039
Fast food frequency	≤1/week 2–4/week ≥4/week	25.72±5 24.37±4.57 20.92±6.32	24.74±4.98 23.27±4.91 20.38±6.37	14.09±5.61 15.33±5.8 17.35±6.84	0.001	0.058
Fruit–vegetable intake	0–1 2–3 ≥4	24.29±5.32 26.03±4.44 25.81±5.61	23.39±5.31 24.9±4.69 24.9±5.68	15.42±5.76 13.8±5.76 13±5.18	0.001	0.032
Sugary beverage frequency	≤1/week 2–4/week ≥4/week	26.28±4.31 24.11±5.23 22.89±6.27	25±4.68 23.33±5.19 22.46±6.2	13.73±5.36 15.24±5.78 16.66±6.89	0.001	0.061
Snack frequency	≤1/week 2–4/week ≥4/week	25.9±4.79 24.89±5.14 23.95±5.17	24.98±4.81 23.93±5.21 22.73±5.29	13.49±5.91 15±5.65 15.76±5.62	0.004	0.020
Family meal frequency	Daily ≥3/week 1–2/week Weekends only	26.08±4.79 24.05±4.43 22.27±5.52 23.09±6.72	25.23±4.83 22.76±4.78 20.82±5.28 22.44±5.97	13.89±5.81 15.59±5.79 16.3±5.29 15.76±5.08	0.001	0.096
Skipping meals	Daily ≥3/week 1–2/week	24.49±6.19 23.98±5.28 25.47±4.54	23.71±6.44 22.87±5.03 24.36±4.79	14.97±6.25 15.77±5.48 14.78±5.79	0.025	0.014

	Weekends only	26.01±4.53	25.25±4.2	12.3±4.98		

Mean±SD: Mean ± Standard Deviation; M: Median; Min–Max: Minimum–Maximum; p: Statistical significance; H: Kruskal–Wallis H test

Table 3. Multivariate Logistic Regression Analysis of Factors Predicting Risky Eating Behavior (EAT-26 ≥20)

Variable	**β**	**SE**	**Wald**	**OR**	**95% CI**	**p**
Gender (female)	0.893	0.385	5.379	2.444	1.148–5.199	0.020
Age	0.202	0.091	4.893	1.224	1.023–1.463	0.027
Positive father–child relationship	-0.036	0.029	1.555	0.964	0.911–1.021	0.212
Positive mother–child relationship	-0.074	0.385	6.140	0.928	0.875–0.985	0.013
Media use (frequent)	-0.327	0.367	0.793	0.721	0.351–1.481	0.373
Media use (never)	-0.428	0.559	0.585	0.652	0.218–1.950	0.444
Media use (occasional, Ref.)	—	—	—	—	—	—
Family meals (daily	-1.442	0.468	9.488	0.237	0.095–0.592	0.002
Family meals (≥3/week)	-3.010	0.724	17.312	0.049	0.012–0.203	<0.001
Family meals (1–2/week)	-1.332	0.615	4.699	0.264	0.079–0.880	0.030

Family meals (weekends, Ref.)	—	—	—	—	—	—
Meal skipping (daily)	0.671	0.641	1.096	1.957	0.557–6.878	0.295
Meal skipping (≥3/week)	0.788	0.645	1.493	2.200	0.621–7.787	0.222
Meal skipping (1–2/week)	0.260	0.618	0.177	1.297	0.386–4.360	0.674
Meal skipping (weekends, Ref.)	—	—	—	—	—	—

Dependent Variable; EAT-26≥20 Chi-square(12)=68,130;(p=0,001); R2=0,261 *p<0,05 Ref.: Reference category used as the baseline for comparison in the regression model.

Conclusion: Adolescent eating attitudes are influenced less by isolated dietary choices and more by the relational and environmental context in which eating takes place. Positive parent–adolescent relationships and regular family meals are key protective factors, indicating that interventions targeting family dynamics and mealtime environments may be more effective than individual-focused approaches in preventing disordered eating behaviours.

Keywords: Adolescents; Eating Attitudes; Dietary Behaviors; Parent–Adolescent Relationship; Disordered Eating

OP - 083

DIAGNOSTIC YIELD OF EEG AND THE CONTRIBUTION OF REPEAT EEG IN PAEDIATRIC NEUROLOGY

Esmanur Demir[1], Mehpare S. Yanartaş[1]

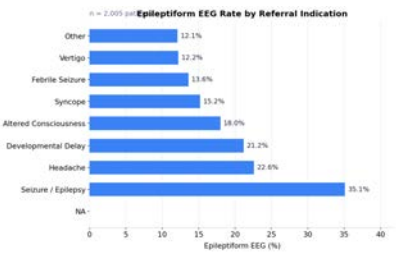
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Aim: Electroencephalography (EEG) is widely used in paediatric neurology; however, its diagnostic yield varies according to clinical indication, and the additional value of repeated EEG remains clinically relevant. This study aimed to evaluate the diagnostic yield of EEG across different clinical indications, assess the contribution of repeated EEG, and investigate the relationship between EEG and magnetic resonance imaging (MRI) findings.

Material & Method: We retrospectively reviewed EEG records of 2,005 patients aged 0–18 years who underwent EEG at Göztepe City Hospital between January 2022 and February 2026. EEG findings were classified as normal, epileptiform, non-specific, or mixed. Repeated EEGs were available in 533 patients (26.6%), and brain MRI was performed in 885 (44.1%). EEG findings were evaluated according to clinical indication and age group, and the contribution of repeated EEG and the association between EEG and MRI findings were analysed.

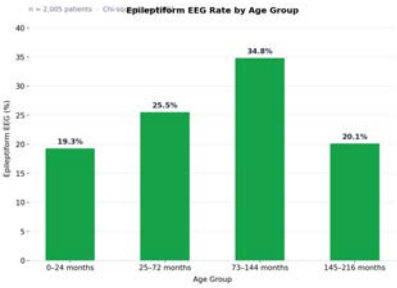
Results: Among 2,005 children, the rate of epileptiform EEG findings differed significantly according to both referral indication and age group. Epileptiform abnormalities were most frequent in patients referred for seizure/epilepsy (35.1%), followed by headache (22.6%) and developmental delay (21.2%), while the lowest rates were observed in those referred for vertigo (12.2%), other indications (12.1%), and febrile seizures (13.6%) (χ^2=107.6, $p < 0.001$) (Figure1). Epileptiform EEG rates also varied significantly across age groups (χ^2=43.1, $p < 0.001$), peaking in children aged 73–144 months (34.8%), compared with 25.5% in those aged 25–72 months, 20.1% in those aged 145–216 months, and 19.3% in those aged 0–24 months (Figure 2). Among the 533 patients who underwent repeat EEG, 197 (37.0%) remained normal, 147 (27.6%) changed from abnormal to normal, 145 (27.2%) remained abnormal, and 44 (8.3%) changed from normal to abnormal (Figure 3). In multivariable logistic regression, clinically significant (OR=1.92, p=0.005) and incidental MRI abnormalities (OR=1.76, p=0.001) were independently associated with increased odds of epileptiform EEG findings, whereas referral indications other than seizure/epilepsy were associated with lower odds (Table 1).

Figure 1. Epileptiform EEG Rate by Referral Indication (n=2,005)



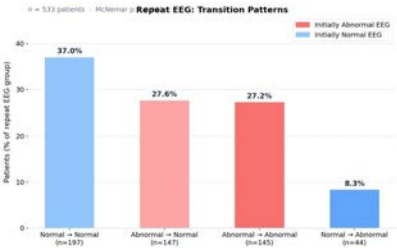
The epileptiform EEG rate varied significantly across referral indications (χ^2=107.6, p<0.001). The highest rate was observed in the seizure/epilepsy group (35.1%), followed by headache (22.6%) and developmental delay (21.2%). The lowest rates were recorded in the vertigo (12.2%), other (12.1%), and febrile seizure (13.6%) groups.

Figure 2. Epileptiform EEG Rate by Age Group (n=2,005)



The epileptiform EEG rate differed significantly across age groups (χ^2=43.1, p<0.001). The highest rate was observed in children aged 73–144 months (34.8%), corresponding to school age, followed by the 25–72 month group (25.5%). The lowest rate was recorded in the 0–24 month group (19.3%).

Figure 3. Transition Patterns on Repeat EEG (n=533)



Among patients who underwent repeat EEG, the most common outcome was Normal→Normal (37.0%, n=197), followed by Abnormal→Normal (27.6%, n=147) and Abnormal→Abnormal (27.2%, n=145). New epileptiform activity was detected in 8.3% of patients with an initially normal recording (Normal→Abnormal, n=44). Of all newly detected findings, 93.2% were epileptiform in nature (McNemar χ^2=54.5, p<0.001).

Table 1. Logistic Regression Analysis — Independent Predictors of Epileptiform EEG

Predictor	**Odds ratio (OR)**	**p value**
Referral indication		
Seizure/Epilepsy	1.00 (Reference)	-
Altered consciousness	0,38	0.015
Febrile seizure	0.28	<0.001
Syncope	0.28	<0.001
Vertigo	0.26	<0.001
Other indications	0.23	<0.001
MRI findings		
Normal MRI	1.00 (Reference)	-
Clinically significant MRI abnormality	1.92	0.005
Incidental MRI abnormality	1.76	0.001
Sex		
Female	1.00 (Reference)	-
Male	≈1.03	>0.9
Age	≈1.00	>0.9

Conclusion: EEG diagnostic yield varies substantially according to clinical indication. Repeated EEG provides meaningful additional diagnostic information in selected patients, particularly when clinical suspicion persists despite an initially normal EEG. Epileptiform EEG findings are also associated with structural MRI abnormalities, supporting the complementary roles of EEG and MRI in paediatric neurological assessment. Appropriate selection of patients for EEG may improve diagnostic yield.

Keywords: Electroencephalography, Child Neurology, Epilepsy, Seizures, Magnetic Resonance Imaging

OP - 084

WHO PRODUCES PARENTING CONTENT ON SOCIAL MEDIA?

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Aim: Parental use of social media for information on child health and development has increased steadily in recent years. This growing reliance highlights the importance of both the source and expression style of information encountered by parents. This study aimed to examine the relationship between the expression style of hashtags used in parenting-related social media content and the professional background and account characteristics of content creators.

Material & Method: In this cross-sectional content analysis, 631 Instagram posts were analyzed using predefined parenting-related hashtags representing five content domains: sleep, nutrition, behavior, development, and screen use. Content creators were categorized as physicians, other healthcare professionals, or non-health professionals. The expression style of hashtags was classified as either clinical/technical or daily/descriptive by independent researchers. Associations between variables were analyzed using chi-square tests, with post-hoc Bonferroni-corrected comparisons where appropriate.

Results: Of the 631 posts analyzed, 363 (57.5%) were produced by non-health professionals. A significant association was found between content domain and professional background (χ^2=28.464; p < 0.001), with non-health professionals more frequently represented in development-related content, whereas other healthcare professionals were more frequently represented in behavior-related content (Table 1). A significant relationship was also observed between follower count and expression style (χ^2=15.373; p < 0.001). Clinical language was more common in accounts with fewer than 10,000 followers, while daily language predominated in accounts with 10,000–100,000 followers (Table 2). Most content was produced by individual accounts (83.5%). No significant association was found between professional background and expression style.

Table 1. Distribution of content creators by professional background across content domains

Content domain	**Physicians n (%)**	**Other healthcare professionals n (%)**	**Non-health professionals n (%)**	**Total**	**p**	**χ^2**
Sleep	15 (11.9)	30 (23.8)	81 (64.3)	126	**<0.001**	**28.464**
Nutrition	7 (21.9)	4 (12.5)	21 (65.6)	32		
Behavior	18 (9.5)	80 (42.1)	92 (48.4)	190		

Content domain	Physicians n (%)	Other healthcare professionals n (%)	Non-health professionals n (%)	Total	p	χ^2
Development	14 (5.6)	83 (33.1)	154 (61.4)	251		
Screen use	4 (12.5)	13 (40.6)	15 (46.9)	32		
Total	**58 (9.2)**	**210 (33.3)**	**363 (57.5)**	**631**		

Table 2. Expression style according to follower count

Follower count	Daily language n (%)	Clinical language n (%)	p	χ^2
<10,000	112 (41.5)	158 (58.5)	**<0.001**	**15.373**
10,000–100,000	148 (58.5)	105 (41.5)		
>100,000	56 (52.3)	51 (47.7)		
Total	**316 (50.2)**	**314 (49.8)**		

Conclusion: A substantial proportion of parenting content on social media is generated by non-health professionals, raising important considerations regarding the reliability of information encountered by parents. These findings highlight the need to evaluate content source, audience reach, and expression style together. Increasing the visibility of healthcare professionals on social media may improve the dissemination of reliable, evidence-based parenting information.

Keywords: Social media, Parenting, Child development, Health information, Digital health

OP - 085

CLINICAL COURSE AND NEURODEVELOPMENTAL OUTCOMES OF NEONATAL SEIZURES: A SINGLE-CENTER STUDY

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Aim: Neonatal seizures are among the most common neurological emergencies and are associated with adverse long-term outcomes. However, evidence integrating clinical course with standardized developmental assessment remains limited, particularly in low- and middle-income settings. We aimed to characterize the clinical course of neonatal seizures and evaluate early childhood neurodevelopmental outcomes.

Material & Method: In this single-center retrospective cohort study, neonates diagnosed with neonatal seizures between January 1, 2020, and December 31, 2024, were included. Clinical and demographic data were obtained from medical records. Surviving children were invited for a cross-sectional developmental assessment. The Bayley Scales of Infant and Toddler Development, Third Edition (Bayley-III), were used for children ≤42 months, and the Vineland Adaptive Behavior Scales, Second Edition (Vineland-II), for those > 42 months.

Results: Thirty-eight neonates were included; five (13.2%) died during follow-up. Among the survivors, developmental assessment was completed in 26 children, of whom 17 (65.4%) had developmental delay, most commonly global delay. Cerebral palsy was identified in 10 children (26.3%), and postneonatal epilepsy developed in 8 (21.1%). All surviving children with epilepsy had severe developmental delay. Longer neonatal intensive care unit stay was associated with developmental delay (p=0.040).

Conclusion: Neonatal seizures are associated with substantial mortality and long-term neurodevelopmental impairment, including cerebral palsy and epilepsy. These findings support structured long-term follow-up and integrated developmental monitoring to facilitate identification of developmental difficulties and early intervention.

Keywords: neonatal seizures, neurodevelopment, epilepsy

OP - 086

CATEGORICAL ANALYSIS OF PARENTAL ANESTHESIA ANXIETY AND SEARCH BEHAVIOR

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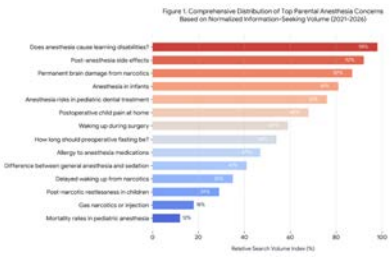
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Aim: Parental anxiety regarding anesthesia and potential complications is a major challenge in pediatric surgery. Parents frequently utilize online search engines to address fears they may hesitate to discuss during consultations. This study aims to identify specific parental concerns, categorize them, and provide a clinical guide for preoperative communication using Google Trends data.

Material & Method: A descriptive digital epidemiological analysis was conducted using Google Trends data from May 2021 to May 2026. Keyword queries reflecting parental anxiety were grouped into three major "Anxiety Pools": 1) General Safety and Risk Perception, 2) Permanent Damage and Neurodevelopmental Fears, and 3) Postoperative/Recovery Concerns. Relative Search Volume (RSV, 0-100 index) was analyzed to identify primary and secondary concerns.

Results: Content analysis revealed specific concern clusters:1. Neurodevelopmental Fears: Formed the highest specific volume. Keywords like "anestezi zeka geriliği" (April 2026, RSV: 100) and "narkoz kalıcı hasar" (June 2024, RSV: 99) highlighted deep worries about future cognitive success.2. Postoperative Concerns: "çocuklarda anestezi sonrası yan etkiler" (June 2025, RSV: 100) showed significant fear of acute postoperative complications.3. General Safety: "pediatrik anestezi riskleri" (September 2021, RSV: 100) reflected a desire to understand clinical complication rates.Secondary analyses showed lower-volume background queries like "bebeklerde narkoz" and "anestezi sonrası uyanamama" indicating age-specific phobia areas (Figure 1).

Figure 1 Comprehensive Distribution of Top Parental Anesthesia Concerns Based on Normalized Information-Seeking Volume (2021-2026)



Conclusion: Online search behavior is highly structured, clustering heavily around cognitive loss and acute postoperative side effects. Interestingly, the acute risk of failing to wake up is clinically overshadowed by long-term neurodevelopmental fears. Anesthesiologists should replace generic explanations with proactive, targeted counseling addressing these specific parental concerns.

Keywords: Pediatric Anesthesia, Parental Anxiety, Google Trends, Digital Epidemiology, Patient Education.

OP - 087

RELATIONSHIP BETWEEN INFANT SLEEP PATTERNS AND MATERNAL ANXIETY AND DEPRESSION AMONG HOSPITALIZED INFANTS: A CROSS-SECTIONAL STUDY

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Aim: The purpose of this study is to examine the relationship between sleep patterns of hospitalized infants aged 0-36 months and levels of depression and anxiety in their mothers.

Material & Method: This cross-sectional study included 110 mother-infant pairs. Infant sleep characteristics were examined using the Brief Infant Sleep Questionnaire (BISQ). Maternal mental health was assessed using the Beck Anxiety Inventory (BAI) and the Beck Depression Inventory (BDI). Sleep disturbance was defined by the BISQ criteria as the presence of 3 night awakenings, hour of nocturnal waking, or hours of total sleep length.

Results: The median age of the infants was 11 months, and 53.6% of the infants met the criteria for sleep disturbance (Table 1). We found that higher maternal anxiety levels were substantially linked with shorter overall infant sleep duration ($p = 0.012$) and a greater number of night wakings ($p = 0.017$) (Table 2). Longer night-time wakefulness was strongly connected with increased severity of maternal depression ($p=0.041$) (Table 3). Additionally, maternal sleep pleasure was highly related to newborn sleep disorder status ($p < 0.001$). association analysis indicated a weak negative association between total sleep duration and maternal anxiety levels (rho =-0.227, $p = 0.017$).

Table 1. Sociodemographic Characteristics and Sleep Parameters of the Study Population (n=110)

Variables	Median (IQR)	Variables	Median (IQR
Age (months), median (minimum–n	11 (1-35)	**Presence of chronic disease n (%)**	29 (26.4)
Gender, n (%)Female	46 (41.8)	**Number of siblings**	1 (2)
Mode of delivery, n (%) Vaginal delivery	28 (25.5)	**Birth order**	2 (2)
Gestational age (weeks)	38 (3)	**Total number of people in the family**	4 (2)
Mother's age (year)	29 (8.8)		
Mother's education level		**Household income level**	
Primary school or below	24 (21.8)	0-30 K	33 (30)
Lower secondary school	17 (15.5)	30- 60 K	57 (51.8)
Secondary school	39 (35.5)	60- 90 K	11 (10)
Bachelor's degree	30 (27.3)	>90 K	9 (8.2)
Mother's Employment Status, n (% Yes	19 (17.3)	**Presence of a caregiver, n (%)**	15 (13.6)
Infant sleep parameters (minimum–maximum)		**Sleep disorder*, n (%)**	59 (53.6)
Total sleep duration (h)	3 (3) (2-18)	**Maternal satisfaction with infant sleep, n (%)**	
Number of night awakenings	3 (2) (0-10)	Very satisfied	70 (63.6)
Nocturnal wakefulness duration (min)	60 (90) (0-360)	Moderately satisfied	26 (23.6)
Sleep-onset latency (min)	10 (25) (0-120)	Not satisfied	14 (12.7)
Beck Anxiety Score	5 (9.8)	**Beck Depression Score**	6 (8)
Anxiety severe clasification, n (%)		**Depression severe clasification**	
Minor	65 (59.1)	No	74 (67.3)
Mild	23 (20.9)	Mild	19 (17.3)
Moderate	13 (11.8)	Modarate	11 (10)
Severe	9 (8.2)	Severe	6 (5.5)

Abbreviations: IQR, interquartile range; n, number; %, percentage. min,minute; h, hour

Data are presented as median (IQR) or n (%). *Sleep disorder was defined as the presence of at least one of the following BISQ-based criteria: more than three night awakenings, nocturnal wakefulness lasting more than 1 hour, or total sleep duration of less than 9 hours

Table 2. Demographic Characteristics and Sleep Parameters According to Maternal Anxiety Severity (BAI Categories) (n=110)

Variables	Minimal (n=65)	Mild (n=23)	Moderate (n=13)	Severe (n=9)	p value
Sex, n (%)					
Female	31 (47.7)[a]	5 (21.7)	8 (61.5)	2 (22.2)	**0.044[1]**
Age of infant (months)	11 (15)	8 (15.5)	12 (10)	9 (13)	0.912
Gestational age at birth (weeks)	38 (2.3)	38 (3)	37 (1)	38 (3)	0.806
History of hospitalization, n (%)	32 (49.2)	17 (73.9)	7 (53.8)	3 (33.3)	0.119
Presence of chronic disease, n (%)	15 (23.1)	8 (34.8)	2 (15.4)	4 (44.4)	0.316
Mother's age (years)	29 (10)	28 (6)	29 (3)	32 (10)	0.979
Mother's education level, n (%)					0.844
Primary school or below	17 (26.2)	3 (13.0)	2 (15.4)	2 (22.2)	
Lower secondary school	9 (13.8)	4 (17.4)	2 (15.4)	2 (22.2)	
Secondary school	23 (35.4)	10 (43.5)	3 (23.1)	3 (33.3)	
Bachelor's degree	16 (24.6)	6 (26.1)	6 (46.2)	2 (22.2)	
Mother's employment status, n (%) Yes	12 (18.5)	4 (17.4)	2 (15.4)	1 (11.1)	1.000
Household income level, n (%)					0.943
0–30K	22 (33.8)	5 (21.7)	3 (23.1)	3 (33.3)	
30–60K	30 (46.2)	14 (60.9)	8 (61.5)	5 (55.6)	
60–90K	7 (10.8)	3 (13.0)	1 (7.7)	0 (0.0)	
>90K	6 (9.2)	1 (4.3)	1 (7.7)	1 (11.1)	
Number of siblings	1 (2)	1 (1.5)	1 (1)	1 (0)	0.625
Number of people in household	4 (2)	5 (1.5)	4 (2)	4 (1)	0.509
Presence of a caregiver, n (%)	8 (12.3)	3 (13.0)	3 (23.1)	1 (11.1)	0.765
Total sleep duration (hours)	12 (3)[a]	11 (2)	12 (4)	8 (3)[b]	**0.012* (0.013)[a]**
Number of night awakenings	3 (2)[a]	3 (2)	2 (3)	4 (3)[b]	**0.017* (0.032)[a]**
Nocturnal wakefulness duration (min)	60 (70)	66 (55)	45 (90)	180 (300)	0.118
Sleep-onset latency (min)	10 (20)	10 (25)	10 (25)	20 (50)	0.326
Maternal satisfaction with infant sleep, n (%)					0.052
Satisfied	44 (67.7)	14 (60.9)	9 (69.2)	3 (33.3)	
Minor problem	16 (24.6)	6 (26.1)	3 (23.1)	1 (11.1)	
Serious problem	5 (7.7)	3 (13.0)	1 (7.7)	5 (55.6)	

Abbreviations: IQR, interquartile range; n, number; %, percentage. min:minute

Data are presented as n (%) or median (IQR). Between-group comparisons were performed using chi-square/Fisher's exact and Kruskal–Wallis tests; Bonferroni-corrected pairwise comparisons were applied for significant variables. a,b: Indicate Bonferroni-adjusted pairwise comparisons; groups with different superscript letters differ significantly. [1]: p values for multi-category comparisons were calculated using Monte Carlo simulation. *p < 0.05 was considered statistically significant.

Table 3. Demographic Characteristics and Sleep Parameters According to Maternal Depression Severity (BDI Categories) (n=110)

Variables	No (n=74) median (IQR)	Mild (n=19) median (IQR)	Moderate (n=11) median (IQR)	Severe (n=6) median (IQR)	P value
Gender, n (%)					
Female	34 (45.9)	7 (36.8)	4 (36.4)	1 (16.7)	0.550
Age of infant (months)	11 (14.5)	9 (13)	12 (16)	18 (14.3)	0.563
Gestational age at birth (weeks)	38 (3)	38 (2)	27 (2.5)	37.5 (1)	0.654
History of Hospitalization, n (%)	39 (52.7)	10 (52.6)	8 (72.7)	2 (33.3)	0.483
Presence of Chronic disease, n (%)	18 (24.3)	6 (31.6)	3 (27.3)	2 (33.3)	0.833
Mother's age (years)	28 (8.5)	28 (9)	30 (4)	35 (5.8)	0.485
Mother's education level, n (%)					0.297
Primary school	18 (24.3)	2 (10.5)	3 (27.3)	1 (16.7)	
Secondary school	10 (13.5)	3 (15.8)	4 (36.4)	0 (0)	
High school	24 (32.4)	8 (42.1)	4 (36.4)	3 (50)	
University	22 (29.7)	6 (31.6)	0 (0)	2 (33.3)	
Mother's employment status, n (%)					
Yes	14 (18.9)	3 (15.8)	0 (0)	2 (33.3)	0.276
Household income level, n (%)					0.943
0-30K	23 (31.1)	4 (21.1)	4 (36.4)	2 (33.3)	
30-60K	38 (51.4)	10 (52.6)	6 (54.5)	3 (50)	
60-90K	7 (9.5)	3 (15.8)	0 (0)	1 (16.7)	
>90K	6 (8.1)	2 (10.5)	1 (9.1)	0 (0)	
Number of siblings	1 (2)	1 (2)	1 (1.5)	1 (0)	0.264
Number of people in the house	4 (2)[a]	4 (2)	5 (1.5)[b]	4 (0)	**0.044*** **(0.025)***
Presence a caregiver , n (%)	12 (16.2)	1 (5.3)	1 (9.1)	1 (16.7)	0.667
Total sleep duration (hour)	12 (3)	11 (2)	10 (3.5)	11.5 (3.3)	0.656
Number of night awakenings	3 (2)	3 (1.5)	2 (2.5)	4.5 (8)	0.458
Nocturnal wakefulness duration (min)	60 (80)[a]	40 (25)[a]	60 (70)	150 (127.5)	**0.041*** **(0.033)***
Sleep-onset latency (min)	10 (20)	10 (7.5)	30 (12.5)	12.5 (20)	0.099
Maternal satisfaction with infant sleep, n (%)					0.126
Satisfied	45 (60.8)	14 (73.7)	8 (72.7)	3 (50)	
Minor problem	21 (28.4)	4 (21.1)	1 (9.1)	0 (0)	
Serious problem	8 (10.8)	1 (5.3)	2 (18.2)	3 (50)	

Abbreviations: IQR, interquartile range; n, number; %, percentage, min:minute

Data are presented as n (%) or median (IQR). Between-group comparisons were performed using chi-square/Fisher's exact and Kruskal–Wallis tests; Bonferroni-corrected pairwise comparisons were applied for significant variables. a,b: Indicate Bonferroni-adjusted pairwise comparisons; groups with different superscript letters differ significantly. *p < 0.05 was considered statistically significant

Conclusion: Sleep problems were very widespread among hospitalized newborns and were substantially correlated with maternal psychological status, especially worry. These findings highlight the relevance of a family-centered strategy and maternal mental health in the clinical assessment of early childhood sleep disorders.

Keywords: Early childhood, Sleep problems, Maternal anxiety, Depression, Maternal mental health

OP - 088

IDENTIFYING PARENTAL DISTRESS IN PEDIATRIC CANCER: TURKISH VALIDATION OF THE PPD-C ASSESSMENT SCALE

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Aim: A childhood cancer diagnosis imposes profound multidimensional psychosocial distress on parents. The Psychosocial Distress in Parents of Children with Cancer scale (PPD-C) is a comprehensive 125-item, 11-domain instrument developed to evaluate these unique difficulties. This study aimed at adapting the PPD-C for use in aTurkish clinical setting, and at critically evaluating its psychometric properties. The explicit focus was on instrument validity and internal consistency within a Turkish clinical sample.

Material & Method: Participants were parents of children undergoing cancer treatment at a pediatric hematology-oncology unit in Istanbul (N=100, primarily mothers). To establish psychometric and criterion validity, the Turkish PPD-C was administered alongside the Impact of Event Scale–Revised (IES-R), the COPE Inventory (COPE) to evaluate coping strategies, and the Experiences in Close Relationships Questionnaire (ECR-Q). Internal consistency was evaluated thru Cronbach's alpha coefficients across all domains, and criterion validity was analyzed via Pearson correlation coefficients.

Results: Reliability analysis demonstrated robust internal consistency for the PPD-C total scale (Cronbach's α = .845), with individual domain α values ranging from .812 to .868, indicating good reliability across all 11 subscales. Criterion validity was supported by a significant positive correlation between the PPD-C Total Score and IES-R Total Score ($r = .344$, $p < .01$), confirming convergent validity with traumatic stress symptomatology. Among coping styles, Submissive coping showed the most pervasive associations with the PPD-C, correlating significantly with the PPDC Total Score and five subscales including Locus of Control, Loneliness and Disease-Related Fear.

Conclusion: The Turkish version of the PPD-C demonstrates excellent psychometric properties and strong validity. These findings confirm high validity of the scale. It comes out as a multidimensional screening instrument that is effective an d useful for identifying psychosocial distress and structural coping vulnerabilities among Turkish parents in pediatric oncology settings.

Keywords: pediatric oncology, psycho-oncology, psychometric validation, parental distress, psychosocial screening

OP - 089

THE RELATIONSHIP BETWEEN SOCIAL APPEARANCE ANXIETY, FEAR OF MISSING OUT ON SOCIAL MEDIA DEVELOPMENTS, AND SOCIAL MEDIA ADDICTION IN ADOLESCENTS

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Aim: To determine the relationship between social appearance anxiety, fear of missing out, and social media addiction (SMA) in adolescents.

Material & Method: This descriptive study collected data using the Social Appearance Anxiety Scale for Adolescents (SAAS), the Fear of Missing Out scale (FoMOS), and the Social Media Disorder Scale (SMD) Short Form. Continuous variables are expressed as mean ± standard deviation and categorical variables as frequency and percentage. Relationships between variables were examined using Pearson correlation coefficients, and the predictive role of independent variables was assessed through hierarchical multiple linear regression. Path analysis based on 5000 bootstrap samples was used to test mediation effects within a 95% confidence interval. Statistical significance was set at $p < 0.05$.

Results: A total of 646 adolescents aged 13-18 years were included. SAAS and FoMOS total scores showed moderate and strong positive correlations with SMA, respectively (r=0.360; r=0.524), and a moderate positive correlation was found between SAAS and FoMOS (r=0.416). FoMO was identified as a partial mediator in the relationship between SAAS and SMA.

Conclusion: As social appearance anxiety increases in adolescents, the risk of SMA also rises. Fear of missing out partially explains this relationship. School nurses can support healthy social media use among adolescents through awareness programs addressing social appearance anxiety, FoMO, and SMA. Guidance training programs for parents focusing on social media use and its underlying psychological dynamics may also be implemented.

Keywords: social appearance anxiety, fear of missing out, social media, addiction

OP - 090

AN EXAMINATION OF NURSING STUDENTS' READINESS LEVELS FOR MEDICAL ARTIFICIAL INTELLIGENCE

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Aim: Artificial intelligence (AI) is increasingly integrated into clinical practice and health professions education, yet undergraduate nursing curricula rarely include structured AI content. This study aimed to evaluate medical AI readiness levels among nursing students and to identify sociodemographic, academic, and technology-related factors associated with readiness.

Material & Method: A cross-sectional, descriptive study was conducted with 201 nursing students. The Medical Artificial Intelligence Readiness Scale for Medical Students (MAIRS-MS), comprising four subscales (Cognition, Ability, Vision, Ethics; 22 items; total score 22–110), was administered alongside a sociodemographic form. Univariate analyses included Mann-Whitney U, Kruskal-Wallis, and Spearman correlation. Multivariate analyses comprised MANOVA (Pillai's Trace) and multiple linear regression (enter method); forward stepwise regression was performed as an exploratory sensitivity analysis. Statistical significance was set at $p < 0.05$.

Results: The mean MAIRS-MS total score was 79.74 ± 15.06 (Cronbach's $\alpha = 0.953$), indicating moderate-to-high readiness. The highest mean subscale score was Ability (30.87 ± 5.80) and the lowest was Vision (10.85 ± 2.34). Univariate analyses revealed significant differences in total and subscale scores by class year, high school type, AI application use, and prior AI education (all $p < 0.05$). MANOVA demonstrated significant multivariate effects for AI application use (Pillai's Trace=0.087, p=0.030) and AI education (Pillai's Trace=0.112, p=0.005). Enter regression models were significant for Cognition (R^2=0.227), Ability (R^2=0.185), and total score (R^2=0.213); curriculum-based AI education (β=0.232, p=0.001) and regular AI application use emerged as the most consistent positive predictors of total readiness, while infrequent AI use was negatively associated. Stepwise regression confirmed curriculum-based AI education as the most consistent predictor across all subscales.

Conclusion: Nursing students demonstrated moderate-to-high medical AI readiness, with structured AI education and regular AI application use identified as the strongest correlates. Integration of AI literacy, digital health, algorithmic bias, and ethics content into nursing curricula is recommended to support readiness for AI-enabled clinical practice.

Keywords: artificial intelligence, nursing students, nursing education, readiness, MAIRS-MS

OP - 091

Harlequin Ichthyosis: Nursing Management of a Rare Case in the Neonatal Intensive Care Unit

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Aim: Harlequin ichthyosis is the most severe and rare form of congenital ichthyoses, caused by autosomal recessive mutations in the ABCA12 gene. Occurring in fewer than one in 300,000 births, this syndrome presents with thick hyperkeratotic plaques, deep fissures, ectropion, eclabium, thermoregulatory dysfunction, and high infection risk. Leading causes of neonatal death include sepsis, dehydration, and respiratory failure. Although neonatal intensive care advances have improved survival, the post-discharge period carries critical risks. This case report aims to share three months of NICU nursing experience, including sterile skin care and infection control protocols, and to highlight family education and discharge planning through a fatal post-discharge sepsis.

Case: A male infant born at 33+2 weeks weighing 2250 g via cesarean section to consanguineous parents was admitted to the NICU with a presumptive diagnosis of Harlequin ichthyosis based on hyperkeratotic plaques, ectropion, eclabium, and ichthyotic skin appearance (Fıgure 1). Accompanying diagnoses included retinopathy of prematurity, patent ductus arteriosus, and pulmonary valve stenosis.

Figure 1. Clinical appearance at birth



Results: Recurrent bacterial and fungal sepsis, candida sepsis, and MRSA growth developed during follow-up; broad-spectrum antibiotic and antifungal treatments were administered. Nursing care included twice-daily and as-needed petrolatum-based skin care, eye care, enteral nutritional support, and infection control measures; acitretin and zinc therapies were maintained. After approximately 112 days of NICU stay, the patient was discharged with multidisciplinary outpatient follow-up planned (Figure 2). Shortly after discharge, the infant was readmitted with sepsis and transferred to the pediatric intensive care unit. Respiratory distress progressed; noninvasive ventilation proved insufficient and endotracheal intubation was performed. Under mechanical ventilation for advanced sepsis and ARDS, the patient was lost despite all treatments.

Figure 2. Clinical appearance before discharge



Conclusion: This case highlights the vital importance of systematic skin care, infection surveillance, and multidisciplinary management in premature neonates with Harlequin ichthyosis. The fatal post-discharge sepsis course underscores the critical role of family education and discharge planning in this rare syndrome.

Keywords: Harlequin ichthyosis, neonatal intensive care, nursing care, skin care, sepsis

OP - 092

KNOWLEDGE LEVELS OF PEDIATRIC NURSES REGARDING THE CARE OF PATIENTS WITH CHEST TUBES: A DESCRIPTIVE CROSS-SECTIONAL STUDY

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Aim: This study aimed to determine the knowledge levels of nurses working in pediatric clinics regarding the care of patients with chest tubes.

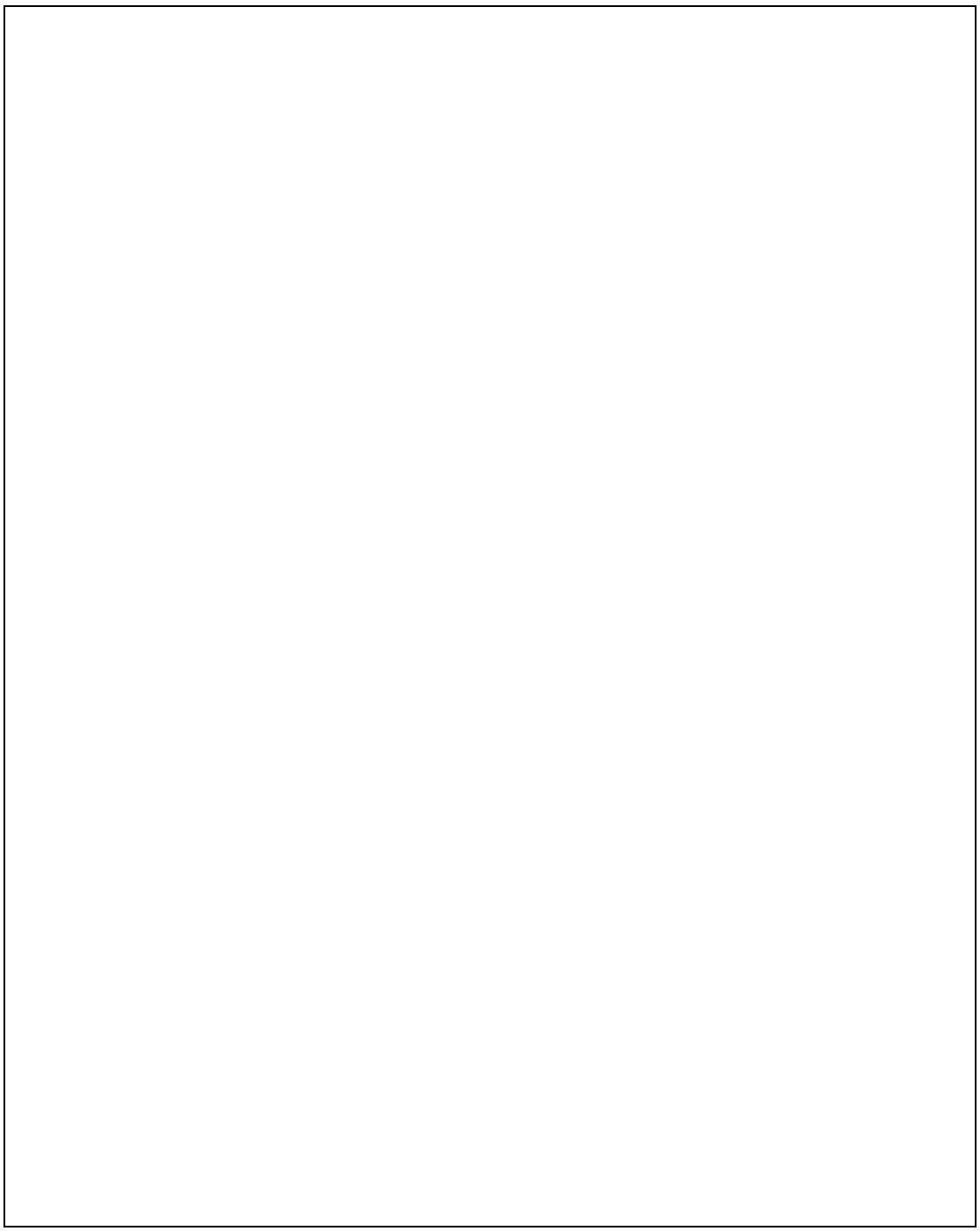
Material & Method: This descriptive cross-sectional study was conducted in the pediatric clinics of a training and research hospital in Türkiye. The sample consisted of 320 pediatric nurses participate in the study. Data were collected using the Descriptive Information Form and the Knowledge Form on Pediatric Nurses' Care of Patients with Chest Tubes.

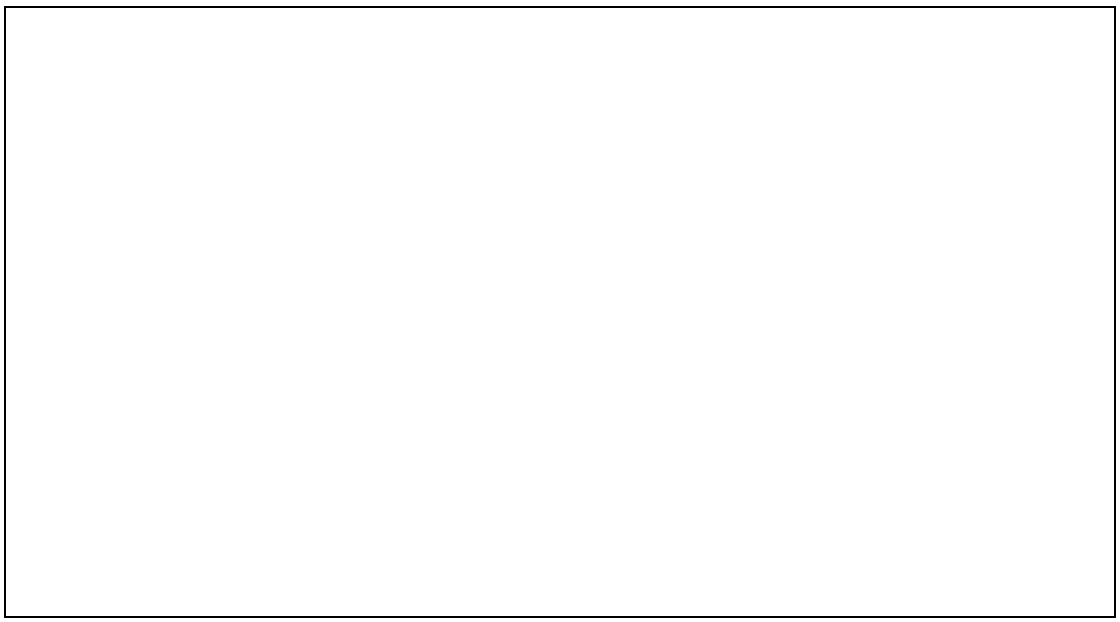
Results: The mean age of the nurses was 27.87 ± 2.19 years, and their mean duration of work experience was 4.94 ± 2.31 years. The participants, 57.2% reported receiving training on chest tube care. The descriptive characteristics of the paediatric nurses are presented in Table 1. The nurses' mean total knowledge score was 64.16 ± 10.53 out of 100. Knowledge scores differed significantly according to sex ($p = .010$), receiving training on chest tube care ($p < .001$), the place where training was received ($p = .014$), self-assessed theoretical knowledge level ($p < .001$), frequency of encountering patients with chest tubes ($p < .001$), and the unit in which nurses worked ($p < .001$). The distribution of correct responses to individual items of the Knowledge Form regarding the care of patients with chest tubes is presented in Table 2. Knowledge scores differed significantly according to sex ($p = .010$), receiving training on chest tube care ($p < .001$), the place where training was received ($p = .014$), self-assessed theoretical knowledge level ($p < .001$), frequency of encountering patients with chest tubes ($p < .001$), and the unit in which nurses worked ($p < .001$) (Table 3). Positive significant correlations were found between knowledge scores and age ($r_s = .235$; $p < .001$) and duration of work experience ($r_s = .272$; $p < .001$), whereas a negative significant correlation was found between knowledge scores and time elapsed since training ($r_s = -0.253$; $p < .001$).

Table 1. Descriptive characteristics of the paediatric nurses (n = 320)

Characteristic	Group	n (%)
Age	Mean ± SD	27.87 ± 2.19
	Median (Min-Max)	28 (22-36)
Work experience	Mean ± SD	4.94 ± 2.31
	Median (Min-Max)	5 (1-13)
Sex	Female	269 (84.1)
	Male	51 (15.9)
Educational level	Bachelor's degree	279 (87.2)
	Master's degree	40 (12.5)
	Doctoral degree	1 (0.3)
Unit of employment	Neonatal Intensive Care Unit	54 (16.8)
	Paediatric Intensive Care Unit	52 (16.2)
	Paediatric Cardiovascular Surgery Intensive Care Unit	51 (15.9)
	Paediatric Emergency	40 (12.5)
	Paediatric Surgery Ward	24 (7.5)
	General Paediatrics Ward	23 (7.2)
	Paediatric Cardiovascular Surgery Ward	12 (3.7)
	*Other	64 (20.2)

Frequency of encountering patients with chest tubes	Every day	57 (17.8)
	Once a week	35 (10.9)
	Once every two weeks	22 (6.9)
	Once a month	78 (24.4)
	Once a year	70 (21.9)
	Never	58 (18.1)
Training on chest tube care	Yes	183 (57.2)
	No	137 (42.8)
Place of training	During undergraduate or postgraduate education	39 (21.3)
	In-service training	133 (72.7)
	Congress / Course	2 (1.1)
	Other	9 (4.9)
Time elapsed since training (years)	Mean ± SD	1.37±1.07
	Median (Min-Max)	1 (1-8)
Self-assessed theoretical knowledge level	Adequate	83 (25.9)
	Partially adequate	176 (55.0)
	Inadequate	61 (19.1)





*Other: Paediatric Neurology, Paediatric Cardiology, Paediatric Nephrology, Paediatric Gastroenterology, Paediatric Metabolism, Paediatric Endocrinology, Paediatric Oncology, and Paediatric Allergy and Immunology wards.

Table 2. Distribution of correct responses to Knowledge Form items regarding the care of patients with chest tubes

Items	Correct responses	
	n	%
Chest Tube Insertion and Function		
1. Informed consent is not required from parents or legal guardians of paediatric patients before chest tube insertion. (False)	265	82.81
2. Local anaesthesia is administered before chest tube insertion. (True)	269	84.06
3. During chest tube insertion, the patient is positioned in the right or left lateral position toward the unaffected lung. (True)	271	84.69
4. A chest tube placed in the pleural space enables the collapsed lung to re-expand. (True)	291	90.94
5. Chest tube insertion drains only air from the thoracic cavity. (False)	250	78.13

6.	Pneumothorax is one of the most common and urgent indications for chest tube insertion. (True)	316	98.75
7.	Oscillation is defined as the up-and-down movement of fluid in the chest tube line. (True)	299	93.44
8.	Oscillation observed in the chest drainage bottle may indicate an air leak. (False)	120	**37.50**
9.	Oscillation provides important information about negative pressure and indicates that the chest drainage system is not functioning. (False)	164	51.25
10.	Sudden cessation of oscillation should suggest that the chest drainage bottle line is obstructed or kinked. (True)	303	94.69

11. Chest tube insertion in patients receiving positive pressure ventilation may reduce the risk of pneumothorax or air leak. (False)	106	**33.13**
Monitoring and Care of the Patient with a Chest Tube		
12. There is no harm in emptying all fluid from the chest drainage bottle in a sterile manner. (False)	155	**48.44**
13. The thoracic catheter insertion site dressing should be changed only when soiled, and the catheter insertion site should be observed for signs and symptoms of infection during dressing changes. (False)	161	50.31
14. Keeping the chest drainage bottle continuously upright is recommended to prevent air from	292	91.25

	entering the pleural space. (True)		
15.	When a pleural fluid specimen is to be obtained from a patient with a chest tube, the line should be sterilised with povidone iodine and fluid should be aspirated by inserting a syringe into the sterilised line. (False)	36	**11.25**
16.	To prevent fluid backflow into the pleural space, the chest drainage bottle should be kept at least 200 cm below the patient's chest level. (False)	87	**27.19**
17.	The tube should routinely be milked to prevent chest tube obstruction. (False)	134	**41.88**
18.	A rapid increase in drainage volume in patients with thoracic trauma or postoperative	292	91.25

	chest tubes may indicate vascular injury. (True)		
19.	The chest drainage bottle must be emptied before the fluid level reaches the apical (short) air tube. (True)	267	83.44
20.	The chest tube bottle should contain enough normal saline or distilled water to exceed the apical (short) tube. (True)	243	75.94
21.	The basal (long) tube in the chest drainage system drains more air. (False)	75	**23.44**
22.	The fluid level in the chest drainage bottle should be at least 100 mL. (False)	63	**19.69**
23.	The formation of air bubbles in the water inside the bottle during inspiration is normal. (False)	120	**37.50**

24.	In children followed with chest tubes, the fluid added to the drainage bottle may be 5% dextrose or 0.9% NaCl, according to the physician's recommendation. (True)	207	64.69
25.	In neonates followed with chest tubes, the fluid added to the drainage bottle should be 5% dextrose. (False)	173	54.06
26.	The amount and characteristics of fluid and air drainage should be monitored and recorded daily. (True)	278	86.88
27.	During transfer of a patient with active drainage into the chest drainage bottle and unstable general condition, the chest tube must be clamped. (False)	126	**39.38**
28.	When the chest drainage bottle is	87	**27.19**

	full, it is appropriate to insert a sterile suction catheter through the filling port on the bottle and aspirate with 10-20 mmHg vacuum until the level is at least 100 mL. (False)		
29.	Chest drainage with ongoing oscillation should not be clamped. (True)	280	87.50
30.	Drainage bottles should be changed every day to prevent respiratory tract infections. (False)	156	**48.75**
31.	Breathing exercises are not recommended for patients with chest tubes because they increase pain. (False)	204	63.75
32.	If the general condition and age of a patient with a chest tube are appropriate, early mobilisation and deep	304	95.00

	breathing exercises should be encouraged to accelerate recovery and prevent complications. (True)		
33.	The nurse should monitor the colour, volume, and consistency of the fluid entering the chest drainage bottle and inform the physician of any changes, considering that a complication may have developed. (True)	298	93.13
34.	Non-pharmacological pain management interventions (e.g., cold application, massage, relaxation techniques) are not effective in reducing pain caused by chest tubes. (False)	217	67.81
35.	Regular oral or intravenous analgesic use is	97	**30.31**

	effective in reducing pain caused by chest tubes. (False)		
Chest Tube Removal			
36.	The chest tube should be removed during inspiration. (False)	101	**31.56**
37.	Children with an appropriate cognitive level and age should perform the Valsalva manoeuvre during chest tube removal. (True)	241	75.31
38.	The chest tube should be removed quickly, and the chest wall defect should be promptly closed with the suture placed during chest tube insertion. If a suture is not present or is insufficient, the site should immediately be covered with an airtight dressing. (True)	318	99.38

39. If there is no oscillation in the chest drainage bottle, the drainage is clear and minimal, and the patient's general condition is good, the line may be clamped. (True)	292	91.25
40. If the patient's oxygen saturation decreases after line clamping, the thoracic catheter may be removed. (False)	255	79.69

Table 3. Comparison of paediatric nurses' knowledge scores according to descriptive characteristics

Variable	Group	n	Mean ± SD	Test value	p
Sex	Female	269	64.82 ± 10.54	t=2.595	**0.010**
	Male	51	60.69 ± 9.88		
Educational level	Bachelor's degree	279	64.09 ± 10.53	F=0.298	0.743
	Master's degree	40	64.88 ± 10.76		
	Doctoral degree	1	57.50		
Training on chest tube care	Yes	183	66.58 ± 11.21	t=4.921	**<0.001**
	No	137	60.93 ± 8.57		
Place of training	During undergraduate or postgraduate education	39	59.55 ± 5.79	Welch=11.837	0.014
	In-service training	133	68.82 ± 11.79		
	Congress / Course	2	60.00 ± 17.68		
	Other	9	65.56 ± 5.83		
Self-assessed theoretical knowledge level	Adequate	83	70.51 ± 10.24	Welch=64.843	**<0.001**
	Partially adequate	176	63.62 ± 10.47		

Frequency of encountering patients with chest tubes	Inadequate	61	57.09 ± 4.43		
	Every day	57	63.95 ± 7.23	Welch=12.839	**<0.001**
	Once a week	35	66.00 ± 6.76		
	Once every two weeks	22	67.16 ± 11.05		
	Once a month	78	70.32 ± 13.98		
	Once a year	70	61.07 ± 7.05		
	Never	58	57.59 ± 7.75		
Unit of employment	Neonatal Intensive Care Unit	54	73.29 ± 14.82	F=19.923	**<0.001**
	Paediatric Intensive Care Unit	52	64.71 ± 9.07		
	Paediatric Cardiovascular Surgery Intensive Care Unit	51	66.96 ± 7.04		
	Paediatric Emergency	40	67.62 ± 7.70		
	Paediatric Surgery Ward	24	58.75 ± 1.28		
	General Paediatrics	23	58.37 ± 7.33		
	Paediatric Cardiovascular Surgery	12	61.25 ± 2.50		
	*Other	64	56.29 ± 6.36		

Age	–	320	27.9 ± 2.2 years	rs=0.235	**<0.001**
Work experience	–	320	4.9 ± 2.3 years	rs=0.272	**<0.001**
Time elapsed since training (years)	–	183	1.37 ± 1.07 years	rs=-0.253	**<0.001**

Note: Data are presented as mean ± standard deviation. t: independent samples t test; F: one-way analysis of variance; Welch: Welch ANOVA; rs: Spearman correlation coefficient. *Other: Paediatric Neurology, Paediatric Cardiology, Paediatric Nephrology, Paediatric Gastroenterology, Paediatric Metabolism, Paediatric Endocrinology, Paediatric Oncology, and Paediatric Allergy and Immunology wards.

Conclusion: The findings indicate the need to ensure that pediatric nurses use evidence-based knowledge in the care of patients with chest tubes and that clinical practices are standardised.

Keywords: Chest tube, knowledge level, nursing care, pediatric nurse, pediatric nursing

OP - 093

SUÇA SÜRÜKLENEN ÇOCUKLARA YÖNELIK EBEVEYN ALGI VE YAKLAŞIMLARI: ÇOCUK SAĞLIĞI VE HASTALIKLARI HEMŞIRELIĞI PERSPEKTIFINDEN NITEL BIR ÇALIŞMA

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Aim: The purpose of this study is to examine in depth the perceptions, emotional responses, and parenting approaches of parents of children involved in crime from the perspective of child health and illness nursing

Material & Method: The research was conducted using a qualitative design based on a descriptive phenomenological approach. The study group consisted of 22 parents to examine their perceptions of children involved in crime. Data were collected through semi-structured in-depth interviews. Participants were anonymized with codes E1–E22. The reliability and validity of the research were ensured through researcher triangulation, data saturation, participant validation, and audit trail methods. Data analysis was performed using the MAXQDA 24 program in line with Braun and Clarke's thematic analysis approach. The analysis process was conducted based on the COREQ (Consolidated Criteria for Reporting Qualitative Research) guide and reviewed in line with the opinions of academics specializing in the field of themes and sub-themes.

Results: Five main themes were identified as a result of the analysis: (1) perception and interpretation processes, (2) references to responsibility, guilt, and causality, (3) emotional responses and psychosocial burden, (4) parental approaches and intervention strategies, (5) expectations from health professionals. Parents perceived their children not as perpetrators of crime but as individuals at psychosocial risk; they expressed intense feelings of anxiety, shame, guilt, and helplessness

Conclusion: It was observed that the understanding of discipline was based on supportive communication and seeking professional help rather than punishment. Research findings reveal that pediatric nurses caring for children involved in crime must assume not only clinical but also psychosocial protective and family-strengthening roles. Early risk identification, family guidance, and compassionate nursing approaches are considered critical in preventing children from becoming involved in crime.

Keywords: Parents; juvenile delinquency, qualitative research

OP - 094

EXAMINATION OF THE RELATIONSHIP BETWEEN PERCEIVED WORKLOAD AND COMPASSION FATIGUE IN HEMATOLOGY-ONCOLOGY NURSES

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Aim: This study aimed to examine compassion fatigue and perceived workload among nurses working in hematology and oncology clinics.

Material & Method: This descriptive, cross-sectional study was conducted in the hematology–oncology units of a city hospital in Istanbul operating under a public–private partnership model. The study population consisted of 187 nurses, of whom 137 who completed all data collection instruments were included in the sample. Data were collected using a Personal Information Form, the Compassion Fatigue Short Scale for Health Professionals, and the Individual Workload Perception Scale.

Results: The majority of the participants were aged 25–36 years, 71.5% were female, and 81.8% worked in adult clinics. Of the participants, 65.7% worked in shifts, 12.4% had a chronic disease, and 12.4% cared for 10 or more patients. Nurses with sleep problems had significantly higher occupational burnout (p=0.0001) and total compassion fatigue scores (p=0.0021), whereas no significant difference was found in secondary traumatic stress.Perceived workload, including supervisor support, colleague support, and work environment, as well as overall workload perception, was affected by sleep problems. Differences were also observed according to working unit, working style, and duration of service. A significant negative relationship was found between perceived workload and compassion fatigue, with the strongest association between total workload perception and total compassion fatigue ($r = -0.460$; $p < 0.001$).

Conclusion: Sleep problems are significantly associated with compassion fatigue among nurses. As sleep problems increase, burnout and compassion fatigue levels also increase. These findings suggest that compassion fatigue is a multidimensional construct influenced by both individual and work-related factors.

Keywords: compassion fatigue, NURSES, Perceived workload, Hematology–oncology, burnout

OP - 095

INFECTION MANAGEMENT IN PEDIATRIC PERITONEAL DIALYSIS AND A FAMILY-CENTERED NURSING APPROACH

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Aim: This case report aims to examine the infection management process in early childhood peritoneal dialysis from the perspective of a pediatric nurse.

Case: A 2-year-old female patient, undergoing home peritoneal dialysis for six months due to chronic renal failure, presented with abdominal pain, irritability, and significant dialysate turbidity. Clinical examination revealed localized heat, hyperemia, and tenderness along the tunnel tract, with purulent discharge upon palpation. The patient, who receives 12 hours of peritoneal dialysis daily, was admitted to the clinic with a preliminary diagnosis of tunnel tract infection. Following the initiation of antibiotic therapy based on a preliminary diagnosis of tunnel tract infection and culture results, it was observed that the patient's developmental need for physical mobility and play led to frequent contact with contaminated surfaces in the hospital environment.. The parents experienced severe anxiety regarding catheter safety and struggled to restrict the child's movements. Nursing interventions included monitoring fluid balance, daily weight, and blood pressure. Furthermore, parents were integrated into the care process through hands-on training; home care errors were identified, and as the infection regressed, parents performed the procedures independently under supervision.

Results: Following these interventions, it was observed that the parents successfully managed their anxiety and developed practical strategies to prevent infection during play. Through applied training and feedback, their proficiency in aseptic techniques significantly improved. Ultimately, parental anxiety decreased, clinical symptoms resolved, and the patient was discharged in good health.

Conclusion: Infection management in early childhood peritoneal dialysis is not merely a medical procedure; it is closely linked to the parents' ability to manage risks during play, recognize early symptoms, and maintain aseptic care. Adopting a family-centered care philosophy, pediatric nurses play a critical role in providing professional support to ensure effective infection management.

Keywords: Pediatric Peritoneal Dialysis, Pediatric Nursing, Infection Management

OP - 096

"I'M AFRAID SOMETHING WILL HAPPEN AGAIN": A PHENOMENOLOGICAL STUDY OF PARENTS' PERCEPTIONS OF CHILD VULNERABILITY AFTER PEDIATRIC HSCT

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Aim: Pediatric hematopoietic stem cell transplantation (HSCT) is a complex treatment process that may have long-term physical, psychological, and social effects on children and their families. This study was conducted to gain an in-depth understanding of the post-transplant experiences of parents of children who underwent HSCT and their perceptions of their children.

Material & Method: This study was conducted using an experience-focused phenomenological qualitative research approach. Fifteen parents whose children had undergone HSCT within the previous year were included in the study. Participants were recruited using snowball sampling. Data were collected through semi-structured, in-depth individual interviews conducted online. Interviews were audio-recorded, transcribed verbatim, and analyzed using Braun and Clarke's reflexive thematic analysis approach. The study was conducted in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines.

Results: Data saturation was reached at the 15th interview. Analysis yielded four themes: (1) the impact of the transplantation process on daily life and family routines, (2) the reflection of perceived child vulnerability on parental attitudes, (3) parents' emotional experiences and coping strategies, and (4) expectations and recommendations regarding the process. Parents reported that the transplantation process resulted in substantial changes in family life and that separation between siblings and caregiving responsibilities particularly disrupted family routines. Most parents stated that they continued to perceive their children as vulnerable after transplantation and that this perception led to overprotective parenting behaviors. Uncertainty, anxiety, and fear of relapse emerged as common emotional experiences.

Conclusion: Parents continued to perceive their children as vulnerable following pediatric HSCT, even when they had medically recovered, and this perception appeared to sustain protective parenting behaviors. The findings indicate the need to assess families' psychosocial needs during the post-transplant period and to develop family-centered support programs.

Keywords: Hematopoietic Stem Cell Transplantation, Psychological Adaptation, Perceived Child Vulnerability, Parents, Qualitative Research

OP - 097

PARENTAL AWARENESS OF DEVELOPMENTAL COORDINATION DISORDER

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[2]Istanbul University

Aim: The aim of this study was to evaluate the awareness levels of parents regarding developmental coordination disorder (DCD), which is characterized by impairments in gross and fine motor skills and affects daily living activities and academic performance in children.

Material & Method: In this cross-sectional study, a questionnaire was administered to parents of children aged 5–15 years who attended Family Health Centers in a district of Istanbul. The questionnaire assessed sociodemographic characteristics, sources of information regarding DCD, and participants' awareness levels of DCD, other childhood neurodevelopmental disorders (such as autism and attention-deficit/hyperactivity disorder [ADHD]), and related concepts (such as dyspraxia, Asperger syndrome, and spina bifida). Data obtained from 509 participants were analyzed.

Results: The mean age of the participants was 37.7±7.1 years, and 92.5% were female. Of the parents, 71.3% were homemakers, and the median number of children was 2. Awareness of DCD was found to be 41.5%. Among childhood neurodevelopmental disorders, the lowest awareness levels were found for dyspraxia (9.4%), spina bifida (17.5%), and Asperger syndrome (18.8%). In contrast, the highest awareness levels were observed for autism (84.2%) and ADHD (80.8%). Parents who reported their social environment as a source of information regarding DCD had significantly higher awareness levels ($p < 0.001$). Awareness levels were also significantly higher among parents with a high school education or above ($p < 0.001$). In addition, parents with one or two children had higher awareness levels than those with three or more children ($p=0.010$). Parents engaged in income-generating employment had significantly higher awareness levels than homemakers ($p < 0.001$).

Conclusion: This study demonstrated that parental awareness of DCD was low and that dyspraxia, a concept closely associated with DCD, was insufficiently recognized. Expanding educational and informational activities aimed at increasing parental awareness is important to facilitate early diagnosis, appropriate referral, and timely intervention during childhood.

Keywords: Developmental Coordination Disorder, Neurodevelopmental Disorder, Child Health

OP - 098

FUTURE ANXIETY AMONG MEDICAL STUDENTS: A MULTI-INSTITUTIONAL CROSS-SECTIONAL STUDY

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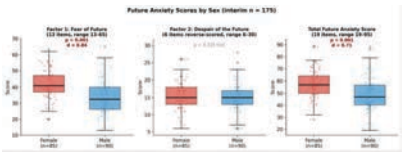
[1]University of Health Sciences, Prof. Dr. Cemil Taşcıoğlu City Hospital, Istanbul, Türkiye

Aim: Future anxiety—apprehension regarding unfavorable changes in one's personal future—is distinct from generalized anxiety and highly relevant to medical students given prolonged training, competitive specialty examinations, and socioeconomic uncertainty. This interim analysis of an ongoing multi-institutional study (target n=500) estimates future anxiety levels and identifies sociodemographic correlates.

Material & Method: A cross-sectional online survey was administered to medical students across 14 universities. The validated 19-item Future Anxiety Scale for University Students (Geylani and Çiriş Yıldız, 2022) was used. Internal consistency was assessed using Cronbach's α and normality using Shapiro-Wilk. Between-group comparisons were performed with appropriate parametric or non-parametric tests. Cohen's d quantified effect sizes. A p-value < 0.05 was considered significant.

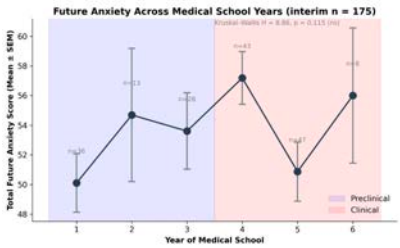
Results: Of 180 respondents, 175 (97.2%) consented and were analyzed (mean age 22.0 ± 2.4 years; 48.6% female). Internal consistency was excellent (overall α=0.918). Mean total score was 53.2 ± 13.1. Female students scored significantly higher than male students on Fear of Future (41.98 ± 9.13 vs 33.71 ± 10.40; p < 0.001; d=0.84) and total score (57.74 ± 11.46 vs 48.96 ± 13.18; p < 0.001; d=0.71) (Figure 1). Despair scores did not differ significantly (p=0.325). No significant differences emerged by age, training year, or phase (Figure 2). Among the three institutions with ≥30 participants, Fear of Future scores differed significantly, with SBÜ students reporting the highest mean, whereas total scores did not differ significantly (Figure 3). The most common concerns were economic and political instability, persistence of problems, and worsening life conditions.

Figure 1. Future anxiety scores by sex (interim n = 175).



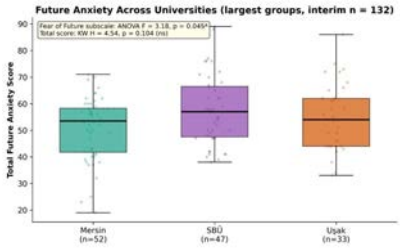
Female students show substantially elevated scores on the Fear of Future subscale and total score (both p < 0.001); Despair of the Future did not differ.

Figure 2. Future Anxiety Across Medical School Years



Total Future Anxiety score across the six years of medical school. No statistically significant trend was observed.

Figure 3. Total Future Anxiety Score Across Universities



Among the three institutions with n ≥ 30 participants (Mersin, SBÜ, Uşak), one-way ANOVA on the Fear-of-Future subscale showed a statistically significant difference (F = 3.18, p = 0.045), with SBÜ students reporting the highest mean. The total score comparison did not reach significance (KW p = 0.104), suggesting that institutional differences are concentrated in the fear component

Conclusion: Future anxiety was highly prevalent among medical students, with a marked sex disparity driven by fear-of-future concerns rather than despair. Findings support early screening and structured career mentorship. Recruitment and analysis of the full target sample are ongoing.

Keywords: future anxiety; medical students; sex differences; medical education; cross-sectional study

OP - 099

PARENT-REPORTED ANXIETY AND DEPRESSION IN CHILDREN WITH EPILEPSY

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Aim: This study aimed to compare parent-reported anxiety and depression symptoms in children and adolescents with epilepsy and healthy controls, and to examine their relationship with epilepsy-related clinical characteristics.

Material & Method: This cross-sectional case-control study included 46 children/adolescents with epilepsy and 46 age- and sex-matched healthy controls. Symptoms were assessed using the parent form of the Revised Child Anxiety and Depression Scale. T-scores for separation anxiety, generalized anxiety, panic, social phobia, obsessive-compulsive symptoms, depression, total anxiety, and total anxiety/depression were analyzed. Groups were compared using the Mann–Whitney U test. Clinical threshold rates were evaluated at T≥65 and T≥70 using Fisher's exact test. Benjamini-Hochberg FDR correction was applied for multiple comparisons. Treatment type, seizure type, sex, age, and disease duration were also analyzed within the epilepsy group.

Results: The groups were similar in age and sex. Depression scores were higher in the epilepsy group than in controls, with median values of 51.5 and 44.5, respectively (p=0.012, r=0.30), but this difference was borderline after FDR correction (FDR-p=0.094). No significant differences were found in the other median scale scores. At the T≥65 threshold, separation anxiety and panic symptoms were more frequent in the epilepsy group, both 23.9% versus 6.5% (OR=4.44, p=0.039), but these findings did not remain significant after FDR correction. No significant associations were found with monotherapy/polytherapy, sex, age, or disease duration. Focal epilepsy was associated with higher obsessive-compulsive scores, but not after correction.

Conclusion: Parent-reported depressive symptoms appear more prominent in children and adolescents with epilepsy. Although median anxiety scores were similar, separation anxiety and panic symptoms above the clinical threshold were more frequent in the epilepsy group. Regular screening for depression and anxiety may be important during follow-up.

Keywords: epilepsy, child, anxiety, depression, parent report

OP - 100

NEURODEVELOPMENTAL CHARACTERISTICS OF CHILDREN PRESENTING WITH SPEECH DELAY

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Aim: To evaluate the demographic characteristics, associated neurodevelopmental findings, and diagnostic evaluation results of children presenting to a pediatric neurology outpatient clinic with speech delay.

Material & Method: Medical records of 62 children presenting with speech delay were retrospectively reviewed. Demographic data, neurological examination findings, Denver II Developmental Screening Test results, Child and Adolescent Psychiatry follow-up records, hearing assessments, electroencephalography (EEG), neuroimaging findings, and speech therapy records were analyzed.

Results: The mean age of the patients was 52.3±32.1 months. Among patients with available sex data, 40 (66.7%) were male and 20 (33.3%) were female. Thirty-four patients (54.8%) were under follow-up by Child and Adolescent Psychiatry services. Neurological examination was normal in 56 patients (90.3%). Hearing assessment had been performed in 26 patients (41.9%). Neuroimaging studies were available in 40 patients (64.5%), while EEG examinations had been performed in 30 patients (48.4%). Epileptiform activity was detected in 6 patients who underwent EEG (20.0%), corresponding to 9.7% of the entire cohort. The Denver II Developmental Screening Test was administered to 44 patients (71.0%). In a substantial proportion of these children, language delay was accompanied by impairments in personal-social, fine motor-adaptive, and gross motor developmental domains. Records of speech therapy or speech-language evaluation were available for 22 patients (35.5%). Receptive-expressive language impairment, articulation disorders, stuttering, neuromotor developmental delay, and findings suggestive of autism spectrum disorder were among the most common associated conditions.

Conclusion: Although neurological examination findings were predominantly normal, Denver II assessments frequently revealed broader neurodevelopmental involvement beyond language delay. Children presenting with speech delay should undergo comprehensive multidisciplinary evaluation, including developmental, psychiatric, and audiological assessment, to facilitate early diagnosis and intervention.

Keywords: Speech delay, Developmental language delay, Denver II, Pediatric neurology, Global developmental delay

OP - 101

HYPOTONIA AND DEVELOPMENTAL DELAYS DUE TO VITAMIN B12 DEFICIENCY

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Aim: The aim of this study is to draw attention to hypotonia and neuromotor developmental delay detected during routine follow up in healthy infants and to demonstrate the association of these findings with vitamin B12 deficiency, a treatable condition.

Material & Method: This retrospective cohort study was conducted at the well-child outpatient clinic. Medical records reviewed from May 2021 to October 2025. Inclusion criteria were healty infants aged 0–12 months presenting with clinical signs of hypotonia and/or neurodevelopmental delay. Serum vitamin B12 levels < 203 pg/mL were defined as deficiency; 203-298 pg/mL were defined as insufficiency. Functional deficiency was defined as elevated serum homocysteine levels (> 8 µmol/L) even in the presence of normal serum vitamin B12. The minimum sample size required for a 95% confidence level and 8% precision was 150.

Results: The study enrolled 157 infants, who had a median age of 3.3 months (IQR: 2.6 – 4.7) at the time clinical findings were detected. The baseline demographic and clinical characteristics of the study participants are summarized in Table 1. The observed symptoms are hypotonia, poor eye contact, poor trunk control during supported sitting, and delays in language and personal–social development. Hypotonia was the most prevalent finding, identified in 89% of infants. Vitamin B12 deficiency, insufficiency, and functional deficiency were present in 45 (28.7%), 49 (31.2%), and 43 (27.4%) infants, respectively. Vitamin B12 status was normal in 20 (12.7%) infants. Biochemical and haematological characteristics of the study group are summarized in Table 2. Of the 137 infants initiated on vitamin B12 treatment, 114 completed follow-up. Clinical resolution of hypotonia and/or developmental delay was achieved in 107 (93.8%) infants, with a median recovery time of 1.6 months (IQR: 1.5 – 2.5). Infants whose symptoms persisted were referred to pediatric neurology for further evaluation. Post-treatment biochemical analysis showed statistically significant increase in serum vitamin B12 levels ($p < 0.001$) and decrease in homocysteine levels ($p < 0.001$) (Table 3).

Table 1. Baseline Demographic and Clinical Characteristics

Variables	**Total group (*n* =157)**	**< 6 months (n =144)**	**≥ 6 months (*n* =13)**

Median age of infants (months), median (IQR)	3.3 (2.6-4.7)	3.2 (2.4-4.1)	6.7 (6.4-8.5)
Follow-up visit at which the clinical finding was identified			
Initial examination *n* (%)	103 (66)	95 (66)	8 (61.5)
Age at onset, median (IQR)	3.1 (2.3-4.1)	3 (2.3-3.9)	6.5 (6.3-7.3)
Onset of symptoms at 2nd visit *n* (%)	28 (18%)	27 (18)	1 (7.7)
Age at onset , median (IQR)	2.9 (2.4-4)	2.9 (2.3-4)	6.Nis
Onset of symptoms at 3rd visit *n* (%)	14 (9%)	13 (9)	1 (7.7)
Age at onset , median (IQR)	4.2 (3.4-5.1)	4.2 (3.4-5)	7
Onset of symptoms at 4th visit *n* (%)	10 (6%)	8 (5.5)	2 (15.4)
Age at onset , median (IQR)	4.6 (4.2-6.3)	4. (4.1-5)	9.Oca
Onset of symptoms at 5th visit(*n*)	2 (1%)	1 (0.5)	1 (7.7)
Age at onset , median (IQR)	7	5	9
Gender *n* (%)			
Male	79 (50.3%)	71 (49%)	8 (61%)
Gestational age (weeks)	38 (37-39)	38 (37-39)	38 (37-38.5)
Preterm (<37 week) *n* (%)	25 (16)	24 (16)	1 (7)

Delivery Mode			
NVSD, *n* (%)	51 (32.5%)	48 (33%)	3 (23%)
C/S, *n* (%)	106 (67.5%)	96 (67%)	10 (77%)
Appropriate feeding practices, *n* (%)	96 (61)	89 (62)	7 (54)
Clinical Presentation *n* (%)			
Hypotonia (vertical and ventral suspension)	139 (89)	128 (89)	11 (85)
Age at identification, median (IQR)	3.3 (2.4-4.3)	3.1 (2.4-4)	6.7 (6.4-8)
Hypotonia (traction response)	31 (20)	31 (21)	0
Age at identification, median (IQR)	3.1 (2.6-3.7)	3.1 (2.6-3.7)	-
Poor eye contact	3 (2)	3 (2)	0
Age at identification, median (IQR)	2.Eyl	2.Eyl	-
Poor trunk control in supported sitting	19 (12)	14 (10)	5 (38)
Age at identification, median (IQR)	5.2 (4.9-6.3)	5 (4.8-5.4)	6.4(6.3-6.6)

Delayed language and personal–social development	1 (0.6)	0	1 (7.7)
Age at identification, median (IQR)	9.Mar		9.Mar
Abbreviations: NVSD, normal vaginal spontaneous delivery; C/S, cesarean section			
Appropriate feeding was defined for the first six months of life as exclusive breastfeeding, for 6–12 months of life as exclusive breastfeeding for the initial six months followed by the introduction of nutritionally adequate complementary foods alongside continued breastfeeding.			
In the "Clinical Presentation" section total percentage exceeds 100% due to the coexistence of multiple neurodevelopmental and clinical signs in individual infants.			

Table 2. Biochemical and Haematological Characteristics of The Study Group

	Vitamin B12 deficient	**Vitamin B12 insufficient**	**Functional vitamin B12 deficient**	**Vitamin B12 status normal**	*p*
	n = 45	n = 49	n = 43	n = 20	
Age (months)	3.3 (2.3-5)	3.1 (2.3-4)	3.3 (2.6-4.2)	4 (3-5.4)	0.166*
Gender, male, n (%)	27 (55)	24 (56)	7 (35)		

	21 (46)				0.38**
Appropriate feeding practices, n (%)	35 (78)	33 (67)	22 (51)	6 (30)	0.001**
Hb (g/dl)	11 (10.5-11.8)	11 (10.4 – 11.7)	11.1 (10.3 – 12.1)	11 (10.5 – 11.9)	0.914*
Htc (%)	32.5 (30.3-35.1)	32.2 (30.5 – 34.3)	32 (30 – 35)	33.3 (30 – 35)	0.887*
MCV (fL)	81 (75.5-86.8)	81 (77-87)	79 (75 – 83)	78 (75 – 83)	0.188*
WBC (10^3/µL)	8.9 (7.3-10.7)	8 (6.6 – 9.2)	8.1 (7 – 9.5)	10.2 (6.6 – 12)	0.059*
ANC (10^3/µL)	1.9 (1.3-2.6)	1.8 (1.3 – 2.3)	1.7 (1.2 – 2.1)	2.1 (1.4 – 3.2)	0.345*
ALC (10^3/µL)	5.3 (4.3-6.8)	5.2 (4.2 – 6.1)	5.2 (4.4 – 6.3)	6.8 (4.8 – 8.1)	0.113*
PLT (10^3/µL)	443 (364 - 549)	404 (333 – 487)	391 (331 – 465)	407 (337 – 499)	0.150*
Serum Vitamin B12 (pg/mL)	161 (125-183)	251 (234-276)	387 (341-482)	531 (393 – 620)	-
Serum Homocysteine (µmol/L)	15.1 (11.4-18)	11.5 (8.8-13.8)	11.2 (9 – 15)	6.8 (5.9 – 7.6)	< 0.001*

	n = 40	n = 44	n = 43	n = 17	
Folate (ng/mL)	16 (14-20)	17 (12-20)	18 (14-20)	20 (16 - 20)	0.281*
	n = 36	n = 41	n = 39	n = 16	
Abbreviations: ALC, absolute lymphocyte count; ANC, absolute neutrophil count; App., appropriate; Hb, hemoglobin; Htc, hematocrit; MCV, mean corpuscular volume; PLT, platelets; WBC, white blood cell count.					
Data are presented as median (IQR) or n (%)					
* Kruskal–Wallis					
** Fisher's Exact Test					
Appropriate feeding was defined for the first six months of life as exclusive breastfeeding, for 6–12 months of life as exclusive breastfeeding for the initial six months followed by the introduction of nutritionally adequate complementary foods alongside continued breastfeeding.					
No statistical comparison was performed for serum vitamin B12 levels, as the groups were defined based on this variable.					
The sample size (n) for each variable is equal to the group total unless otherwise specified in parentheses.					

Table 3. Comparison of Serum Vitamin B12 and Homocysteine Levels Before and After Treatment

Variable	**N**	**Before Treatment**	**After Treatment**	***z***	***p* ***
Vitamin B12 (pg/mL)	91	249 (184-317)	809 (512-1247)	-8,276	**< 0,001**
Homosistein (µmol/L)	76	13.4 (10.8-16.3)	5.8 (5.0-6.8)	-7,57	**< 0,001**
Data are presented as median (IQR)					
*Wilcoxon Signed-Ranks Test					

Conclusion: The findings of this study highlight the need for detailed neurological examination and neurodevelopmental assessment to always be included in child health monitoring, and the critical role of vitamin B12 deficiency on neurocognitive development.

Keywords: Hypotonia, Developmental Delay, Vitamin B12 deficiency, Infant, Neurodevelopment

OP - 102

RELATIONSHIP BETWEEN MATERNAL ANXIETY AND BREASTFEEDING SUCCESS IN THE POSTPARTUM PERIOD: A CROSS-SECTIONAL EVALUATION USING THE {BECK ANXIETY INVENTORY} AND {LATCH} SCORE

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Aim: Postpartum anxiety is one of the significant psychological factors that may adversely affect the breastfeeding process. This study aimed to investigate the relationship between anxiety levels assessed by the Beck Anxiety Inventory (BAI) and LATCH breastfeeding assessment scores in postpartum mothers.

Material & Method: This cross-sectional study included 181 postpartum mothers. Sociodemographic and obstetric data (age, parity, and mode of delivery) were recorded. Anxiety levels were measured using the BAI, and breastfeeding success was assessed with the LATCH Breastfeeding Assessment Scale. Spearman correlation analysis and the Kruskal–Wallis test were used for statistical analyses; the significance level was set at $p < 0.05$.

Results: The mean age of participants was 29.2±5.5 years, the mean LATCH score was 7.89±1.00, and the mean BAI score was 10.26±9.64. Of the participants, 70.7% delivered by cesarean section. According to BAI groups, 49.2% had minimal, 26.5% mild, 15.5% moderate, and 8.8% severe anxiety. As anxiety levels increased, LATCH scores showed a declining trend, and the difference between groups was statistically significant (Kruskal–Wallis, $p=0.045$). A weak negative correlation was found between BAI scores and LATCH scores (Spearman rho=−0.134); however, this relationship was at the borderline of statistical significance ($p=0.072$). No significant associations were found between demographic or obstetric variables and scale scores ($p > 0.05$).

Conclusion: Elevated anxiety levels in the postpartum period are associated with reduced breastfeeding success. These findings suggest that breastfeeding counseling programs should incorporate psychosocial assessment alongside technical support. Integrating routine postpartum anxiety screening into standard mother-infant follow-up visits may contribute to improved breastfeeding outcomes.

Keywords: Postpartum anxiety, Breastfeeding success, Beck Anxiety Inventory, LATCH score, Psychosocial support

OP - 103

UNMASKING OF ALCAPA FOLLOWING VENTRICULAR SEPTAL DEFECT CLOSURE: A CASE REPORT

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Aim: Anomalous Left Coronary Artery from the Pulmonary Artery (ALCAPA) is a rare congenital coronaryanomaly associated with severe myocardial ischemia and high mortality during early infancy. Inpatients with a concomitant ventricular septal defect (VSD), elevated pulmonary artery pressureand oxygen content may temporarily preserve left coronary perfusion, thereby masking the clinicalmanifestations of ALCAPA. Following VSD closure, abrupt hemodynamic changes may revealpreviously latent coronary insufficiency.

Case: An infant who underwent surgical repair of a hemodynamically significant VSD at six months of ageremained clinically stable during the early postoperative period. However, routine outpatientfollow-up revealed newly developed diffuse ST-segment depression on electrocardiography,accompanied by a decline in left ventricular ejection fraction. Echocardiographic evaluationdemonstrated no residual shunt or significant valvular pathology. Therefore, further imaging wasperformed with suspicion of an underlying coronary abnormality. Computed tomographyangiography confirmed the diagnosis of ALCAPA by demonstrating the origin of the left maincoronary artery from the pulmonary artery. The patient subsequently underwent surgicalrevascularization.

Results: In patients with ALCAPA associated with VSD, elevated pulmonary artery pressure may providenear-systemic antegrade flow to the left coronary circulation, partially preserving myocardialperfusion. Following VSD closure, the reduction in pulmonary artery pressure predisposes tocoronary steal phenomenon and subendocardial ischemia. This hemodynamic transition maymanifest as postoperative left ventricular dysfunction and ischemic electrocardiographic changes.In particular, unexplained systolic dysfunction in the absence of a residual defect should promptinvestigation for an underlying coronary anomaly. This case highlights the importance of meticulousassessment of coronary anatomy before VSD repair.

Conclusion: VSD closure may clinically unmask previously compensated ALCAPA. Coronary artery anomaliesshould be considered in patients who develop postoperative ST-segment changes and deteriorationof left ventricular function. Early diagnosis and timely surgical intervention are essential to limitmyocardial damage and improve outcome

Keywords: Vsd closure. İscemia. ALCAPA

OP - 104

SOCIODEMOGRAPHIC AND FAMILIAL FACTORS AFFECTING THE FREQUENCY OF PEDIATRIC OUTPATIENT CLINIC VISITS

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Aim: This study aimed to evaluate the effects of sociodemographic characteristics and familial factors on the frequency and reasons for pediatric outpatient clinic visits.

Material & Method: In this cross-sectional study, data from patients admitted to the pediatric outpatient clinic were collected using a ' Polyclinic Data Collection Form'. The form included information regarding the child's age and gender, maternal age, educational and employment status of the mother, family type, number of children, reasons for outpatient admission, and frequency of admissions within the last six months. The obtained data were analyzed using appropriate statistical methods.

Results: The sociodemographic characteristics of children admitted to the pediatric outpatient clinic and their familyasından were evaluated. The most common reasons for admission were infection and routine control. Factors such as family structure, parenteral education level, and number of children were considered to potentially influence the frequency of outpatient visits.

Conclusion: Evaluating sociodemographic and familial factors in pediatric outpatient clinic admissions is important for planning child healthcare services and improving preventive healthcare practices. Regular data collection may contribute to increasing the effectiveness of healthcare services.

Keywords: Sociodemographic factors, visit frequency, pediatric, health-seeking behavior, famial characteristics

OP - 105

EFFECT OF A WEB-BASED GAME IN TEACHING THE NATIONAL IMMUNIZATION SCHEDULE

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Aim: Learning the national childhood immunization schedule can be challenging for medical students, particularly in correctly matching vaccines with their administration times and dose sequences. This study aimed to evaluate the effect of a web-based interactive educational game on students' learning experience, motivation, user satisfaction, and perceived learning effectiveness.

Material & Method: An interactive educational game was developed in which vaccine types were presented in rows and age intervals in columns, requiring students to place vaccine doses into the correct cells. The game was designed client-side using JavaScript and made accessible online. After playing the game, 17 medical students completed a questionnaire consisting of Likert-type scales evaluating learning effectiveness, ease of use, motivation, and user experience. Two participants were excluded due to inconsistent responses, and analyses were conducted with 15 participants. Internal consistency of the scales was assessed using Cronbach's alpha coefficient.

Results: All participants reported that they liked the way the game taught the immunization schedule. Overall, 93.3% reported that the game facilitated learning, 86.7% stated that it made the information more permanent, and 93.3% found it more motivating than traditional memorization methods. All participants stated that most users could learn the system quickly and use it without technical support. Game Experience Questionnaire results indicated that most students found the game enjoyable, fun, engaging, and actively involving. Users particularly emphasized that instant correct/incorrect feedback, time tracking, and replayability contributed to learning. The Student Satisfaction and Self-Confidence in Learning Scale score was 89.48%, the Intrinsic Motivation Inventory score was 77.94%, and the System Usability Scale score was 81.47%. Internal consistency was high (Cronbach's alpha > 0.84).

Conclusion: Questionnaire results suggest that web-based educational games may facilitate learning of memorization-heavy topics such as immunization schedules. Game-based digital tools may be considered a feasible method to support active learning in medical education.

Keywords: Game-based Learning, Javascript, Medical Education, Student Motivation, National Immunization Schedule

OP - 106

LOW-VALUE LABORATORY TESTING IN PEDIATRIC PRACTICE: ASSOCIATIONS WITH DEFENSIVE MEDICINE, PERCEIVED PARENTAL PRESSURE, AND WORKLOAD AMONG PEDIATRICIANS IN TÜRKIYE

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Aim: Unnecessary laboratory testing is an important form of low-value care in pediatric practice. It may cause avoidable procedural burden, anxiety, potential harm, and increased healthcare costs in children. This study aimed to evaluate the associations of defensive medicine, perceived parental pressure, and workload-related factors with self-reported unnecessary laboratory test ordering behavior among pediatricians in Türkiye.

Material & Method: This cross-sectional online survey included a convenience sample of 317 actively practicing pediatricians in Türkiye. Participants were recruited through a closed professional network between March 25 and April 18, 2026. The primary outcome was a self-reported unnecessary laboratory test ordering score derived from four items (Cronbach's $\alpha = 0.808$). Multivariable linear regression analysis was used to assess independent associations.

Results: The mean unnecessary test ordering score was 3.55 ± 0.85. In the multivariable model, defensive medicine showed the strongest independent association with higher self-reported unnecessary test ordering scores ($\beta = 0.448$, $p < 0.001$), followed by perceived parental pressure ($\beta = 0.238$, $p < 0.001$) and daily patient workload ($\beta = 0.119$, $p = 0.006$). Longer professional experience was associated with lower scores ($\beta = -0.152$, $p = 0.001$). Time constraints, institution type, and malpractice exposure were not independent predictors. The model explained 46.9% of the variance (adjusted $R^2 = 0.458$).

Conclusion: Self-reported unnecessary laboratory test ordering among pediatricians in Türkiye appears to be a multidimensional behavior associated with defensive medicine, perceived parental pressure, and daily patient workload. Interventions to reduce self-reported unnecessary laboratory test ordering should address not only knowledge gaps but also diagnostic uncertainty, physician–parent communication, and organizational workload conditions in high-volume settings. Findings should be interpreted cautiously due to the cross-sectional and self-reported design.

Keywords: Defensive medicine, laboratory overuse, low-value care, parental pressure

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THE PROJECT "BRONCHIECTASIS: CYSTIC FIBROSIS AND MORE..."

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Aim: The aim of the project is to organize a system for the diagnosis of conditions that cause bronchiectasis, in order to ensure that patients in remote areas of the Russian Federation receive appropriate medical care.

Material & Method: The project "Bronchiectasis: Cystic Fibrosis and More..." involves a group of experts (pediatricians, pulmonologists, microbiologists, physiotherapist, nutritionists, and psychologist) visiting regional and remote areas to hold a conference (Figure 1) and evaluate patients with suspected conditions accompanied by bronchiectasis. The project provides schools for parents and patients. Physiotherapist consultation includes training in inhalation techniques and working with equipment. The dietary assistance is provided through the use of a phone app. Leading microbiologists provide training for microbiological laboratory specialists in working with biomaterials from patients with bronchiectasis. A brush biopsy is taken for transmission electron microscopy (TEM) during the examination, and blood samples are collected for genome-wide sequencing (Figure 2).

Figure 1. Conference day

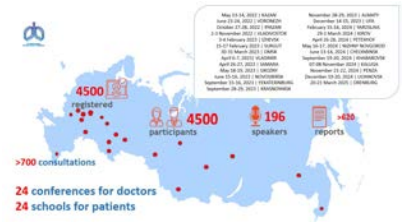


Figure 2. Consultations day



Results: During the four-year project, 24 visits were made to various regions of the Russia. Conferences were attended by 196 speakers and > 4,500 doctors from different medical organizations. There were > 700 patient consultations, > 200 of which were for patients with cystic fibrosis, and more than 500 for patients with other diseases associated with bronchiectasis (Figure 3). 300 brush biopsy samples for TEM and blood samples were collected for genome sequencing. According to the current results, 160 patients have been diagnosed with primary ciliary dyskinesia, 7 patients with primary immunodeficiency and 14 with other hereditary diseases. The data obtained formed the basis of the registry of patients with primary ciliary dyskinesia in the Russian Federation. It is also planned to create a registry for patients with bronchiectasis.

Figure 3. Project scope



Conclusion: The versatility of the project is unique, including educational components for doctors and patients, as well as examinations by leading specialists using the newest diagnostic methods.

Keywords: bronchiectasis, cystic fibrosis, primary ciliary dyskinesia, transmission electron microscopy, genome-wide sequencing

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ASSESSMENT OF PLASMA ADRENOMEDULLIN CONCENTRATIONS IN ADOLESCENTS DIAGNOSED WITH ASTHMA

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Aim: Asthma is a chronic inflammatory airway disease commonly observed during adolescence. Adrenomedullin (ADM), a vasoactive peptide with immunomodulatory and inflammatory properties, has been suggested to play a role in airway inflammation. However, data regarding the relationship between plasma ADM levels and asthma control in adolescents remain limited. This study aimed to evaluate plasma ADM concentrations in adolescents with asthma and investigate their association with disease control.

Material & Method: This prospective cross-sectional study included 60 adolescents aged 12–18 years diagnosed with asthma according to GINA 2024 criteria and 25 healthy controls. Asthma patients were categorized as controlled or uncontrolled based on Asthma Control Test (ACT) scores. Plasma adrenomedullin concentrations were measured using ELISA. Hemogram, CRP, ferritin, vitamin D, platelet count, and total IgE levels were also evaluated. Statistical analyses were performed using SPSS 27, and ROC analysis was conducted to assess the diagnostic performance of ADM.

Results: Plasma ADM, IgE, and platelet levels were significantly higher in asthmatic adolescents than in controls (p=0.001, p=0.001, and p=0.004, respectively). ADM showed the best diagnostic performance for asthma (AUC: 0.865), followed by IgE (AUC: 0.795) and platelet count (AUC: 0.716) (all p=0.001). An ADM cutoff value of ≥6.74 ng/mL was associated with asthma (OR: 21.357), whereas IgE ≥130.2 IU/mL and platelet count ≥278×10^3/mm^3 were associated with ORs of 10.500 and 4.826, respectively. Compared with controlled asthma, uncontrolled asthma was characterized by higher ADM, IgE, and platelet levels and lower vitamin D levels.

Conclusion: Plasma adrenomedullin may serve as a promising complementary biomarker for asthma detection and assessment of disease control in adolescents. Elevated IgE and platelet levels together with reduced vitamin D levels may reflect ongoing inflammatory activity and disease severity.

Keywords: Asthma, Adrenomedullin, Adolescents, Asthma Control

OP - 109

NAILFOLD VIDEOCAPILLAROSCOPY PRACTICES AMONG PEDIATRIC RHEUMATOLOGISTS IN TÜRKIYE: A NATIONAL SURVEY

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Aim: Nailfold videocapillaroscopy(NVC) is a non-invasive imaging method used in pediatric rheumatology,particularly in patients with Raynaud phenomenon, juvenile systemic sclerosis and juvenile dermatomyositis. This studyaimed to evaluate current nationwide NVC practices, identify variations in practice patterns and assess the need forstandardization and future pediatric capillaroscopy working groups.

Material & Method: The questionnaire was distributed electronically to pediatric rheumatologists and completed voluntarily. Thesurvey assessed participants' demographic characteristics, their institutions' characteristics, the availability of NVCdevices, the device types used, practitioners' profiles, training status, pre-procedural preparation, time allocated forimaging, technical application features, evaluation parameters, reporting habits, clinical areas of use, standardizationapproaches, and educational needs.

Results: A total of 119 participants from various regions of our country were included in the study. NVC was mostfrequently performed by fellows (n=42, 35.3%). A total of 103 participants (86.6%) had received at least one trainingsession in capillaroscopy. Self-efficacy regarding capillaroscopy application, image acquisition, interpretation ofcapillaroscopic findings, and structured reporting was generally rated as moderate to good among participants, whereaslower confidence levels were particularly observed in structured reporting and knowledge of standard reporting systems,cut-off values, and pattern classifications. NVC was most commonly used in patients with Raynaud phenomenon, juvenilesystemic sclerosis, juvenile dermatomyositis, and SLE/MCTD/overlap syndromes, with 54 participants (45.4%) routinelyapplying it in these four groups. The most frequently evaluated parameters during capillaroscopy were capillary density(n=108, 90.8%), presence of dilated capillaries (n=106, 89.1%), presence of giant capillaries (n=104, 87.4%),microhemorrhages (n=101, 84.9%), avascular areas (n=96, 80.7%). A total of 101 participants (84.9%) indicated theneed for national guidelines.

Conclusion: This study shows that NVC is a common method influencing decisions in pediatric rheumatology. However,variability exists across centers in device features, application, reporting and evaluation standards. Participantshighlighted concerns about age-related differences in capillary density, the absence of pediatric-specific reference values and the use of adult classifications in children. These findings suggest the need for pediatric-specific standards andnational networks.

Keywords: nailfold videocapillaroscopy, pediatric rheumatology, raynaud phenomenon, juvenile systemic sclerosis

OP - 110

THE ROLE OF CLINICAL BIOETHICS IN DEVELOPING PROFESSIONAL ETHICAL COMPETENCIES AMONG FUTURE PHYSICIANS: RESULTS OF A DELAYED EVALUATION OF AN EDUCATIONAL COURSE

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Aim: Rapid advances in medical science, healthcare technologies, digitalisation, and access to medical information have increased the complexity of ethical challenges encountered in clinical practice. These challenges may be particularly pronounced across different medical specialties, where physicians must apply general ethical principles to specialty-specific clinical situations.To assess, two to three years after completion of a Clinical Bioethics course, students' perceived preparedness to apply acquired bioethical knowledge and skills during clinical training, particularly in relation to patient rights, doctor–patient communication, and the management of specialty-specific ethical problems.

Material & Method: A cross-sectional survey was conducted among 200 fourth- to sixth-year medical students who had previously completed the Clinical Bioethics course. The participants represented a cohort distinct from those included in our previous evaluations of bioethics education. A 32-item questionnaire assessed students' perceptions of the course content, educational value, practical relevance, and applicability of bioethical knowledge during clinical training in different medical disciplines.

Results: Eighty-five percent of respondents reported that the course improved their ability to identify and address ethical issues arising in clinical practice, particularly those related to doctor–patient relationships and the protection of patients' rights during clinical communication. Seventy-five percent reported greater awareness of bioethical principles and increased confidence in analysing complex ethical situations involving patients with diverse demographic, cultural, and communication needs. Seventy percent supported incorporating specialty-specific ethical problems into bioethics teaching, indicating a perceived need to connect foundational bioethical principles with the practical dilemmas encountered across different medical specialties.

Conclusion: A delayed evaluation among students who had completed Clinical Bioethics suggests that the course may contribute to perceived preparedness for addressing ethical challenges during clinical training. The findings particularly highlight the value of linking bioethical principles with patient rights, doctor–patient communication, and specialty-specific clinical dilemmas. Integrating clinically oriented and specialty-relevant cases into bioethics education may strengthen the practical application of ethical knowledge throughout medical training.

Keywords: clinical bioethics, medical education, ethical competence, medical students, professional ethics

OP - 111

WELL-BEING, BURNOUT, AND PSYCHOLOGICAL DISTRESS IN PEDIATRIC RESIDENTS

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Aim: Pediatric residency is a demanding training period characterized by high clinical workload, prolonged working hours, and exposure to multiple occupational stressors. These factors may adversely affect residents' psychological health and professional sustainability. This study aimed to evaluate well-being, burnout, and psychological distress among pediatric residents and to examine their associations with workplace-related factors.

Material & Method: This cross-sectional study was conducted using an online questionnaire. Sociodemographic characteristics, working conditions, workplace-related factors, and well-being-related variables were assessed. Burnout was measured using the Burnout Assessment Scale (BOS), well-being using the WHO-5 Well-Being Index, and anxiety/depressive symptoms using the PHQ-4. A total of 72 pediatric residents participated in the study. Statistical analyses were performed using SPSS.

Results: The median age of participants was 29 years (IQR: 28–31), and 79.2% were female. Overall, 33.3% of residents reported seriously considering leaving their profession or specialty within the previous month, while 34.7% reported exposure to mobbing or psychological pressure during the preceding six months. Median BOS, WHO-5, and PHQ-4 scores were 42.5 (IQR: 34.75–52.5), 40 (IQR: 31–52), and 6 (IQR: 4.75–10), respectively. Burnout was strongly and inversely correlated with well-being (rho=-0.608, $p < 0.001$) and strongly positively correlated with psychological distress (rho=0.774, $p < 0.001$). A more favorable work environment was associated with lower burnout and psychological distress and higher well-being (all $p < 0.001$). Residents exposed to mobbing had significantly higher burnout and psychological distress scores and lower well-being scores. Longer weekly working hours were associated with lower well-being ($p=0.001$) and higher psychological distress ($p=0.032$).

Conclusion: Pediatric residents experience substantial burnout and psychological distress, which are closely linked to impaired well-being. Workplace-related factors, particularly mobbing, unfavorable work environments, and excessive working hours, appear to be important determinants of resident mental health. Institutional interventions targeting training conditions may be essential to promote psychological well-being and professional retention among pediatric residents.

Keywords: Pediatric residents; burnout; psychological distress; well-being

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THE RELATIONSHIP BETWEEN ADOLESCENTS' WATER LITERACY AND ATTITUDES TOWARD WATER

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Aim: This study was conducted to determine the relationship between adolescents' water literacy levels and their attitudes toward water.

Material & Method: This descriptive and correlational study was conducted with 300 students selected through stratified sampling among 9th, 10th, 11th, and 12th grade students attending a public high school in Istanbul during the 2025–2026 academic year. Data were collected using the Descriptive Information Form, Water Literacy Scale, and Attitude Toward Water Scale. Data were analyzed using descriptive statistics and Pearson correlation analysis in IBM SPSS Statistics 30.0. Ethical approval, institutional permission, and written informed consent from parents were obtained prior to data collection. This study is supported by the TÜBİTAK 2209-A University Students Research Projects Support Program (2025/1 Term, Project No: 1919B012547534).

Results: The mean age of the participants was 16.2±1.1 years, and 56.0% were female. The mean total scores of the Water Literacy Scale and the Attitude Toward Water Scale were 100.54±15.91 and 54.05±6.17, respectively. A moderate positive and statistically significant correlation was found between water literacy and attitudes toward water ($r=0.473$, $p < 0.001$). The water awareness subscale was positively associated with attitudes toward water ($r=0.508$, $p < 0.001$), whereas the water sensitivity subscale was negatively associated with attitudes toward water ($r=-0.248$, $p < 0.001$).

Conclusion: Higher water literacy levels were associated with more positive attitudes toward water among adolescents. Expanding school-based water literacy education programs and providing awareness training on sustainable water use by nurses are recommended.

Keywords: Adolescent, Attitude, Environmental Health, Water Conservation, Water Literacy.

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EVALUATION OF OXIDATIVE STRESS AND PROINFLAMMATORY CYTOKINE LEVELS IN NEWBORNS WITH HYPERBILIRUBINEMIA

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Aim: Neonatal hyperbilirubinemia is one of the most common clinical conditions encountered during the neonatal period. This study aimed to evaluate oxidative stress and inflammatory response in newborns with hyperbilirubinemia by measuring total antioxidant status (TAS), total oxidant status (TOS), oxidative stress index (OSI), interleukin-1β (IL-1β), interleukin-6 (IL-6), and tumor necrosis factor-alpha (TNF-α) levels.

Material & Method: Newborns diagnosed with hyperbilirubinemia and healthy newborns with similar characteristics in terms of age, sex, gestational age, and birth weight were included in the study. Serum TAS, TOS, OSI, IL-1β, IL-6, and TNF-α levels were measured and compared between the groups. A p-value of < 0.05 was considered statistically significant.

Results: No significant differences were observed between the groups regarding demographic characteristics (all comparisons, $p > 0.05$). TOS and OSI levels were significantly higher in newborns with hyperbilirubinemia than in the control group ($p < 0.05$), whereas TAS levels were significantly lower ($p < 0.05$). Furthermore, IL-1β, IL-6, and TNF-α levels were significantly elevated in the hyperbilirubinemia group compared with healthy controls ($p < 0.05$).

Conclusion: The findings of this study demonstrate that the oxidant–antioxidant balance in newborns with hyperbilirubinemia is shifted toward oxidative stress and is accompanied by a marked proinflammatory response. These results suggest that oxidative stress and inflammatory mechanisms may play important roles in the pathogenesis of neonatal hyperbilirubinemia. A better understanding of these mechanisms may contribute to the development of novel diagnostic and therapeutic approaches for this condition.

Keywords: OXIDATIVE STRESS, PROINFLAMMATORY CYTOKINE, HYPERBILIRUBINEMIA, NEWBORNS

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ASSOCIATION OF DOCUMENTED FAMILY HISTORY WITH MEFV MUTATION POSITIVITY AND M694V CARRIAGE IN CHILDHOOD FMF

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Aim: Familial Mediterranean fever (FMF) shows marked familial clustering, but whether documented family history is associated with overall MEFV mutation positivity or with specific genotype patterns remains unclear. We aimed to examine the association between documented family history of FMF and genetic findings, particularly MEFV mutation positivity and M694V carriage, in children with FMF.

Material & Method: This retrospective cohort study included 175 children diagnosed with FMF and followed at a tertiary pediatric rheumatology center. Demographic features, documented family history of FMF, parental consanguinity, and genetic data were obtained from medical records. Genetic outcomes were defined as MEFV mutation positivity (primary outcome), M694V carriage (secondary outcome), and M694V homozygosity (exploratory outcome). Patients with and without documented family history were compared using chi-square or Fisher's exact tests. Multivariable logistic regression was performed adjusting for sex, FMF onset age, and parental consanguinity.

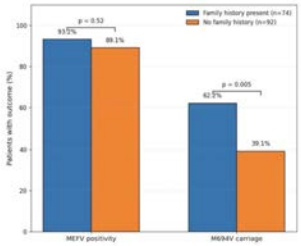
Results: Documented family history of FMF was present in 76/175 patients (43.4%). Genetic results were available for 166 patients (Figure 1; Table 1). Overall, MEFV mutation positivity was detected in 151/166 patients (91.0%), and 82/166 (49.4%) carried M694V (Table 1). MEFV mutation positivity was similar between patients with and without documented family history [69/74 (93.2%) vs 82/92 (89.1%), p=0.52]. In contrast, M694V carriage was significantly more frequent in patients with documented family history [46/74 (62.2%) vs 36/92 (39.1%), p=0.005] (Figure 2; Table 2). In multivariable analysis, documented family history was independently associated with M694V carriage (adjusted odds ratio 2.76, 95% confidence interval 1.37-5.55; p=0.004), but not with overall MEFV mutation positivity (adjusted odds ratio 1.98, 95% confidence interval 0.61-6.47; p=0.257) (Figure 3; Table 3). Because the number of M694V homozygous patients was limited, this outcome was assessed descriptively only.

Figure 1. Study Cohort and Analytic Sample



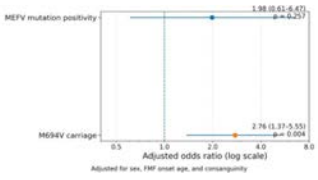
Flowchart of the study cohort showing the total number of children with FMF, availability of genetic data, subgroup denominators used for documented-family-history-based comparisons, and the analytic sample included in multivariable analysis.

Figure 2. Genetic Outcomes by Documented Family History of FMF



Grouped bar chart comparing overall MEFV mutation positivity and M694V carriage between patients with and without documented family history of FMF. Overall mutation positivity was similar between groups, whereas M694V carriage was more frequent in children with documented family history.

Figure 3. Multivariable Association of Documented Family History with Genetic Outcomes



Forest plot showing adjusted odds ratios for the association between documented family history of FMF and genetic outcomes after adjustment for sex, age at FMF onset, and parental consanguinity.

Table 1. Baseline Characteristics and Genetic Profile of the Cohort

Characteristic	**Value**

Total patients	175
Male sex, n (%)	103 (58.9)
Female sex, n (%)	72 (41.1)
FMF onset age, median (IQR), years	6.0 (4.0-9.0)
Age at presentation, median (IQR), years	9.0 (6.0-13.0)
Documented family history of FMF present, n (%)	76 (43.4)
No documented family history of FMF, n (%)	99 (56.6)
Parental consanguinity present, n (%)	31 (17.7)
Parental consanguinity absent, n (%)	82 (46.9)
Parental consanguinity missing, n (%)	62 (35.4)
Genetic results available, n (%)	166 (94.9)
MEFV mutation positivity, n (%)	151/166 (91.0)
M694V carriage, n (%)	82/166 (49.4)
M694V homozygosity, n (%)	3/166 (1.8)

This table summarizes the demographic, clinical, and genetic characteristics of the overall childhood FMF cohort, including documented family history, consanguinity, and the frequency of MEFV mutation positivity and M694V carriage.

Table 2. Comparison by Documented Family History of FMF

Variable	Documented family history present	No documented family history	p value
Male sex, n (%)	46/76 (60.5)	57/99 (57.6)	0.81
FMF onset age, median (IQR), years	6.0 (3.25-9.0)	6.0 (4.0-9.0)	0.84
Age at presentation, median (IQR), years	9.0 (6.0-13.25)	9.0 (7.0-13.0)	0.50
Parental consanguinity, n/N (%)	20/63 (31.7)	11/50 (22.0)	0.35
MEFV mutation positivity, n/N (%)	69/74 (93.2)	82/92 (89.1)	0.52
M694V carriage, n/N (%)	46/74 (62.2)	36/92 (39.1)	**0.005**

This table compares children with and without a documented family history of FMF in terms of demographic variables and genetic outcomes. It highlights that overall MEFV mutation positivity was similar between groups, whereas M694V carriage was significantly more frequent in patients with a positive family history.

Table 3. Multivariable Logistic Regression for Genetic Outcomes

Outcome	Adjusted OR	95% CI	p value
MEFV mutation positivity	1.98	0.61-6.47	0.257
M694V carriage	2.76	1.37-5.55	**0.004**
Footnote: Adjusted for sex, age at FMF onset, and parental consanguinity in the multivariable analytic sample (n=160).			

This table presents the adjusted associations between documented family history of FMF and genetic outcomes. After adjustment for sex, age at FMF onset, and parental consanguinity, family history remained independently associated with M694V carriage, but not with overall MEFV mutation positivity.

Conclusion: In childhood FMF, documented family history was associated with M694V carriage, but not with overall MEFV mutation positivity. These findings should be interpreted in light of the retrospective design and the reliance on medical-record-based family-history documentation.

Keywords: Familial Mediterranean Fever, M694V, Documented family history, MEFV, Genotype

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THE BURDEN OF BALANCE: A LONGITUDINAL ANALYSIS OF CLINICAL COMPLEXITY AND MONITORING REQUIREMENTS IN ALFACALCIDOL THERAPY

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Aim: This study aims to evaluate longitudinal therapeutic complexity, including monitoring frequency and healthcare resource utilisation, in a paediatric cohort receiving alfacalcidol for rare hypocalcaemic disorders.

Material & Method: This retrospective study evaluated electronic medical records from 14 patients (8 females, 6 males; median age 13 years, range 2–19 years) across a spectrum of rare aetiologies: 22q11 deletion (n=3),pseudohypoparathyroidism(n=4),Kenny-Caffey syndrome(n=1),McCune-Albright syndrome(n=1), and idiopathic hypoparathyroidism(n=5).Observed parameters encompassed alfacalcidol dosing,laboratory testing frequencies,total clinical visits,and renal outcomes/referrals.

Results: The mean daily dose of alfacalcidol was 1.71 ± 1.14 µg/day (median: 1.90, range: 0.10–3.50), corresponding to a weight-based mean of 0.052 ± 0.029 µg/kg/day (median: 0.053, range: 0.008–0.102). A median of two dose adjustments per patient-year was required, peaking at seven adjustments in a single patient. Maintaining physiological stability necessitated high-frequency monitoring, with a median of three biochemical evaluations per patient-year. Adverse events occurred in 28.5% of the cohort (n=4),including hypocalcaemic crises requiring emergency intervention. While non-adherence was a factor in two cases, the remainder were attributed to inherent metabolic volatility. Baseline nephrocalcinosis was prevalent (28.5%) but remained stable under regular monitoring and tight dose adjustments. The healthcare burden was substantial, with a median of two unplanned nursing and two medical consultations per patient-year, alongside a median of three scheduled formal visits. Notably, one high-complexity toddler required 77 unplanned interactions (57 nursing, 20 medical) to avert acute hospitalisation.

Conclusion: Managing paediatric rare hypocalcaemia with alfacalcidol is characterised by an exceptionally narrow therapeutic index where stability is a dynamic achievement rather than a static state. The high rate of unscheduled clinical interactions highlights a significant hidden burden on healthcare systems. These data argue for a responsive, multidisciplinary care model and underscore the urgent need for more stable therapeutic alternatives to optimise long-term endocrine and renal outcomes.

Keywords: Alfacalcidol, Rare Hypocalcaemia, Therapeutic Index, Healthcare Utilisation, Nephrocalcinosis.

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EVALUATION OF ENDOCRINOLOGICAL INVOLVEMENT AND METABOLIC STATUS IN CHILDREN WITH SULPHUR-BEARING AMINO-ACID METABOLISM DISORDER

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Aim: Bu çalışmanın amacı, sülfürlü amino asit (SAA) metabolizması bozukluğu tanısıyla izlenen pediatrik hastalarda, kronik hastalık sürecinin ve uygulanan spesifik tedavilerin büyüme parametreleri ile metabolik ve endokrinolojik sistemler üzerindeki olası etkilerini ileriye dönük olarak değerlendirmektir

Material & Method: Bu çalışma, Şubat 2015 ile Haziran 2021 tarihleri arasında pediatrik metabolizma polikliniğinde sülfürlü amino asit (SAA) metabolizması bozukluğu tanısıyla takip edilen, yaşları 0-18 arasında değişen 18 hastanın (13 erkek, 5 kız) verilerinin retrospektif olarak incelenmesiyle gerçekleştirilmiştir.

Results: Çalışmaya dahil edilen 18 olgunun (yaş ortalaması 8,78 ± 3,19 yıl) boy ortalaması 0,35 ± 1,2 SDS ve ağırlık ortalaması -0,01 ± 1,45 SDS ile normal aralıkta saptanmıştır. Kemik metabolizması incelendiğinde; olguların %61,1'inde (n=11) vitamin D eksikliği (< 15 µg/l) ve buna bağlı olarak 17 hastada paratiroid hormon (PTH) yüksekliği (ortalama 48,8 ± 20,2 pg/ml) tespit edilmiş, ancak kemik mineral yoğunluğu tüm hastalarda normal bulunmuştur. Glukoz metabolizması (HbA1c: %5,3 ± 0,18), lipit profili, tiroid fonksiyon testleri ve adrenal aks değerlendirmeleri (kortizol, ACTH, elektrolitler) genel olarak normal sınırlarda saptanmıştır. İki olguda Anti-TG yüksekliği, bir olguda ise geçici prolaktin yüksekliği dışında anlamlı bir hormonal patoloji izlenmemiştir. Altı hastada düşük saptanan bazal kortizol düzeylerine karşılık yapılan ACTH uyarı testinde tüm hastalarda normal pik kortizol yanıtı (> 18 µg/dl) alınmıştır.

Conclusion: Sülfürlü amino asit (SAA) metabolizması bozukluğu tanılı pediatrik hastalarda, erken tanı ve etkin tedavi yönetimi sayesinde büyüme parametrelerinin normal popülasyon standartlarında korunabildiği ve sistematik, özgün bir endokrinopati saptanmadığı görülmüştür. En belirgin laboratuvar bulgusu olarak vitamin D eksikliği ve buna sekonder gelişen paratiroid hormon yüksekliği saptanırken; kemik mineral yoğunluğu, glukoz metabolizması, tiroid ve adrenal fonksiyonların genel olarak normal sınırlarda olduğu belirlenmiştir. Sonuç olarak, SAA bozukluklarında rutin bir endokrinolojik tutulum izlenmese de, hastaların mikrobesin düzeyleri, büyüme-gelişme verileri ve pubertal bulgular açısından bireysel bazda düzenli takibi klinik önemini korumaktadır.

Keywords: Sülfürlü amino asitler, Endokrinopati, Büyüme ve gelişme, Vitamin D eksikliği

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NEONATAL CHOLESTASIS AND ELEVATED CHOLESTANOL: THE NEED FOR A NEW BIOMARKER IN CEREBROTENDINOUS XANTHOMATOSIS

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Aim: Cerebrotendinous Xanthomatosis(CTX) is a bile acid metabolism disorder characterized by findings such as neonatal cholestasis, infantile diarrhea, juvenile cataracts, xanthomas, epilepsy, ataxia, tremor, and dementia. Early diagnosis aims to prevent the neurodegenerative course, epilepsy and cataracts. Therefore, early manifestations such as cholestasis and/or chronic diarrhea, are being increasingly emphasized. We aimed to emphasize the low specificity of cholestanol for Cerebrotendinous Xanthomatosis in the neonatal/early infancy period.

Material & Method: Between October 2024 and March 2026, data from patients who were evaluated for cholestasis/prolonged jaundice and/or diarrhea were recorded. Non-parametric tests (Spearman correlation test and Mann–Whitney U test), in addition to descriptive statistics, were applied.

Results: There were six patients having elevated cholestanol levels and negative CYP27A1 genetic. In all cases, cholestanol levels normalized during follow-up. Five of these six patients had neonatal cholestasis, and one had prolonged jaundice accompanied by chronic diarrhea. A significant correlation was found between cholestanol levels and both direct bilirubin and AFP levels (Table 1). Direct bilirubin and AFP levels were also significantly correlated with other parameters, including length of neonatal intensive care unit stay, duration of mechanical ventilation, and duration of antibiotic therapy. No correlation was observed between duration of cholestasis and cholestanol levels.

Clinical and Laboratory Findings of Patients With Elevated Cholestanol

	Ortanca (min-max)	Ortalama +/- std
Doğum haftası	31,5 (27,6-40,3) hafta	32,75 +/- 5,38 hafta
Doğum ağırlığı	1770 (760-3925) gram	2165 +/- 1361 gram
TPN süresi	7,50 (0-12) gün	6,16 +/- 5,15 gün

Entübasyon gün sayısı	1,50 (0-11) gün	3,16 +/- 4,35 gün
Antibiyoterapi gün sayısı	23 (0-55) gün	24,16 +/- 22,85 gün
Kolestaz başlangıç yaşı (gün)	6,5 (1-38) gün	11,16 +/- 13,84 gün
Kolestaz süresi (gün)	110,50 (43-120) gün	96 +/- 32,05 gün
İlk kolestanol yaşı (gün)	54,00 (6-330) gün	91,66 +/- 119,65 gün
İlk kolestanol düzey	6,30 (5,57- 9,35)	6,67 +/- 1,34
İkinci kolestanol düzey	2,58 (2,24- 2,93)	2,58 +/- 0,48
İkinci kolestanol yaşı (gün)	317 (306-328) gün	317 +/- 15,55 gün
Maksimum direkt bilirubin yaşı (gün)	41 (6-110) gün	45 +/- 36,32 gün
Maksimum GGT yaşı(gün)	25 (6-102) gün	42,50 +/- 38,56 gün
Maksimum ferritin yaşı (gün)	36 (16-53) gün	33,50 +/- 14,23 gün
Maksimum AFP yaşı (gün)	52,50 (16-92) gün	51,83 +/- 33,49 gün
Maksimum D.Bilirubin	3,78 (0,56-6,56)	
Maksimum GGT	227 (176-877)	
Maksimum Ferritin	546 (514-1028)	
Maksimum AFP	47891 (2100-60500)	

Conclusion: Since cholestanol is a bile acid precursor, an increase in blood bile acids during cholestasis is expected to be accompanied by a corresponding increase in cholestanol levels. In cases of transient neonatal cholestasis, cholestanol is expected to normalize as cholestasis resolves, which was also observed in our patients. In five of the patinets, no additional pathology was identified in advanced genetic analyses, while the results of further genetic testing are still pending in one patient. All findings suggest that cholestanol is not a specific biomarker for Cerebrotendinous Xanthomatosis and may frequently lead to false-positive results in the neonatal and infantile period.

Keywords: cholestanol, cholestasis, cerebrotendineous ksantomatosis, infantil diarrhea, CYP27A1

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PUBERTAL DEVELOPMENT IN CHILDREN WITH FAMILIAL MEDITERRANEAN FEVER: A CROSS-SECTIONAL AUXOLOGICAL AND CLINICAL ASSESSMENT

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Aim: Familial Mediterranean Fever (FMF) is the most common monogenic autoinflammatory disease in childhood. Recurrent inflammatory attacks and persistent subclinical inflammation may affect growth and pubertal maturation; however, pubertal data in children with FMF remain limited. To evaluate auxological and pubertal characteristics in children with FMF and to investigate whether pubertal development is associated with clinical disease-related parameters.

Material & Method: This cross-sectional study included 75 children with FMF followed in a pediatric rheumatology clinic. Pubertal assessment was available in 62 patients. Pubertal development was evaluated using Tanner staging, axillary hair development, pubarche, thelarche in girls, menarche status and age, testicular volume in boys, penile length, and overall Tanner classification. Auxological parameters included height SDS, weight SDS, body mass index (BMI), BMI SDS, target height, and target height SDS. Disease-related variables included disease duration, annual attack frequency, and International Severity Score for FMF (ISSF). Descriptive and comparative analyses were performed.

Results: Among 62 patients with available Tanner staging, 32 were girls and 30 were boys. Tanner stage 1 was observed in 27 patients (43.5%), stage 2 in 5 (8.0%), stage 3 in 5 (8.0%), stage 4 in 3 (4.8%), and stage 5 in 22 (35.4%). The sex-specific distribution of Tanner stages is presented in Table 1. Axillary hair development was present in 45.2% of evaluated patients, while menarche was present in 50.0% of girls with available data. Mean age increased progressively across Tanner stages. No clinically evident precocious or delayed puberty was identified. Pubertal stage was not significantly associated with ISSF score or annual attack frequency, whereas longer disease duration was associated with increased disease severity.

Table 1. Distribution of Tanner Stages According to Sex

Tanner Stage	Girls (n=32)	Boys (n=30)	Total (n=62)
Stage 1	12 (%37,5)	15 (%50)	27 (%43,5)
Stage 2	1 (%3,1)	4 (%13,3)	5 (%8)

Stage 3	1 (%3,1)	4 (%13,3)	5 (%8)
Stage 4	2 (%6,3)	1 (%3,3)	3 (%4,8)
Stage 5	16 (%50)	6 (%20)	22 (%35,4)

Conclusion: Children with FMF showed heterogeneous pubertal distribution, predominantly clustering at Tanner stages 1 and 5. No overt pubertal disorder was detected. Larger prospective studies are needed to clarify the impact of chronic inflammation on pubertal maturation in FMF.

Keywords: Familial Mediterranean fever, pediatric rheumatology, puberty, Tanner stage

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HEALTHY VITAMIN D IN CHILDREN WITH THYROID FUNCTION BETWEEN THEM RELATIONSHIP

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Aim: Vitamin D deficiency is a major health problem worldwide. Vitamin D plays an important role in calcium and phosphorus metabolism and in the immune system. Its receptors are also found in bone, intestine, kidney, immune system, muscles, skin, endocrine system, and liver. Studies have shown that individuals with autoimmune thyroid diseases, in particular, have lower vitamin D levels compared to healthy individuals. This study was conducted in healthy children; It aimed to investigate the relationship between vitamin D, thyroid hormones and liver enzymes.

Material & Method: The study evaluated 100 children aged 4-16 years. Serum 25(OH)D3 levels ≤ 20 ng/mL and ≥30 ng/mL were considered as vitamin D deficiency and sufficiency, respectively. Patients with 25(OH)D3 deficiency and sufficiency were compared in terms of serum TSH, FT3, FT4, glucose, ALT, AST, vitamin B12, and folic acid levels.

Results: The mean age of the group was 8.95 years. There was no difference in terms of gender and age. In the vitamin D deficiency group, FT4 levels were lower (1.16 vs. 1.39 (ng/dl), p=0.001), while TSH was higher (3.87 vs. 2.67 (uIU/ml), p=0.001). Additionally, AST (34.26 vs. 18.23 (U/L), p=0.0001) and ALT (19.25 vs. 11.34 (U/L), p=0.0001) were also higher. A positive correlation was found between vitamin D levels and FT3 and FT4 levels, while a negative correlation was found between age and TSH, AST, and ALT. None of our patients showed pathological values in thyroid function or liver enzymes.

Conclusion: Discussion: A significant association has been reported between Hashimoto's thyroiditis (HT) and vitamin D receptor gene polymorphisms. Some studies have shown that vitamin D deficiency affects HT and Graves' disease. Children with vitamin D deficiency need to be monitored more closely, especially in terms of thyroid hormones. Therefore, attention should be paid to both vitamin D prophylaxis and treatment of children with deficiency.

Keywords: Child, Vitamin D, thyroid hormones, liver enzymes.

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EFFECTS OF ORAL NUTRITIONAL SUPPORT ON PEDIATRIC GROWTH FALTERING

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Aim: Growth faltering is a common pediatric condition associated with adverse health outcomes. Oral enteral nutritional supplements (ONS) may improve growth by increasing energy and protein intake; however, evidence regarding their long-term efficacy in isolated growth faltering remains limited. The aim of this study To retrospectively evaluate the effects of oral enteral nutritional support on growth parameters in children with isolated growth faltering.

Material & Method: This retrospective single-center study included children aged 1 month to 18 years who presented to the pediatric gastroenterology outpatient clinic between January 2023 and May 2024 with isolated growth faltering and received ONS for at least 6 months. Patients with chronic systemic, metabolic, genetic, developmental, cardiac, or malabsorptive disorders were excluded. Weight, height, body mass index (BMI), weight-for-age SDS, height-for-age SDS, and BMI SDS were recorded at baseline, 3 months, and 6 months. Statistical analyses were performed using repeated-measures and comparative tests.

Results: A total of 84 patients were included (53.6% female), with the distribution across age groups shown in Table 1. The distribution of baseline weight SDS categories is presented in Table 2. Mean baseline weightSDS, height SDS, and BMI SDS were -2.85 +/- 0.76, -1.88 +/- 1.01, and -2.60 +/- 0.97, respectively.Significant improvement was observed during follow-up, particularly in weight SDS and BMI SDS. At 6 months, mean weight SDS improved to -2.37 +/- 0.79 and BMI SDS to -1.78 +/- 1.05. Weight SDS and BMI-related measurements showed significant improvement over time ($p < 0.001$). Changes in growth parameters over time according to age groups are illustrated in Figures 1-3. Although height SDS increased slightly, the change was not statistically significant. No significant differences were observed among age groups regarding treatment response. ONS was generally well tolerated.

Figure 1.

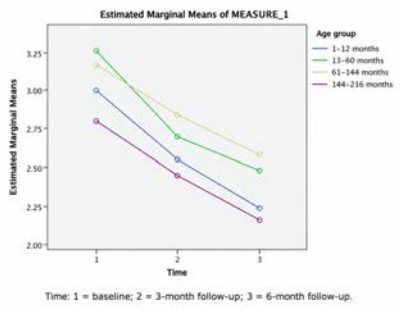


Figure 2.

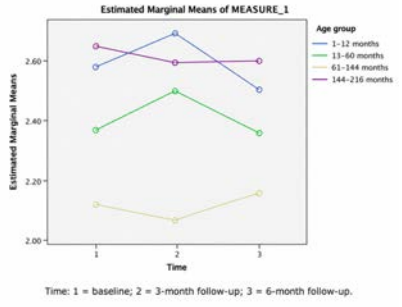


Figure 3.

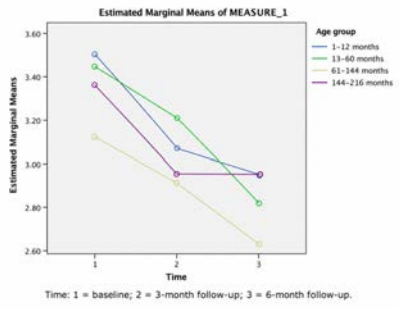


Table 1. Distribution of patients according to age groups

Age Group	**Number Of Patients(n)**	**Percentage(%)**
1-12 months	16	19.04

13-60 months	27	32.14
61-144 months	24	28.57
144-216 months	17	20.24
Total	84	100

Table 2. Baseline Weight SDS Distribution of the Study Population

Weight SDS Category	**Number of Patients (n)**	**Percentage(%)**
Weight SDS > -1	2	2.38
Weight SDS -2 to -1	14	16.67
Weight SDS -3 to -2	42	50.00
Weight SDS < -3	26	30.95
Total	84	100

Conclusion: Oral enteral nutritional support provides early and significant improvement in weight and BMI in children with isolated growth faltering, regardless of age. Longer follow-up may be required to better evaluate its effect on linear growth.

Keywords: Growth faltering, Oral nutritional supplements, Pediatric nutrition, Catch-up growth, Anthropometric measurements

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ETHICAL SENSITIVITY, QUALITY OF CARE AND ATRAUMATIC ATTITUDE IN PEDIATRIC PALLIATIVE NURSES

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Aim: This study aimed to examine the relationships among ethical sensitivity, nursing care quality, and atraumatic care attitudes of nurses working in pediatric palliative care units, and to identify factors influencing care quality.

Material & Method: This descriptive, cross-sectional study was conducted between December 2025 and March 2026 in pediatric palliative care units of a city hospital. Of 156 eligible nurses, 137 (87.8%) participated. Data were collected using a Personal Information Form, the Palliative Care Quality Scale for Nurses, the Scale for Evaluating Nurses' Approaches to Ethical Issues, and the Pediatric Atraumatic Care Attitude Scale (PACAS). Spearman correlation and multiple linear regression analyses were performed.

Results: The mean age was 36.00 ± 5.91 years. Mean scores for ethical sensitivity, palliative care quality, and atraumatic care attitudes were 94.20 ± 11.94, 76.48 ± 11.85, and 128.21 ± 15.59, respectively. Ethical sensitivity was positively and moderately correlated with both palliative care quality ($r = 0.468$; $p < 0.01$) and atraumatic care attitudes ($r = 0.488$; $p < 0.01$). A significant positive correlation was also found between care quality and atraumatic care attitudes ($r = 0.420$; $p < 0.01$). Regression analysis revealed that the professional approach subscale of ethical sensitivity was the only significant predictor of care quality ($\beta = 0.452$; $p < 0.001$), while the avoidant ($\beta = 0.141$; $p = 0.196$) and unresponsive ($\beta = 0.011$; $p = 0.916$) subscales showed no significant effect.

Conclusion: Nurses with higher ethical sensitivity provided better quality and more atraumatic care in pediatric palliative settings. Notably, the professional ethical approach emerged as the strongest independent predictor of care quality, suggesting that ethical sensitivity is not merely a personal value but a core clinical competency that directly shapes care outcomes. Systematic integration of ethical sensitivity and atraumatic care content into pediatric palliative nursing education and continuous professional development programs is strongly recommended.

Keywords: Palliative Nursing, Pediatric Palliative Care, Ethical Sensitivity, Quality Of Nursing Care, Atraumatic Care Attitudes

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EFFECT OF LIDOCAINE-PRILOCAINE CREAM AND COLD APPLICATION ON CHEST TUBE REMOVAL IN CHILDREN

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Aim: This study investigated the effects of Lidocaine-Prilocaine cream (LPK) and cold application methods used before chest tube removal on children's pain, anxiety and vital signs (SpO_2, pulse/min).

Material & Method: The study was conducted in the pediatric cardiovascular surgery clinic of a state hospital in Istanbul between December 29, 2024, and July 7, 2025, using a parallel-group randomized controlled experimental design. The sample consisted of 66 children who met the inclusion criteria. Participants were assigned to two intervention groups and one control group using block randomization. The control group (n = 24) underwent chest tube removal according to routine practice. In the intervention groups, lidocaine–prilocaine cream (LPK) (n = 21) or cold application (n = 21) was applied prior to removal. Data were collected using the Descriptive Information Form, the Follow-up Form, the Wong-Baker Faces Pain Rating Scale (WBFPS), and the Child Fear Scale (CFS). Data analysis was performed using appropriate statistical tests with SPSS version 25.0. Ethical approval, institutional permissions, and written informed consent were obtained, and the protocol was registered.

Results: At 1 minute before the procedure (T2), 1 minute after the procedure (T3), and 5 minutes after the procedure (T4), the pain levels in the LPK and cold application groups were significantly lower than those in the control group ($p < 0.05$). At T3 and T4, the anxiety levels in the intervention groups were also significantly lower compared to the control group ($p < 0.05$). There was no significant difference in mean pain and anxiety scores between the LPK and cold application groups ($p > 0.05$).

Conclusion: It was determined that the use of lidocaine–prilocaine cream application and cold application methods prior to chest tube removal, a painful procedure in children, are effective in reducing pain and anxiety levels. It is recommended that these methods be used before chest tube removal.

Keywords: Pain, Anxiety, Child, Chest tube removal

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MEDICATION ADMINISTRATION TRAINING ENHANCES KNOWLEDGE AND COMPETENCE IN PEDIATRIC RHEUMATOLOGY

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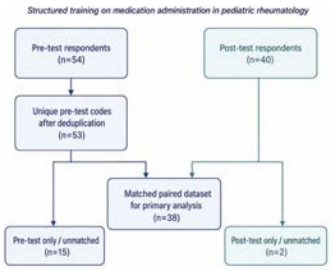
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Aim: To evaluate the effect of a structured educational session on self-reported knowledge and self-perceived clinical competence regarding medication administration methods in pediatric rheumatology among pediatric rheumatology fellows, specialists, and faculty members.

Material & Method: This pre-test/post-test educational study assessed a structured training session covering oral, subcutaneous, and intravenous medication administration in pediatric rheumatology. Participants completed an anonymous pre-test before the session and a post-test immediately afterward using a self-generated code for matching. The questionnaire included baseline professional characteristics, 8 Likert-type items assessing self-reported knowledge, and 7 Likert-type items assessing self-perceived competence (1–5 points/item). Total knowledge scores ranged from 8 to 40, competence scores from 7 to 35, and combined scores from 15 to 75. Paired analyses were performed for participants with matched pre- and post-test responses. Wilcoxon signed-rank test was used for paired comparisons, effect sizes were reported as r, and item-level analyses were adjusted using the Holm method.

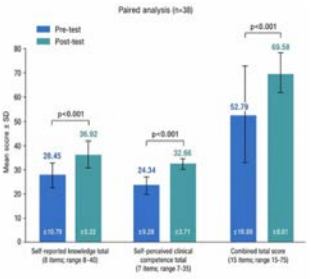
Results: A total of 54 pre-test and 40 post-test forms were received; 38 participants were matched and included in the primary paired analysis after deduplication of one repeated pre-test code (Figure 1). Most participants were pediatric rheumatology fellows (55.3%), and 73.7% had not previously received structured training on medication administration methods (Table 1). Self-reported knowledge total score increased from 28.45±10.79 to 36.92±5.22 ($p < 0.001$; $r=0.680$), while self-perceived clinical competence total score increased from 24.34±9.28 to 32.66±3.71 ($p < 0.001$; $r=0.726$). The combined total score also improved from 52.79±19.89 to 69.58±8.01 ($p < 0.001$; $r=0.744$) (Figure 2; Table 2). All 15 individual items improved significantly after Holm correction, with the largest gains observed in storage conditions, pre-administration checks, post-injection monitoring, and local reaction management (Figure 3; Table 3).

Figure 1. Participant flow of the study



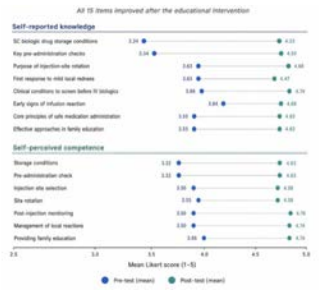
Fifty-four pre-test and 40 post-test forms were received. After deduplication of one repeated pre-test code, 38 participants were matched by self-generated code and included in the paired primary analysis. Fifteen pre-test responses and 2 post-test responses remained unmatched.

Figure 2. Primary outcome improvement after training



In the paired cohort (n=38), the structured educational session was associated with significant improvement in self-reported knowledge, self-perceived clinical competence, and combined total score. All primary comparisons were significant on Wilcoxon signed-rank testing (p<0.001).

Figure 3. Item-level improvement across domains



All 15 individual items improved after the educational intervention and remained significant after Holm correction. The largest gains were observed in storage conditions, pre-administration checks, post-injection monitoring, and management of local reactions.

Table 1. Baseline characteristics of the matched cohort (n=38)

Variable	**Category**	**n**	**%**
Role	Fellow	21	55.3
	Faculty member	7	18.4
	Specialist	5	13.2
	Other or unspecified	5	13.2
Prior structured training	No	28	73.7
	Yes	10	26.3
SC administration experience	Yes	23	60.5
	No	15	39.5
IV biologic administration involvement	No	20	52.6
	Yes	18	47.4
Rheumatology nurse in clinic	No	20	52.6
	Yes	18	47.4
Patient education provided	Yes	22	57.9
	Partly	11	28.9

	No	4	10.5
	Unknown	1	2.6
Written medication protocol	Yes	14	36.8
	No	11	28.9
	Unknown	8	21.1
	Partly	5	13.2

Most participants were fellows, and nearly three-quarters had not previously received structured training on medication administration methods.

Table 2. Primary changes in self-reported knowledge and clinical competence

Outcome	**Pre-test mean +/- SD**	**Post-test mean +/- SD**	**Mean change (95% CI)**	**p**	**Effect size r**
Self-reported knowledge total (8 items; range 8-40)	28.45 +/- 10.79	36.92 +/- 5.22	8.47 (5.08 to 12.05)	<0.001	0.680
Self-perceived clinical competence total (7 items; range 7-35)	24.34 +/- 9.28	32.66 +/- 3.71	8.32 (5.16 to 11.63)	<0.001	0.726
Combined total score (15 items; range 15-75)	52.79 +/- 19.89	69.58 +/- 8.01	16.79 (10.32 to 23.58)	<0.001	0.744
Note: Wilcoxon signed-rank test was used for paired comparisons.					

The educational intervention was associated with statistically significant and large improvements in all three paired outcome measures in the matched cohort (n=38).

Table 3. Item-level improvement in knowledge and competence domains

Domain	Item	Pre mean	Post mean	Mean change	Holm-adjusted p
Knowledge					
	SC biologic drug storage conditions	3.24	4.53	1.29	<0.001
	Key pre-administration checks	3.34	4.55	1.21	<0.001
	Purpose of injection-site rotation	3.63	4.68	1.05	0.002
	First response to mild local redness	3.63	4.47	0.84	0.005
	Clinical conditions to screen before IV biologics	3.66	4.74	1.08	0.003
	Early signs of infusion reaction	3.84	4.68	0.84	0.008
	Core principles of safe medication administration	3.55	4.63	1.08	0.002
	Effective approaches in family education	3.55	4.63	1.08	0.001
Competence					
	Storage conditions	3.32	4.63	1.32	<0.001
	Pre-administration check	3.32	4.63	1.32	<0.001

	Injection site selection	3.50	4.58	1.08	0.003
	Site rotation	3.55	4.58	1.03	
	Post-injection monitoring	3.50	4.76	1.26	<0.001
	Management of local reactions	3.50	4.74	1.24	0.002
	Providing family education	3.66	4.74	1.08	0.002
Note: All 15 items remained significant after Holm correction.					

All 15 items remained significant after Holm correction in the paired cohort (n=38), with the strongest gains in storage conditions, pre-administration checks, post-injection monitoring, and local reaction management.

Conclusion: A structured medication administration training session was associated with marked short-term improvement in self-reported knowledge and self-perceived clinical competence in pediatric rheumatology. Such focused educational interventions may help standardize medication-related practices and strengthen safe clinical care.

Keywords: Pediatric rheumatology, Medication administration, Medical education, Clinical competence, Pre-test post-test study

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HEALTH BEHAVIOR PATTERNS RELATED TO GALACTAGOGUE USE AMONG BREASTFEEDING MOTHERS OF INFANTS AGED 0-6 MONTHS: A QUALITATIVE STUDY IN TÜRKIYE

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Aim: This study aimed to examine in depth the experiences, motivations, decision-making processes, and perceived effects of mothers using galactagogues during the first sixmonths of breastfeeding.

Material & Method: The research was conducted using a qualitative design based on adescriptive phenomenology approach. Participants were recruited through purposive andsnowball sampling methods. Interviews were audio-recorded, transcribed verbatim usingTranskriptor software, and analyzed with MAXQDA 24 according to Braun and Clarke'sthematic analysis approach. The study followed the COREQ checklist, and themes werereviewed by expert academics.

Results: Thematic analysis revealed three main themes: motivations for galactagogue use,usage process and decision-making dynamics, and perceived effects and psychosocialreflections. Mothers mainly reported using galactagogues due to perceived insufficient milksupply and the aim of maintaining exclusive breastfeeding during the first six months. Whilemany participants perceived an increase in milk production, others emphasized psychologicalcomfort, increased self-confidence, and enhanced breastfeeding motivation. Adverse effectswere limited, although some mothers reported issues such as hyperlactation.

Conclusion: Galactagogue use is not only a physiological attempt to increase milk productionbut also a psychosocial strategy for managing uncertainties during breastfeeding. The findingsemphasize the importance of considering individual needs and emotional dimensions inbreastfeeding counseling.

Keywords: galactagogues, maternal behavior, breastfeeding, lactation, qualitative research

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THE EFFECTIVENESS OF NURSING INTERVENTIONS FOR THE MANAGEMENT OF INFANTILE COLIC: A SYSTEMATIC REVIEW OF GRADUATE THESES

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Aim: This study aimed to examine the effectiveness of nursing interventions for the management of infantile colic in graduate theses available in the National Thesis Center database of the Council of Higher Education.

Material & Method: This systematic review was registered in PROSPERO (CRD42019093795) and conducted in accordance with PRISMA 2020 guidelines using the Cochrane Risk of Bias tool. Inclusion and exclusion criteria were defined based on the PICOS framework. A literature search was performed in the National Thesis Center database between February 7–17, 2026, using the keywords “infantile colic,” “baby colic,” “colic,” “nursing,” and “pediatrics.” The included theses were evaluated regarding author, publication year, department, thesis type, aim, study design, sample size, nursing interventions, measurement tools, and colic-related outcomes.

Results: A total of 48 graduate theses conducted between 2006 and 2026 were identified. Following title, abstract, and full-text screening, 7 theses that met the inclusion criteria were included in the review. Of these, 57.1% were doctoral theses, 57.1% were conducted in the Department of Pediatric Nursing, and 71.4% had a randomized controlled trial design. Among the nursing interventions, 40% involved massage, 20% involved white noise and maternal heartbeat sounds, and 36.8% used the Infantile Colic Scale. Massage, foot reflexology, acupressure, therapeutic touch, SPA applications, white noise, and maternal heartbeat sound interventions were found to be effective in reducing infantile colic symptoms in infants. White noise was found to be more effective than massage, and interventions combined with massage were more effective in reducing symptoms.

Conclusion: Nursing-led interventions are safe, feasible, and effective methods in the management of infantile colic. It is recommended that especially tactile interventions, such as massage, be integrated into clinical care protocols and that parents be educated on these practices.

Keywords: Infant, Infantıle Colic, Nursing Interventions, Systematic Review

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AROMATHERAPY IN PEDIATRIC SYMPTOM MANAGEMENT: A SYSTEMATIC REVIEW

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Aim: To evaluate the effects of aromatherapy and essential oil interventions on pain, anxiety, sleep quality, nausea, and vomiting in pediatric populations.

Material & Method: This systematic review was registered with PROSPERO (CRD420261431464) and conducted per PRISMA 2020 guidelines. A comprehensive search across seven databases (PubMed, CINAHL, Scopus, Google Scholar, Web of Science, Cochrane Library, and backward citation screening) identified RCTs, quasi-experimental studies, and clinical trials published in English or Turkish (2020–2026). Populations comprised children aged 0–18 years in dental, medical, surgical, oncology, or neonatal settings receiving inhalation, topical, or massage aromatherapy compared to standard care or placebos. Study quality was appraised via Cochrane RoB-2 and JBI tools; high heterogeneity necessitated a narrative synthesis.

Results: Twenty-seven studies met the inclusion criteria. Aromatherapy significantly alleviated symptom severity across various clinical settings:·Pain & Anxiety: Lavender and orange inhalation significantly reduced procedural pain and dental anxiety (VAS, Venham scores) across 20 trials.·Nausea & Vomiting: Peppermint and lemon inhalation markedly mitigated chemotherapy-induced nausea and vomiting (CINV) and enhanced quality of life in pediatric oncology.·Sleep Quality: Lavender inhalation notably improved sleep parameters in hospitalized and oncology patients.·Neonatal Care: Five studies demonstrated significant reductions in neonatal procedural pain (PIPP, NIPS) and crying duration with lavender inhalation. Reported adverse events were minimal. Primary limitations included methodological heterogeneity, small samples, and blinding challenges.

Conclusion: Aromatherapy (particularly lavender and peppermint inhalation) serves as a safe, cost-effective, non-pharmacological complementary approach for pediatric pain, dental anxiety, CINV, sleep disturbances, and neonatal pain. Standardized protocols and larger longitudinal pediatric RCTs are needed to guide clinical practice and nursing curricula.

Keywords: Essential Oils, Pediatric Nursing, Aromatherapy, Symptom Management, Systematic Review

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THE EFFECT OF NEWBORN SCREENING PROGRAMME TRAINING ON THE KNOWLEDGE AND ATTITUDES OF PREGNANT WOMEN

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Aim: This study was conducted in a pretest-posttest, experimental design to determine the effect of newborn screening programme training on the knowledge and attitudes of pregnant women.

Material & Method: The research was carried out in Beykoz State Hospital Pregnancy Outpatient Clinic of Beykoz State Hospital in Beykoz district of Istanbul between June and August 2025 with pregnant women with 36 weeks of gestation and above who were undecided about having newborn screening or refused to have screening. The research was applied in pretest posttest, experimental design. The study was carried out with 60 mothers, 30 in the intervention group and 30 in the control group. The intervention group received newborn screening programme training in addition to standard care. The research data were obtained with the Introductory Information Form and the Maternal Knowledge and Attitudes Scale about Newborn Screenings.

Results: After the newborn screening programme training, there was a significant increase in the level of knowledge about newborn screening tests in the intervention group; the total score of the Maternal Knowledge and Attitudes about Newborn Screenings Scale increased significantly in the intervention group ($p < 0.001$), while a decrease was observed in the control group. Examination of newborn screening practices showed that mothers in the intervention group had significantly higher rates of completing newborn screenings compared with the control group (93.3% vs. 43.3%, $p < 0.001$). Similar findings were observed for heel prick screening, hearing screening, vision screening, and hip dislocation screening, with screening rates consistently higher in the intervention group than in the control group (all $p < 0.001$).

Conclusion: The newborn screening programme training improved pregnant women's awareness, knowledge, and attitudes toward newborn screening. Therefore, integrating this training into routine prenatal care is recommended.

Keywords: Newborn screening, pregnancy education, attitude change

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FATHERS' INVOLVEMENT IN NEWBORN CARE AND ASSOCIATED FACTORS

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Aim: This study was conducted to examine fathers' experiences and practices regarding newborn care and to determine the sociodemographic factors affecting this process.

Material & Method: This descriptive and correlational cross-sectional study included 383 fathers who had a newborn infant. Data were collected using the "Father and Newborn Descriptive Information Form" and the "Fathers' Experiences and Practices Regarding Newborn Care Form." Descriptive statistics, reliability analysis, independent samples t-test, one-way analysis of variance, Bonferroni test, and Pearson correlation analysis were used. The significance level was accepted as $p < 0.05$.

Results: The mean total score of fathers' experiences and practices regarding newborn care was 100.45±11.01. The mean subscale scores were 28.71±3.41 for emotions related to the infant care process, 28.11±4.82 for level of involvement in care, 27.73±3.54 for thoughts related to care, and 15.90±2.46 for factors affecting care. Fathers' involvement in newborn care differed significantly according to occupation, employment status, income level, and spouse's educational level. Positive and significant correlations were found between the subscales and the total score.

Conclusion: Fathers' involvement in newborn care was high and was affected by some sociodemographic characteristics. Nurses and midwives are recommended to systematically include fathers in postnatal education, counseling, and newborn care processes.

Keywords: Father involvement, newborn care, paternal role, family-centered care, postnatal care.

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EEVALUATION OF THE EFFECT OF NUTRITIONAL STATUS ON CARDIOMETABOLIC RISK IN TURKISH ADOLESCENTS

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Aim: Cardiometabolic risk factors that emerge during adolescence may persist into adulthood and contribute to the early development of chronic diseases, making the evaluation of nutritional status during this period critically important. This study aimed to evaluate the effect of nutritional status on cardiometabolic risk among Turkish adolescents.

Material & Method: This study included adolescents aged 15-19 who participated in the Turkey Nutrition and Health Survey (TNHS) in 2010 (n = 596) and 2017 (n = 550) and who had biochemical findings and food record data. Participants' biochemical findings, including fasting glucose, HDL-cholesterol, LDL-cholesterol, total cholesterol, and triglycerides were evaluated, and dietary records were used to assess the intake of certain nutrients. Statistical analysis of the data was performed using the “SPSS v27” software package.

Results: In adolescents evaluated in TNHS 2017, intake of plant protein, animal protein, saturated fatty acids, cholesterol, and omega-6/omega-3 ratio was found to be statistically significantly higher compared to those evaluated in TNHS 2010 ($p < 0.05$) (Table 1). The 2010 data showed that each unit increase in monounsaturated fatty acid intake reduced cardiometabolic risk by 7.7% ($p < 0.05$) (Table 2). According to the 2017 data, each unit increase in animal protein intake increased cardiometabolic risk by 2.1%, while each unit increase in polyunsaturated fatty acid intake reduced cardiometabolic risk by 12.3% ($p < 0.05$) (Table 3).

Table1. Comparison of macronutrient intakes between TNHS 2010 and TNHS 2017

	2010 (n=596)	2017 (n=550)	
	Median (min-max)	Median (min-max)	p
Fiber (g)	18,9 (1,2-62,9)	19,4 (2,3-55,5)	0,188

Plant-based protein (g)	30 (3,2-96,5)	37,7 (3,4-129,7)	<0,001***
Animal Protein (g)	20,8 (0,1-142,6)	27,3 (1,2-158,5)	<0,001***
Saturated Fatty Acids (%)	10,3 (1,2-35,2)	11 (1,9-31,2)	0,011*
Monounsaturated Fatty Acids (%)	10,9 (1,2-35)	10,9 (1,1-25,2)	0,947
Polyunsaturated Fatty Acids (%)	8,3 (0,7-32,2)	8 (0,7-23,7)	0,338
Cholesterol (mg)	180,5 (1,4-1364,4)	214,9 (1,7-1191,2)	<0,001***
Omega-6 / Omega-3	12,4 (1,1-81,5)	14,2 (2,6-111,6)	<0,001***
U: Mann-Whitney U Test *p<0,05; ***p<0,001			

Table2. The effect of macronutrient intake on cardiometabolic risk status in individuals – TNHS 2010

				95% OR Confidence Interval	
Coefficient	OR	Wald	p	Lower Limit	Upper Limit
Fiber (g)	0,993	0,142	0,706	0,956	1,031
Plant-based protein (g)	1,000	0,001	0,976	0,975	1,026
Animal Protein (g)	1,013	3,729	0,053	1,000	1,026
Saturated Fatty Acids (%)	1,016	0,270	0,604	0,958	1,077

Monounsaturated Fatty Acids (%)	0,923	4,943	0,026*	0,859	0,990
Polyunsaturated Fatty Acids (%)	1,026	0,517	0,472	0,957	1,100
Cholesterol (mg)	0,998	2,906	0,088	0,997	1,000
Omega-6 / Omega-3	0,988	0,612	0,434	0,959	1,018
Fixed Term	0,521	1,872	0,171		
OR: Odds Ratio *p<0,05					

Table 3. The effect of macronutrient intake on cardiometabolic risk status in individuals –TNHS 2017

				95% OR Confidence Interval	
Coefficient	OR	Wald	p	Lower Limit	Upper Limit
Fiber (g)	0,982	0,254	0,615	0,917	1,053
Plant-based protein (g)	0,985	0,520	0,471	0,945	1,027
Animal Protein (g)	1,021	4,708	0,030*	1,002	1,041
Saturated Fatty Acids (%)	1,020	0,135	0,713	0,919	1,131
Monounsaturated Fatty Acids (%)	0,977	0,138	0,710	0,866	1,103
Polyunsaturated Fatty Acids (%)	0,877	4,288	0,038*	0,774	0,993
Cholesterol (mg)	0,998	1,429	0,232	0,995	1,001

Omega-6 / Omega-3	1,015	0,872	0,350	0,984	1,047
Fixed Term	0,373	1,223	0,269		
OR: Odds Ratio *p<0,05					

Conclusion: These findings suggest that changes in dietary lipid and protein composition over time may play a significant role in the development of cardiometabolic risk among Turkish adolescents.

Keywords: monounsaturated fatty acid, polyunsaturated fatty acid, animal protein, cardiometabolic risk, adolescent

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THYROID HORMONE SENSITIVITY INDICES IN CEREBRAL PALSY AND ASSOCIATED FACTORS

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Aim: Children with cerebral palsy (CP) may show altered thyroid function tests due to nutritional problems, severe motor disability, epilepsy, and long-term antiseizure medication use. In daily practice, it is difficult to determine whether such changes reflect thyroid axis dysfunction or the child's clinical condition and treatment. This study evaluated central thyroid hormone sensitivity indices calculated from thyroid-stimulating hormone (TSH) and free thyroxine (FT4) levels in children with CP, and examined whether they differed by motor severity, epilepsy treatment, and malnutrition.

Material & Method: Medical records of 31 children followed with CP were retrospectively reviewed.Children with uncertain CP diagnosis (n=18) and those with known thyroid disease or thyroid medication use (n=2) were excluded.The thyrotroph thyroxine resistance index (TT4RI), thyrotropin index (TSHI), and standardized TSHI (sTSHI) were calculated using TSH and FT4 values. Patients were grouped by Gross Motor Function Classification System (GMFCS) level, epilepsy/antiseizure treatment characteristics, and malnutrition status.

Results: The study included 31 children: 17 girls and 14 boys, with a mean age of 8.8±4.9 years. Twenty patients had severe motor impairment, 20 had epilepsy, and 9 had malnutrition. Thyroid sensitivity indices were similar when patients were compared by motor severity, epilepsy status, and malnutrition. In contrast, FT4 levels were lower in children receiving antiseizure polytherapy and in those treated with valproic acid (p=0.004 and p=0.013, respectively). These treatment-related differences in FT4 were not reflected in TT4RI, TSHI, or sTSHI values.

Conclusion: Central thyroid hormone sensitivity indices showed no clear variation across the clinical subgroups studied. Although FT4 levels were lower in patients receiving antiseizure polytherapy or valproic acid, this was not accompanied by parallel changes in TT4RI, TSHI, or sTSHI. These findings suggest low FT4 values in children with CP may need to be interpreted in the context of antiseizure treatment and disease burden, rather than as direct evidence of altered central thyroid feedback.

Keywords: Cerebral palsy; Thyroid hormone sensitivity indices; Free thyroxine; Antiseizure medication

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METABOLIC DIFFERENCES ACCORDING TO PUBERTAL STAGE IN OBESE CHILDREN: ARE SEX AND AGE CONFOUNDING FACTORS?

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Aim: We aimed to compare metabolic parameters between early pubertal (Tanner 2-3) and late pubertal (Tanner 4-5) obese children, adjusting for sex and age.

Material & Method: This retrospective cross-sectional study included 79 randomly selected obese children who presented to the author's pediatric endocrinology outpatient clinic within the last six months. Patients were grouped as early pubertal (Tanner 2-3, n=39) and late pubertal (Tanner 4-5, n=40) (Table 1). Anthropometric data, fasting glucose, insulin, glycated hemoglobin (HbA1c), homeostasis model assessment of insulin resistance (HOMA-IR), lipid profile, and the rates of hypertension, non-alcoholic fatty liver disease (NAFLD), and dyslipidemia were compared. Insulin resistance was defined using sex-specific Kurtoğlu criteria (boys ≥5.22, girls ≥3.82). Analysis of covariance (ANCOVA) and logistic regression were used for sex- and age-adjusted analyses. Additionally, a sex × pubertal stage interaction term was added to the models to determine whether the metabolic effect of pubertal stage differed between boys and girls.

Results: In unadjusted analysis, the early pubertal group had higher fasting glucose (p=0.013), insulin (p=0.020), HbA1c (p=0.006), and HOMA-IR (p=0.009) (Table 2). Insulin resistance prevalence (Kurtoğlu criteria) was similar between groups (71.8% vs 67.5%, p=0.808). After adjustment for sex and age (ANCOVA), these differences were no longer significant (all p > 0.05); however, the late pubertal group showed higher triglyceride levels (+41.5 mg/dL, p=0.028) and an approximately 6-fold increased NAFLD risk (OR=6.17, p=0.013) (Table 3). The metabolic effect of pubertal stage did not differ between boys and girls (interaction term not significant for any variable, all p > 0.05).

Table 1. Demographic and clinical characteristics

Variable	Early Pubertal (n=39)	Late Pubertal (n=40)	p
Age (years)	12.0 (11.2-13.0)	13.0 (12.0-14.0)	<0.001*
Sex (Male), n(%)	24 (61.5)	8 (20.0)	<0.001*

BMI (kg/m2)	30.1 (28.0-32.2)	33.9 (29.4-36.0)	0.035*
BMI SDS	2.44 +/- 0.73	2.93 +/- 0.82	0.007*
Height SDS	0.49 +/- 0.99	0.19 +/- 1.09	0.201
Weight SDS	2.40 +/- 0.94	3.29 +/- 1.43	0.002*
Hypertension, n(%)	6 (15.4)	4 (10.0)	0.518
NAFLD, n(%)	21 (53.8)	24 (60.0)	0.745
Dyslipidemia, n(%)	23 (59.0)	22 (55.0)	0.897

Table 2. Metabolic parameters

Variable	**Early Pubertal (n=39)**	**Late Pubertal (n=40)**	**p**
Fasting glucose (mg/dL)	93.5 +/- 7.9	89.5 +/- 6.1	0.013*
Insulin (uIU/mL)	32.2 +/- 13.7	25.3 +/- 12.1	0.020*
HbA1c (%)	5.64 +/- 0.33	5.42 +/- 0.35	0.006*
HOMA-IR	7.51 +/- 3.44	5.61 +/- 2.82	0.009*
Total Cholesterol (mg/dL)	147.7 +/- 24.5	153.8 +/- 33.7	0.359
LDL (mg/dL)	91.0 (73-105)	94.0 (74-109)	0.787
Triglycerides (mg/dL)	116 (70-154)	113.5 (80.5-158)	0.546
HDL (mg/dL)	41.0 (37.5-45.0)	41.0 (35.8-49.8)	0.864

Table 3. Sex- and age-adjusted ANCOVA analysis

Variable	**Unadjusted p**	**Adjusted p**	**Diff / OR**	**Result**
Fasting glucose	0.013	0.070	-4.2 mg/dL	NS
Insulin	0.020	0.502	-2.8 uIU/mL	NS

HbA1c	0.006	0.228	-0.13%	NS
HOMA-IR	0.009	0.343	-0.97	NS
Triglycerides	0.546	0.028*	+41.5 mg/dL	Significant
NAFLD	0.745	0.013*	OR=6.17	Significant

Conclusion: The insulin resistance difference between early and late pubertal obese children is explained by sex distribution imbalance. After adjustment, late pubertal obesity is independently linked to higher triglyceride levels and increased NAFLD risk. The metabolic effect of pubertal stage is similar in both sexes.

Keywords: Childhood obesity, Tanner stage, insulin resistance, non-alcoholic fatty liver disease

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MICRONUTRIENT STATUS AND INSULIN RESISTANCE IN OBESE ADOLESCENTS: A PROSPECTIVE CROSS-SECTIONAL STUDY

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Aim: To evaluate serum vitamin D, zinc, iron and magnesium levels in obese adolescents; to examine the relationship of these parameters with insulin resistance (HOMA-IR).

Material & Method: In this prospective cross-sectional study included 90 adolescents aged 10–18 years. 60 obese patients with body mass index (BMI) > 95th percentile were divided into two groups according to HOMA-IR value: insulin resistance (IDV, n=30; HOMA-IR > 3.16) and no insulin resistance (IDD, n=30; HOMA-IR ≤ 3,16). 30 healthy individuals with a BMI in the 5th–85th percentile range were included as the control group. Serum vitamin D, zinc, iron, ferritin, magnesium, B12, HbA1c and fasting insulin were measured. Pearson/Spearman correlation, Kruskal-Wallis, ANOVA and multiple linear regression methods were used for statistical analysis.

Results: Adolescents with obesity and insulin resistance exhibited significantly higher HOMA-IR, fasting insulin, and HbA1c levels compared with healthy controls (all $p < 0.001$). Serum iron and ferritin levels were significantly lower in both obese groups than in controls ($p < 0.05$). Magnesium levels were lowest in the IR+ group and demonstrated a significant inverse correlation with HOMA-IR ($r=-0.272$, $p=0.035$). Vitamin B12 concentrations were significantly lower in both obese groups than in controls ($p < 0.001$). No significant differences were observed among groups regarding vitamin D or zinc levels ($p > 0.05$). In multiple linear regression analysis, HbA1c, BMI, and fasting glucose emerged as independent predictors of HOMA-IR ($R^2=0.514$).

Conclusion: Obese adolescents exhibited significantly lower iron, ferritin, and vitamin B12 levels, while reduced magnesium concentrations were associated with insulin resistance. These findings suggest that micronutrient deficiencies should be considered as part of the metabolic risk assessment in adolescent obesity. The observed association between magnesium and insulin resistance further indicates that magnesium may serve as a potential biomarker for identifying obesity-related metabolic dysfunction in adolescents.

Keywords: Obesity, adolescent, insulin resistance, vitamin D, iron deficiency

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NOT ALL MUTATIONS ARE EQUAL: DISTINCT CLINICAL MANIFESTATIONS ACROSS FMF GENOTYPES IN AZERBAIJANI PEDIATRIC PATIENTS

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Aim: Familial Mediterranean Fever (FMF) is an autosomal recessive autoinflammatory disease caused by MEFV gene mutations. The relationship between clinical severity and MEFV genotype across different zygosity states of the M694V mutation remains an important area of investigation. This study compared the clinical phenotype and treatment response of pediatric FMF patients from Azerbaijan across three genotype groups: M694V homozygous, M694V heterozygous, and other exon mutation carriers.

Material & Method: A total of 350 children followed at pediatric centers in Azerbaijan (November 2023–2025) were retrospectively analyzed and classified into three groups: M694V homozygous (n=59), M694V heterozygous/compound heterozygous (n=115), and other exon mutations (n=176). Inclusion criteria required age ≤18 years, FMF diagnosis per Yalcinkaya-Ozen/Tel-Hashomer or Eurofever/PRINTO criteria, and at least 6 months of follow-up. Symptom profiles, attack duration, and colchicine response were compared between groups.

Results: The cohort comprised 350 patients (60.45% boys), with median age at symptom onset and diagnosis of 4 and 7 years, respectively. M694V homozygous patients showed the most severe phenotype: fever (86.4%), abdominal pain (78.0%), arthritis (25.4%), and arthralgia (27.1%). In the heterozygous group, fever and abdominal pain were observed in 77.4% and 67.8%, with arthritis dropping to 10.4%. Patients with other exon mutations had a milder overall phenotype, though arthralgia (19.9%) and arthritis (18.2%) were comparatively frequent. Attack duration was predominantly 1–3 days across all groups. Colchicine response was excellent: 98.2%, 97.3%, and 96.9% in homozygous, heterozygous, and other exon mutation groups, respectively. No amyloidosis was detected in any group. The clinical features and treatment outcomes across the three MEFV genotype groups are summarized in Table 1.

Table 1. Clinical Features and Treatment Outcomes by MEFV Genotype Group in Pediatric FMF Patients

Feature	M694V Homozygous (n=59)	M694V Heterozygous (n=115)	Other Exon Mutations (n=176)
Fever	86.4%	77.4%	74.4%
Abdominal pain	78.0%	67.8%	62.5%
Arthritis	25.4%	10.4%	18.2%
Arthralgia	27.1%	14.8%	19.9%
Chest pain	5.1%	10.4%	4.0%
ELE	6.8%	1.7%	2.3%
Vomiting	10.2%	5.2%	8.0%
Attack duration (most common)	1–3 days	1–3 days	1–3 days
Colchicine response	98.2%	97.3%	96.9%
Amyloidosis	0%	0%	0%

Conclusion: M694V homozygous patients displayed the most severe clinical phenotype, with higher rates of fever, abdominal pain, and musculoskeletal involvement. Colchicine response was excellent across all genotype groups. These findings support the value of genotype-phenotype correlations in clinical decision-making and genetic counseling for pediatric FMF patients.

Keywords: Familial Mediterranean fever, genotype-phenotype correlation, phenotype

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CLINICAL, METABOLIC AND AUTOIMMUNE PROFILE IN NEW-ONSET TYPE 1 DIABETES

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Aim: To evaluate metabolic presentation and pancreatic, thyroid, and celiac autoimmunity profiles in children with new-onset type 1 diabetes mellitus.

Material & Method: This retrospective single-center study included children diagnosed with type 1 diabetes mellitus between June 2023 and May 2026. Age, sex, symptom duration, admission glucose, HbA1c, C-peptide, venous pH, bicarbonate, hospitalization duration, and autoantibody results were recorded. Patients were grouped by diabetic ketoacidosis (DKA) status and severity. Pancreatic autoantibodies included anti-GAD, anti-insulin antibody, and islet cell antibody, all obtained before insulin treatment. Thyroid and celiac autoimmunity were also evaluated.

Results: A total of 115 patients were included; 61 (53.0%) were male and median age was 9.0 years (IQR 5.0–13.0). Median symptom duration was 14 days (IQR 7–20), admission glucose 415 mg/dL (IQR 314–563.5), HbA1c 11.8% (IQR 10.4–12.9), and C-peptide 177.5 pmol/L (IQR 107.0–282.8). DKA was present in 71 patients (61.7%): mild in 16 (13.9%), moderate in 24 (20.9%), and severe in 31 (27.0%). Compared with patients without DKA, those with DKA had higher glucose (466.0 vs 329.5 mg/dL, p=0.002), lower C-peptide (126.5 vs 296.5 pmol/L, p < 0.001), and longer hospitalization (10.0 vs 7.0 days, p=0.003), whereas symptom duration and HbA1c were similar (Table 1). Anti-GAD, anti-insulin antibody, and islet cell antibody positivity rates were 93.0%, 8.6%, and 42.1%; multiple pancreatic autoantibody positivity was 37.4% and was not associated with DKA status or severity, or with associated thyroid/celiac autoimmunity (Table 2). Thyroid autoimmunity and celiac disease were detected in 12.2% and 7.8% respectively.

Table 1. Comparison of patients with and without diabetic ketoacidosis at diagnosis

Variable	No DKA n=44	DKA n=71	p
Symptom duration, days	14.0 (7.0–26.3)	10.0 (7.0–20.0)	0.324

Admission glucose, mg/dL	329.5 (271.3–468.8)	466.0 (363.0–581.0)	0.002
HbA1c, %	11.8 (10.0–13.0)	12.0 (10.6–12.9)	0.475
C-peptide, pmol/L	296.5 (212.3–463.7)	126.5 (86.4–183.8)	<0.001
Hospitalization, days	7.0 (6.8–10.0)	10.0 (8.0–12.0)	0.003
Multiple pancreatic autoantibody positivity	15/44 (34.1%)	28/71 (39.4%)	0.565
Thyroid autoimmunity	7/44 (15.9%)	7/71 (9.9%)	0.335
Anti-tTG IgA positivity	2/44 (4.5%)	7/71 (9.9%)	0.479

Data are presented as median (IQR) or n/N (%). DKA: diabetic ketoacidosis; IQR: interquartile range.

Table 2. Association Between Multiple Pancreatic Autoantibody Positivity and Associated Autoimmunity

Variable	**Multiple Ab (+) n=43**	**Multiple Ab (−) n=72**	**p**
Thyroid autoimmunity	5/43 (11.6%)	9/72 (12.5%)	1.000
Celiac disease	4/43 (9.3%)	5/72 (6.9%)	0.726
Thyroid autoimmunity or celiac disease	9/43 (20.9%)	14/72 (19.4%)	1.000

Data are presented as n/N (%). Multiple pancreatic autoantibody positivity was defined as positivity for two or more pancreatic autoantibodies. p values were calculated using Fisher's exact test.

Conclusion: DKA was common and frequently severe at diagnosis. Patients presenting with DKA had lower C-peptide levels and longer hospitalization; however, HbA1c, symptom duration, and autoimmunity profile were similar between groups. These findings emphasize early recognition and systematic autoimmune screening at diagnosis.

Keywords: Type 1 Diabetes Mellitus, Diabetic Ketoacidosis, Autoantibodies, Autoimmunity, Celiac Disease

OP - 136

PARTIAL 12P DUPLICATION AND KLINEFELTER SYNDROME: A DUAL GENETIC DIAGNOSIS

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Aim: This case demonstrates the rare co-occurrence of Klinefelter syndrome and partial 12p duplication arising from an unbalanced maternal insertion, and highlights the importance of comprehensive genetic evaluation in unexplained intellectual disability.

Case: A 10-year-old male was referred to the pediatric genetics clinic for intellectual disability. Physical examination revealed micropenis, dysmorphic facial features, and small testes. Motor milestones were delayed and he required special education. Conventional karyotyping identified 47,XXY with an additional chromosomal abnormality. Metaphase FISH and chromosomal microarray analysis subsequently revealed a 12p duplication due to an unbalanced maternal insertion. Family segregation studies were then performed.

Results: The patient's karyotype was 47,XXY,der(6)ins(6;12)(p23;p12p13)mat (Figure 1). Chromosomal microarray analysis identified an additional X chromosome and an approximately 7.07 Mb pathogenic copy-number gain in the 12p13.2-p12.3 region arr[GRCh38] X(1_156040895)x2,12p13.2p12.3(11507517_18573991)x3 (Figure 2). Metaphase FISH revealed three signals for the ETV6 locus in all metaphases, confirming insertion of 12p material into chromosome 6 (Figure 3). The mother carries a balanced insertion (46,XX,ins(6;12)(p23;p12p13)), confirmed by FISH, and is phenotypically normal. The father has a normal karyotype (46,XY). Both siblings carry the same balanced insertion without clinical manifestations. The duplicated region contains critical neurodevelopmental genes including GRIN2B, LRP6, and CDKN1B.

Figure 1: Karyotype: 47,XXY,der(6)ins(6;12)(p23;p12p13)

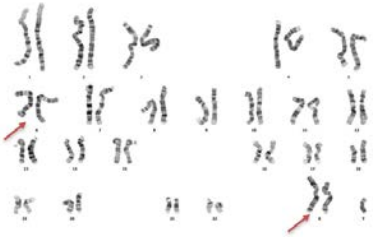


Figure 2: Chromosomal microarray: arr[GRCh38] X(1_156040895)x2,12p13.2p12.3(11,507,517_18,573,991)x3

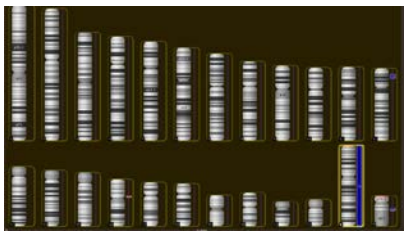
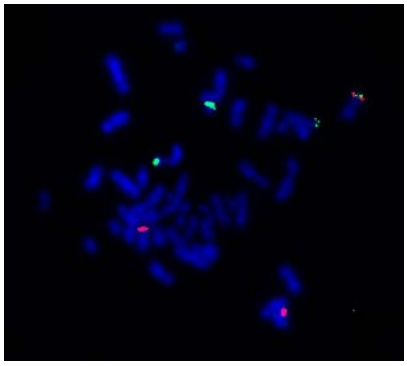


Figure 3: Metaphase FISH: Three signals for the ETV6 locus in all metaphases, confirming insertion of 12p material into chromosome 6



Conclusion: This case highlights a dual genetic diagnosis in which 12p duplication may contribute to the severe phenotype in a patient with Klinefelter syndrome. When unexplained intellectual disability is accompanied by dysmorphic features or other anomalies, comprehensive genetic investigation should be considered. Combined cytogenetic and molecular analyses with family segregation studies are important for accurate diagnosis and genetic counseling. The identification of a parental balanced insertion has implications for recurrence risk and prenatal diagnosis options.

Keywords: 12p duplication, karyotype, Klinefelter syndrome, intellectual disability, micropenis

OP - 137

PEDIATRIC SUCCINIC SEMIALDEHYDE DEHYDROGENASE DEFICIENCY: CLINICAL SPECTRUM AND TREATMENT RESPONSES

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[2]Bursa High Specialty Training and Research Hospital, University of Health Sciences
[3]Akdeniz University Faculty of Medicine
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Aim: The aim of this study is to evaluate the clinical and radiological heterogeneity in pediatric Succinic semialdehyde dehydrogenase (SSADH) deficiency and to assess variability in treatment responses among patients followed in different centers.

Case: Succinic semialdehyde dehydrogenase (SSADH) deficiency is a rare autosomal recessive disorder of GABA metabolism with highly variable neurological manifestations. We retrospectively evaluated 11 pediatric patients with genetically confirmed SSADH deficiency. Clinical features, metabolic findings, neuroimaging, and treatment responses were analyzed.

Results: The cohort demonstrated marked phenotypic heterogeneity. The most frequent clinical features were developmental delay (81.8%), epilepsy (63.6%), speech impairment (90.9%), autism spectrum features, and movement disorders including dystonia. Elevated urinary 4-hydroxybutyrate was detected in most patients. Neuroimaging commonly showed bilateral globus pallidus and dentate nucleus involvement; however, one patient demonstrated atypical caudate nucleus and putaminal involvement. Epilepsy response to antiseizure medications was variable, with partial benefit from vigabatrin in selected cases. One patient developed severe refractory dystonia with recurrent dystonic crises and significant functional impairment. In this case, combined NMDA receptor modulation using ketamine, dextromethorphan, and memantine resulted in marked and sustained clinical improvement. One patient had early mortality due to infection-related complications.

Conclusion: SSADH deficiency shows broad clinical and radiological variability. Our multicenter experience highlights the heterogeneity of phenotype and treatment response. NMDA receptor modulation may represent a promising therapeutic strategy for refractory movement disorders in selected patients, warranting further prospective studies.

Keywords: ALDH5A1 gene, Epilepsy, GABA metabolism disorders, Movement disorders, Succinic semialdehyde dehydrogenase deficiency

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SUCLG1-RELATED MITOCHONDRIAL DNA DEPLETION SNDROME TYPE 9

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Aim: Mitochondrial DNA depletion syndromes are clinically heterogeneous and often present during infancy with severe metabolic, neurological, and systemic involvement. SUCLG1-related mitochondrial DNA depletion syndrome type 9 is a rare autosomal recessive disorder associated with early-onset encephalomyopathy. This case aims to highlight the molecular and clinical findings of an infant diagnosed with SUCLG1-related mitochondrial DNA depletion syndrome.

Case: A one-year-old male patient was evaluated due to clinical findings suggestive of mitochondrial encephalomyopathy. The patient underwent detailed radiological, clinical and genetic assessment. Whole-exome sequencing was performed to identify the underlying molecular etiology.

Results: Whole-exome sequencing revealed a homozygous missense variant in the SUCLG1 gene, c.815A > C, resulting in the amino acid substitution p.Gln272Pro. The variant is located in exon 7 and has not been previously reported in the available literature. Although currently classified as a variant of uncertain significance, the patient's clinical presentation, inheritance pattern, and molecular findings were consistent with mitochondrial DNA depletion syndrome type 9. The findings support the possible clinical relevance of this SUCLG1 variant

Conclusion: This case expands the genotypic spectrum of SUCLG1-associated mitochondrial disorders and emphasizes the importance of whole-exome sequencing in infants with suspected mitochondrial disease. Early molecular diagnosis may contribute to accurate clinical classification, genetic counseling, and improved understanding of genotype–phenotype correlations. Further functional studies are required to clarify the pathogenic significance of this variant.

Keywords: Mitochondrial Encephalopathy, Mitochondrial Depletion Syndrome Type 9, SUCLG1, variant, Whole Exome Sequencing

OP - 139

DOUBLE-TROUBLE: CYSTIC FIBROSIS AND PALLISTER-HALL SYNDROME CLINICAL CASE

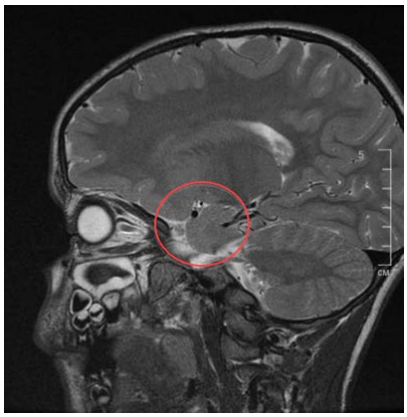
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Aim: Two or more rare diseases can complicate the diagnostic process.

Case: The boy, was born at full-term uneventful pregnancy by normal delivery. During the first 7 hours of life, according to increase respiratory failure the patient was transferred to a ventilator and stayed for 3 months. The malformation of the larynx, bronchial tree on the right, hypoplasia of the right kidney, both-hands oligodactyly and both-feet polysyndactyly were diagnosed. At the age of 2 months laparoscopic fundoplication with gastrostomy, at the age of 3 months a tracheotomy tube was applied. Cystic fibrosis was diagnosed at age of 10 months, therapy was prescribed. Analysis for pancreatic elastase 1 < 15mcg/g (N > 200mcg/g), sweat test (Nanoduct) - conductivity 101mmol/L (N < 80 mmol/L). DNA diagnostic (CFTR) - F508del/Trp1063X. At the age of 1-4 years child had 12 surgeries, including: plastic surgery of the epiglottis and larynx; reconstructions of the feet; electrosection of the arytenoid cartilage, laterofixation of the epiglottis, reinstallation of a tracheostomy). From the age of 3y, progressive enlargement of the penis, the appearance of pubic hair, testicular enlargement, acne on the face and back, coarsening of the voice, testosterone level 10.2 nmol/l (N 0-1.51nmol/l), bone age - 4.5 years ahead of passport age. Episodes of involuntary laughter for 1-2 seconds 1-2 times a day. According to the MRI of the brain hypothalamic hamartoma (20x16x19mm) was determined (Figure 1). Clinical exome analysis: variant of c.3454G was detected in the GLI3 gene, described in Pallister-Hall syndrome. Triptorelin therapy brought the hormonal profile back to normal, clinically the signs of premature puberty were stopped. CFTR modulator therapy (ETI) since 7y.o.

Figure 1. Hypothalamic hamartoma Pallister-Hall syndrome



The MRI of the patient with Pallister-Hall syndrome brain - hypothalamic hamartoma (20x16x19mm) was determined

Results: At the age 8 y.o. height 137 cm (2,2 Z-score), weight 30 kg (1,42 Z-score). Psycho-motor development corresponds to age. Attends a general education school

Conclusion: One rare disease does not exclude the presence of another one.

Keywords: Cystic fibrosis, Pallister-Hall syndrome, malformation of the larynx, hypothalamic hamartoma, premature puberty

OP - 140

CONGENITAL PULMONARY AIRWAY MALFORMATION ASSOCIATED WITH A DICER1 VARIANT

Ümmügülsüm Tepeltepe[1], Mustafa Azizoğlu[2], Serdar Bozlak[3]

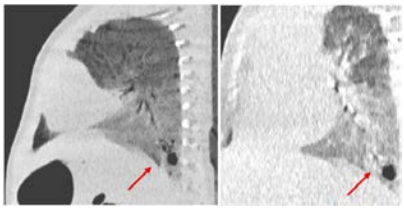
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Aim: Congenital pulmonary airway malformation (CPAM) is a rare developmental anomaly of the lung arising from abnormal bronchopulmonary morphogenesis. Although most cases are sporadic and isolated, emerging evidence suggests a potential association with underlying genetic variants, particularly involving the DICER1 gene. Here we report a prenatally detected CPAM case in which postnatal genetic evaluation identified a DICER1 gene variant, aiming to raise awareness of the genetic basis of cystic lung lesions in the pediatric population.

Case: Postnatal evaluation included chest X-ray and contrast-enhanced thoracic computed tomography performed on postnatal day 7. Imaging demonstrated a 19 × 10 mm multicystic lesion located in the posterior basal segment of the left lower lobe, consistent with Type 2 CPAM. No pneumothorax, pleural effusion, or mediastinal shift was observed (Figure 1). Comprehensive genetic panel analysis demonstrated a heterozygous p.Lys1844Asn (c.5532G > C) missense variant in the DICER1 gene, classified as a variant of uncertain significance (VUS), located within the RNase IIIb domain.

Results: Postnatal evaluation included chest X-ray and contrast-enhanced thoracic computed tomography performed on postnatal day 7. Imaging demonstrated a 19 × 10 mm multicystic lesion located in the posterior basal segment of the left lower lobe, consistent with Type 2 CPAM. No pneumothorax, pleural effusion, or mediastinal shift was observed(Figure 1). Comprehensive genetic panel analysis demonstrated a heterozygous p.Lys1844Asn (c.5532G > C) missense variant in the DICER1 gene, classified as a variant of uncertain significance (VUS), located within the RNase IIIb domain.

Figure 1. Thoracic Computed Tomography



A multicystic lesion was identified in the posterior basal segment of the left lower lobe, with the largest cyst measuring 5 mm in diameter within an area of approximately 19 × 10 mm (Type 2 CPAM suspected). Contrast-enhanced CT evaluation was recommended for the exclusion of pulmonary sequestration.

Conclusion: DICER1 mutations are well established in the spectrum of pleuropulmonary blastoma and may also underlie cystic lung lesions phenotypically resembling CPAM. This case highlights the importance of genetic evaluation in prenatally detected or atypical pulmonary cystic lesions. A multidisciplinary approach encompassing pediatric surgery, pulmonology, oncology, and clinical genetics is recommended to guide long-term surveillance and family screening.

Keywords: Congenital pulmonary airway malformation, DICER1, Cystic lung lesion, Pleuropulmonary blastoma, Pediatric genetics

OP - 141

STÜVE-WIEDEMANN SYNDROME: A CASE SERIES OF THREE PATIENTS WITH VARIABLE CLINICAL PHENOTYPE

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Aim: Stüve-Wiedemann syndrome is a rare congenital skeletal dysplasia caused by pathogenic variants in the LIFR gene, inherited in an autosomal recessive pattern and associated with significant morbidity. The LIFR gene encodes a receptor integral to interleukin-6 cytokine family signaling; loss-of-function variants disrupt skeletal development, neuronal differentiation, and autonomic nervous system function. We present three cases sharing an identical pathogenic variant, highlighting the remarkable phenotypic variability that may arise from a single genetic etiology.

Case: Three patients with Stüve-Wiedemann syndrome, confirmed by molecular genetic analysis, were evaluated. All three carried the identical LIFR c.2074C > T (p.Arg692*) nonsense variant (rs199775294), leading to a premature stop codon. Clinical, radiological, and laboratory findings were systematically reviewed and compared.

Results: Despite harboring the identical pathogenic variant, the three patients displayed strikingly different clinical trajectories. Two patients followed a severe course marked by progressive skeletal deformities, autonomic dysfunction, and recurrent respiratory complications, with complete oral feeding intolerance necessitating long-term enteral nutritional support; both died in the early infantile period. The third patient demonstrated a considerably milder phenotype with less pronounced musculoskeletal involvement and the ability to sustain partial oral feeding, and remains alive under follow-up. These observations point to the influence of modifying genetic or environmental factors beyond the primary variant (Table 1).

Table 1. Clinical Comparison of Three Cases with Stüve-Wiedemann Syndrome

Feature	Patient 1 (Female- 35+4 wk GA)	Patient 2 (Male- 39+6 wk GA)	Patient 3 (Female- 38 wk GA)
Birth Measurements			

(WHO/Fenton reference)			
Weight (g) (SDS)	1600 g (SDS -2.0)	3180 g (SDS -0.35)	3050 g (SDS -0.40)
Lenght (cm) (SDS)	45 cm (SDS -0.5)	45 cm (SDS -2.58)	45 cm (SDS -2.23)
Head circumference (cm) (SDS)	32 cm (SDS 0.0)	33 cm (SDS -1.25)	35 cm (SDS +0.96)
Last Visit Measurements (WHO reference)			
Age (months)	5.6 month	7.3 month	10.3 month
Weight (kg) (SDS)	7 kg (SDS -2.57)	7 kg (SDS -1.54)	6.5 kg (SDS -2.8)
Lenght (cm) (SDS)	69 cm (SDS -2.93)	71 cm (SDS +0.58)	70 cm (SDS -0.83)
Head circumference (cm) (SDS)	38.4 cm (SDS -2.8)	45 cm (SDS +0.67)	46 cm (SDS +1.37)
Consanguinity	+	+	+
Short neck	+	+	+
Frontal bossing	+	+	+
Midface hypoplasia	+	+	+
Micrognathia	+	+	+
Short nose	+	+	+
Pursed lips	+	+	+
Short palpebral fissures	+	+	-
Campomelia	+	+	+
Camptodactyly	-	+	+

Short femur	+	+	+
Short fingers	+	+	+
Short tibia	+	+	+
Contracture	Lower extremity	Claw hand+contracture	-
Pes equinovarus	-	+	-
Scoliosis/Fractures	-/-	-/-	-/-
Hypotonia	+	+	+
Dysautonomia	+	+	+
Episodic hyperthermia	+	+	+
Temprature intolerence	+	+	+
Epilepsy	-	-	+
Pulmonary hypoplasia	-	+	+
Respiratory failure	Neonatal ICU	+	+
Apnea	-	-	+
Pulmonary arterial hypertension	+	-	+
Echocardiography	Atriyal Septal Defekt	Atriyal Septal Defekt	Atriyal Septal Defekt
Dysphagia/Drooling	+	+	+
Feeding method	Oral	Percutaneous Endoscopic Gastrostomy	Nasogastric (NG) tube
Strabismus	+	+	-

Hypothyroidism	-	-	+

Conclusion: This case series illustrates that the identical LIFR c.2074C > T (p.Arg692*) nonsense variant can give rise to a broad spectrum of clinical severity, from life-threatening complications to relatively preserved functional capacity. These findings challenge the assumption that genotype alone determines prognosis in Stüve-Wiedemann syndrome and underscore the need for larger case series to elucidate modifying factors, ultimately guiding more precise prognostic counseling and individualized management.

Keywords: Stüve-Wiedemann syndrome, LIFR, Congenital skeletal dysplasia, Dysautonomia, Episodic hyperthermia

OP - 142

THE TWO FACES OF MOSAICISM: SIZE AND GONADAL MOSAICISM IN THREE RARE CASES

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Aim: To evaluate two distinct forms of mosaicism, namely FMR1 CGG repeat size mosaicism and parental gonadal mosaicism associated with an MBD5 deletion, and to emphasize diagnostic challenges, clinical heterogeneity, and recurrence risk issues in genetic counseling processes in mosaic phenotypes.

Case: The first case was a 10-year-old boy evaluated for speech delay, learning difficulties, behavioral problems, seizure history, and dysmorphic facial features; chromosome analysis, chromosomal microarray, and clinical exome sequencing were normal. The second and third cases were two sisters aged 14 and 12.5 years, born to third-degree consanguineous parents. Both siblings had intellectual disability, neuromotor developmental delay, speech delay, short stature, and dysmorphic appearance; the younger sibling additionally had epilepsy and behavioral problems. Whole exome sequencing was normal in both cases.

Results: In the first case, FMR1 CGG repeat analysis revealed variable repeat patterns across different tissues. Buccal mucosa and fibroblast samples showed premutation-range CGG repeats in addition to full mutation-range expansions (> 200 CGG repeats). Detection of different CGG repeat populations despite the expected hemizygous X chromosome structure in a male patient was compatible with FMR1 size mosaicism secondary to postzygotic repeat instability and supported a rare mosaic Fragile X phenotype. In cases 2 and 3, molecular karyotyping identified a heterozygous deletion of approximately 271 kb involving exons 3–9 of MBD5 at 2q23.1 in both sisters. Parental genetic evaluations were normal, suggesting possible gonadal mosaicism.

Conclusion: Mosaicism may obscure classical clinical findings and complicate diagnostic evaluation and clinical management. It may also create challenges in phenotype interpretation, follow-up planning, family screening, and recurrence risk counseling. These cases indicate that mosaicism should be considered in neurodevelopmental disorders not fully matching classical phenotypic expectations. Tissue-specific or family-based advanced molecular investigations may be required. These two rare mosaicism mechanisms may increase diagnostic awareness and improve genetic counseling in pediatric neurodevelopmental phenotypes.

Keywords: Mosaicism, FMR1, Fragile X syndrome (FXS), MBD5, Neurodevelopmental delay

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A RARE GENETIC SYNDROME DIAGNOSED IN THE NEONATAL INTENSIVE CARE UNIT

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Aim: Megacystis-Microcolon-Intestinal Hypoperistalsis Syndrome (MMIHS) is a rare visceral myopathy caused by pathogenic variants in the ACTG2 gene, which encodes enteric smooth muscle gamma-2 actin. Clinical manifestations range from severe neonatal intestinal obstruction with megacystis to milder gastrointestinal and genitourinary dysfunction.

Case: We report a female neonate born at 35+5 weeks of gestation to a 26-year-old mother with a prenatal history of megacystis. The infant was delivered via spontaneous vaginal delivery with meconium-stained amniotic fluid and admitted to the neonatal intensive care unit due to meconium aspiration syndrome, perinatal asphyxia, and multiple congenital anomalies. Physical examination revealed hypotonia, low-set ears, retrognathia, hypertelorism, flat nasal bridge, narrow thorax, long neck, abdominal distension, and lax abdominal wall musculature. Postnatal imaging demonstrated severe gastrointestinal and genitourinary abnormalities, including microcolon, intestinal hypoperistalsis, bilateral hydroureteronephrosis, tortuous dilated ureters, and megacystis. Despite multiple surgical interventions, including microcolon resection and stoma creation, there was no improvement in intestinal motility. Clinical exome sequencing was performed due to severe gastrointestinal dysmotility, megacystis, and associated congenital anomalies, and identified a heterozygous ACTG2 (NM_001615.4):c.533G > A variant, confirming the diagnosis of MMIHS.

Results: This case highlights the importance of detailed phenotypic assessment and targeted genetic testing in neonates with severe intestinal dysmotility and megacystis, particularly when initial broad genomic analyses are inconclusive.

Conclusion: This case highlights the importance of detailed phenotypic assessment and targeted genetic testing in neonates with severe intestinal dysmotility and megacystis, particularly when initial broad genomic analyses are inconclusive.

Keywords: NICU, ACTG2, Megacystis, Microcolon, Hypoperistalsis

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CCM2 VARIANT IN FAMILIAL CEREBRAL CAVERNOUS MALFORMATION: EARLY DIAGNOSIS IN A 9-MONTH-OLD INFANT

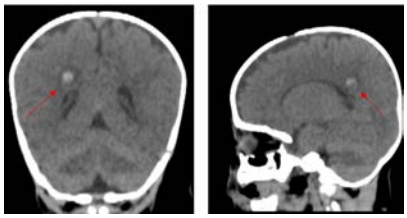
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Aim: Cerebral Cavernous Malformations (CCM) are dynamic vascular lesions of the central nervous system with significant clinical heterogeneity; approximately 50% of individuals remain symptom-free throughout their lives. This report emphasizes the necessity of genetic screening in familial cases and highlights that identifying the underlying molecular pathology is vital for clinical surveillance, early diagnosis, and proactive family screening.

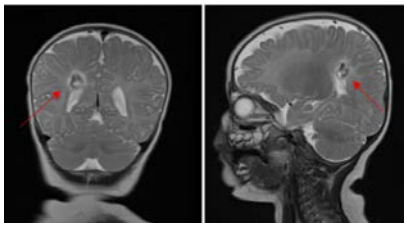
Case: A 9-month-old male infant with unremarkable prenatal history and normal neuromotor development presented to the emergency department following minor trauma to the left temporal region. Non-contrast CT scan revealed a 1 cm intraparenchymal hyperdense focus adjacent to the right lateral ventricle.(Figure 1) Contrast-enhanced cranial MRI confirmed a lesion consistent with CCM, classified as Zabramski Type II.(Figure 2)Family history revealed the patient's paternal uncle deceased in his fourth decade due to hemorrhagic stroke, and his father was under surveillance for multiple CCMs. The patient was referred to the pediatric genetics clinic, and Clinical Exome Sequencing (CES) analysis and ophthalmological evaluation were planned.

Figure 1: Cranial Computer Tomography



A hyperdense area approximately 1 cm in diameter adjacent to the posterior horn of the right lateral ventricle, associated with a surrounding zone of vasogenic edema.

Figure 2: Cranial Magnetic Resonance Imaging



A nodular focus adjacent to the posterior horn of the right lateral ventricle exhibits T2-weighted hyperintense signal intensity without significant pathological contrast enhancement.

Results: CES analysis revealed a CCM2(NM_031443.4):c.214C > T p.Gln72* heterozygous nonsense variant, classified as pathogenic according to ACMG criteria (PVS1, PP5, PM2).Ophthalmological evaluation detected retinal hemorrhagic areas. As retinal involvement in Familial CCM patients has been rarely reported in the literature, the patient was referred for detailed ophthalmological assessment and follow-up.

Conclusion: This case underscores the necessity of molecular characterization in pediatric cavernous malformations. Pathogenic variants in KRIT1, CCM2, and PDCD10 account for approximately 90% of molecularly identified familial cases; however, genetic etiology remains unidentified in 5-15% of families. Advanced analyses such as Whole Genome Sequencing (WGS) significantly increase the likelihood of identifying deep intronic variants. Establishing molecular pathology is vital, as nearly half of variant carriers remain asymptomatic, requiring proactive family screening. Definitive variant identification enables comprehensive genetic counseling and ensures precise clinical surveillance and informed decision-making for high-risk pedigrees.

Keywords: Cerebral Cavernous Malformation, CCM2 Gene, Retinal Hemorrhage, Genetic Counseling, Hereditary Cerebrovascular Disease

OP - 145

CLINICAL AND GENETIC SPECTRUM OF CHILDHOOD-ONSET HEREDITARY SPASTIC PARAPLEGIA: A SINGLE-CENTER EXPERIENCE

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Aim: We aimed to describe the clinical and genetic characteristics of children with hereditary spastic paraplegia followed at a tertiary pediatric neurology center and to highlight the phenotypic and molecular heterogeneity of childhood-onset HSP.

Case: A total of 13 patients from 11 unrelated families with genetically confirmed childhood-onset hereditary spastic paraplegia (HSP) were evaluated. Developmental delay, spastic gait, lower extremity spasticity, speech delay, and intellectual disability were the most frequent clinical findings. Genetic testing identified disease-causing variants in several HSP-associated genes, including AP4M1, AP4B1, SPG11, SPAST, ERLIN1, ERLIN2, KIF1A, ENTPD1, and PLP1. Most patients presented with complicated forms of HSP. Our cohort illustrates the marked clinical and genetic heterogeneity of childhood-onset HSP.

Results: Among 13 patients, developmental delay was the most common presenting feature and was observed in 10 patients (76.9%). All patients had lower extremity spasticity and gait abnormalities. Nine patients (69.2%) had complicated HSP, while four (30.8%) had pure HSP. Epilepsy was detected in three patients (23.1%), and three patients (23.1%) were unable to achieve independent ambulation. Consanguinity was present in six families (54.5%). Genetic testing identified variants in AP4M1 (n=3, 23.1%), AP4B1 (n=2, 15.4%), SPG11 (n=2, 15.4%), SPAST (n=1), ERLIN1 (n=1), ERLIN2 (n=1), KIF1A (n=1), ENTPD1 (n=1), and PLP1 (n=1). AP4-related HSP represented the most frequent genetic subtype, accounting for five patients (38.5%). Neuroimaging findings were heterogeneous and ranged from normal MRI findings to hypomyelination and nonspecific white matter abnormalities.

Conclusion: Childhood-onset HSP shows considerable clinical and genetic heterogeneity. Complicated phenotypes were more common in our cohort, and AP4-related disorders were the most frequent genetic subtype. HSP should be considered in children with developmental delay and spastic motor findings, particularly when cerebral palsy is suspected and there is consanguinity or a family history of similar symptoms. Early genetic evaluation is important for establishing the diagnosis and providing appropriate genetic counseling.

Keywords: Hereditary spastic paraplegia, Childhood-onset, Cerebral palsy mimic, Developmental delay, Genetic heterogeneity

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INTRAVENOUS ALPHA-LIPOIC ACID IN RARE METABOLIC NEUROPATHIES: A THREE-CASE CLINICAL EXPERIENCE

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Aim: Alpha-lipoic acid (ALA) is a mitochondrial cofactor with strong antioxidant properties and has demonstrated clinical efficacy in diabetic peripheral neuropathy. However, evidence regarding its use in rare metabolic diseases associated with peripheral neuropathy remains limited. This study aimed to evaluate the clinical effects of intravenous (iv) ALA in such conditions.

Case: Three patients with different rare metabolic disorders presenting with peripheral neuropathy received iv ALA at a dose of 600 mg every three days for 6 weeks, administered as two treatment courses. Clinical evaluation included neuropathic pain, paresthesia, functional capacity, and electrophysiological findings assessed before and after treatment.

Results: The first case, a 19-year-old male with a POLG-related MNGIE-like phenotype, presented with progressive peripheral neuropathy and gastrointestinal dysmotility. Following iv ALA treatment, a reduction in paresthesia and gastrointestinal symptoms was observed, particularly during treatment periods. The second case, a 15-year-old male with Perrault syndrome due to a homozygous HSD17B4 mutation, had progressive neuropathy and recurrent osteomyelitis secondary to trauma. Post-treatment evaluations demonstrated regression of neuropathic findings on electromyography and imaging, with no recurrence of osteomyelitis episodes. The third case, a 13-year-old male with mitochondrial trifunctional protein deficiency due to a HADHA mutation, showed improvement in walking capacity and electrophysiological findings after treatment.

Conclusion: Iv ALA may provide symptomatic and functional improvement in rare metabolic neuropathies. These findings suggest that ALA could represent a promising supportive therapeutic option in this patient group, highlighting the need for larger controlled studies to confirm efficacy and safety.

Keywords: Alpha-lipoic acid, Peripheral neuropathy, Metabolic disease, Mitochondrial disease, Treatment

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EVALUATION OF CASES WITH COBALAMIN METABOLISM DISORDERS: SINGLE CENTER EXPERIENCE

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Aim: Intracellular cobalamin metabolism disorders are rare, genetically heterogeneous conditions caused by defects in the synthesis of the active vitamin B12 coenzyme forms, adenosylcobalamin (AdoCbl) and methylcobalamin (MeCbl), resulting in a broad clinical spectrum. In this study, the clinical and laboratory features of five patients (three cblC and two cblA) followed at a single center were evaluated.

Case: The ages at presentation of patients with cblC were 2.5, 6, and 10 years. Hematological and renal involvement, including hemolytic anemia, thrombocytopenia, and hypertension, were prominent in two patients. One patient had a severe clinical course requiring intensive care monitoring and replacement therapy due to pulmonary hypertension and renal failure; a family history revealed a sister who died from hemolytic uremic syndrome. Another patient presented with seizures, and cranial MRI demonstrated white matter involvement. One patient exhibited significant language delay. Biochemical analysis revealed elevated urinary methylmalonic acid and homocysteine levels in all cblC patients, while vitamin B12 levels were normal or elevated. Genetic analysis identified pathogenic variants in the MMACHC gene in all cases. The two patients with cblA were diagnosed at 3 and 15 months of age and presented with neuromotor developmental delay. Both had a history of metabolic decompensation episodes, including acidosis and hyperammonemia. Cranial MRI showed white matter and basal ganglia involvement. Biochemically, isolated methylmalonic acid elevation was observed, with normal homocysteine levels. Genetic testing revealed homozygous pathogenic variants in the MMAA gene in both patients.

Results: Treatment included hydroxocobalamin, betaine, and carnitine, with multidisciplinary follow-up required in patients with additional systemic involvement. Management included hydroxocobalamin, carnitine supplementation, and dietary modification.

Conclusion: Cobalamin metabolism disorders may present from the prenatal period to adulthood with multisystem involvement, including neurological, hematological, renal, and cardiovascular manifestations. This is considered in the differential diagnosis of hemolytic uremic syndrome-like presentations. Early diagnosis and treatment require a multidisciplinary approach.

Keywords: Methylmalonic acidemia, cobalamin, Hydroxocobalamin, MMAA, MMACHC

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A NOVEL APPROACH TO TREATMENT-RESISTANT SEIZURES IN ADENYLOSUCCINATE LYASE DEFICIENCY

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Aim: Adenylosuccinate lyase (ADSL) deficiency is a rare autosomal recessive disorder caused by impaired activity of an enzyme involved in purine metabolism. Neurotoxicity resulting from the accumulation of SAICAR and S-Ado clinically manifests with hypotonia, developmental delay, and refractory epilepsy. Although no curative treatment is currently available, metabolic supportive therapies have gained increasing importance. In this study, we present the clinical effects of a combined therapeutic approach applied in three patients with ADSL deficiency.

Case: The first case was a male patient who presented with hypotonia at four months of age. Seizures began at six months and gradually increased in frequency over time.Whole-exome sequencing performed at the age of four years revealed a homozygous mutation in the ADSL gene.At ten years of age, the patient was admitted with status epilepticus, which was resistant to multiple antiepileptic drugs and midazolam infusion. Following the addition of clobazam,ketogenic diet,D-ribose,uricolysis, and quercetin were initiated.Seizure control was achieved on the tenth day of treatment.The second case was a ten-year-old patient referred after receiving a diagnosis of ADSL deficiency. The patient had a history of hypotonia and seizures beginning at three and a half years of age.Following combined treatment,a reduction in seizure frequency and a marked improvement in cognitive functions were observed.The third case was a 35-year-old female patient with a history of hypotonia and developmental delay since infancy. Due to progressively worsening seizures, she had lost her motor functions over time. Although combined treatment was initiated, the patient developed sepsis and required intensive care. During follow-up, the ketogenic diet ratio was increased according to EEG findings.

Results: The combination of ketogenic diet, D-ribose, quercetin, and uricolysis may contribute to seizure control and improvement in neurocognitive functions in patients with ADSL deficiency.

Conclusion: This approach may be considered a promising supportive treatment strategy, particularly in the presence of refractory epilepsy.

Keywords: ADSL deficiency, ketogenic diet, refractory epilepsy

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PHENOTYPIC VARIABILITY IN SIX PATIENTS WITH CAMRQ SYNDROME

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Aim: Cerebellar ataxia, mental retardation, and disequilibrium syndrome (CAMRQ) is a rare neurodevelopmental disorder comprising four genetically distinct subtypes (CAMRQ1-CAMRQ4). We aimed to evaluate the clinical, neuroimaging, and molecular genetic spectrum of CAMRQ syndrome and explore phenotypic variability across different subtypes.

Case: Six patients from three unrelated families with molecularly confirmed CAMRQ syndrome were retrospectively evaluated. Clinical, neuroimaging, electrophysiological, and molecular genetic findings were reviewed and compared.

Results: Five patients were diagnosed with CAMRQ4 and one with CAMRQ2. The cohort consisted of six patients (four males and two females) aged 2.5–17 years. Symptoms were recognized within the first months of life in CAMRQ4 patients, while the CAMRQ2 patient presented during childhood with gait difficulties and distal lower extremity involvement. Four affected siblings with CAMRQ4 harbored a homozygous ATP8A2 splice-site variant (c.1868-3C > G), while an unrelated patient carried a novel homozygous ATP8A2 frameshift variant (c.415_416delGA, p.Asp139Phefs*2). The CAMRQ2 patient had a pathogenic WDR81 variant. Severe developmental delay, absent speech, inability to achieve independent sitting or walking, intellectual disability, and hypotonia were observed in all CAMRQ4 patients. Optic atrophy was observed in all patients. One patient had epilepsy and two had febrile seizures. Neuroimaging findings ranged from normal MRI to cerebellar and white matter abnormalities. Dysmorphic features and hyperkinetic movement disorders were common among CAMRQ4 patients. In contrast, the CAMRQ2 patient achieved independent ambulation and showed mild intellectual disability, pes cavus, distal muscle weakness and atrophy, hypophonic speech, optic atrophy, normal brain MRI, and electrophysiological findings consistent with chronic motor neuropathy/neuronopathy. Marked phenotypic variability was observed between CAMRQ subtypes and among ATP8A2-related cases.

Conclusion: CAMRQ syndrome demonstrates substantial clinical heterogeneity. The identification of a novel ATP8A2 frameshift variant further expands the genotypic spectrum of CAMRQ4 and highlights the importance of comprehensive clinical and molecular evaluation for accurate diagnosis and genetic counseling.

Keywords: CAMRQ syndrome, ATP8A2, WDR81, neurogenetics, phenotypic variability

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MULTISYSTEM INVOLVEMENT AND DIAGNOSTIC DELAY IN PEDIATRIC FRIEDREICH ATAXIA

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Aim: Friedreich ataxia is a multisystemic disorder that typically begins in childhood or adolescence and is characterized by progressive neurological involvement together with cardiac, orthopedic, and metabolic manifestations. This study aimed to evaluate diagnostic delay, neurological findings, the importance of family screening, and multisystemic involvement in pediatric and adolescent patients with Friedreich ataxia using real-life clinical data.

Case: This retrospective case series included patients who were followed with a diagnosis of Friedreich ataxia or with a clinical phenotype compatible with Friedreich ataxia. Patients with symptom onset during childhood or adolescence and follow-up in a pediatric neurology clinic were included. The main analysis group consisted of 9 patients.Demographic characteristics, age at symptom onset, age at diagnosis, diagnostic delay, FXN GAA repeat analysis, deep tendon reflexes, gait pattern, ambulatory status, electromyography findings, echocardiographic results, presence of scoliosis, and glucose metabolism status were evaluated.

Results: Of the 9 patients, 5 were male and 4 were female. The median age at symptom onset was 10 years, the median age at diagnosis was 13.9 years, and the median diagnostic delay was 3.8 years. Two patients were identified through family screening.Genetic diagnosis was confirmed in 8 patients. One patient was considered to have clinical Friedreich ataxia based on clinical and electrophysiological findings. Deep tendon reflexes were hypoactive or absent in 8 patients. Electromyography findings were consistent with sensory polyneuropathy and/or sensory ganglionopathy.Seven patients were independently ambulatory, while 2 patients were non-ambulatory. Cardiomyopathy was detected in 3 patients, scoliosis in 8 patients, diabetes-range glucose metabolism disorder in 2 patients, and prediabetes-range glucose metabolism disorder in 1 patient.

Conclusion: Our findings demonstrate that diagnostic delay is prominent in Friedreich ataxia and the disease is not limited to neurological manifestations but progresses with multisystemic involvement. Early diagnosis, family screening, and multidisciplinary follow-up are essential in the management of pediatric patients with Friedreich ataxia.

Keywords: Friedreich ataxia, pediatric ataxia, diagnostic delay, scoliosis, cardiomyopathy

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EVALUATION OF EIGHT CASES IN THE PYRIDOXINE/PYRIDOXAL PHOSPHATE–RESPONSIVE EPILEPSY SPECTRUM

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Aim: Pyridoxine-dependent epilepsy is an early-onset and treatable epileptic encephalopathy, most commonly associated with ALDH7A1 mutation. This study aimed to evaluate the clinical, genetic, and treatment-response characteristics of eight patients followed at our center in light of the current literature.

Case: Eight patients, four girls and four boys, were included in the study. All patients were born at term. Parental consanguinity was present in five patients, and a family history of epilepsy was present in six. Seizure onset occurred within the first week of life in seven patients and on day 30 in one patient. Initial seizure types included generalized clonic seizures, focal motor seizures, cyanotic episodes, ocular deviation, unresponsiveness, and status epilepticus in one patient.

Results: Most patients had drug-resistant seizures despite treatment with selected antiseizure medications, including phenobarbital, levetiracetam, phenytoin, valproate, oxcarbazepine, clonazepam, vigabatrin, or topiramate; seizure control was achieved after pyridoxine or pyridoxal phosphate treatment. At the last follow-up, seven patients were seizure-free; one patient had a history of febrile seizures, and none had drug-resistant epilepsy. Seizure recurrence was observed in one patient after discontinuation of pyridoxine, supporting the need to continue treatment in clinically responsive cases. Genetically, ALDH7A1 mutations were detected in seven patients. One patient was found to have a mutation associated with the PNPO gene. Neurodevelopment was normal in most patients; however, mild learning difficulties were present in two patients, and one required special education support. The persistence of neurodevelopmental impairment despite seizure control highlights the importance of long-term follow-up in ALDH7A1-related epilepsies.

Conclusion: This series demonstrates that pyridoxine-responsive epilepsies should be considered early in neonatal or early infantile seizures that are not adequately controlled with standard antiseizure medications. Rapid recognition of clinical response, avoidance of treatment discontinuation, genetic confirmation—particularly involving ALDH7A1 and PNPO—assessment of specific metabolic biomarkers, and continued neurodevelopmental follow-up should constitute the main clinical approach.

Keywords: Pyridoxine, Epilepsy, ALDH7A1 mutations

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CLINICAL AND GENETIC EVALUATION OF MELANOCORTIN-4 RECEPTOR (MC4R) MUTATIONS IN 7 CASES OF EARLY-ONSET MORBID OBESITY

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Aim: The melanocortin-4 receptor (MC4R) gene is one of the key components of the melanocortin pathway, which plays a central role in the regulation of energy homeostasis and appetite. Pathogenic variants in the MC4R gene are one of the most commonly reported genetic causes of monogenic obesity and can lead to a phenotype characterized by severe early-onset obesity, hyperphagia, and accelerated linear growth. The aim of this study was to evaluate the clinical and genetic characteristics of seven patients with identified variants in the MC4R gene and to highlight the diagnostic and prognostic significance of MC4R-associated obesity.

Case: Seven patients evaluated for early-onset obesity and marked hyperphagia, in whom variants in the MC4R gene were identified following genetic testing, were retrospectively evaluated. Four of the patients were female and three were male; the mean age was 9.4 years, and the mean body mass index standard score (BMI-SDS) was 3.7. All patients presented with early-onset obesity and marked hyperphagia. Genetic analysis revealed a heterozygous variant in six patients and a homozygous variant in one patient; the variants were missense and nonsense mutations. Some of the variants had previously been identified as pathogenic in the literature. Two of the patients had metabolic complications, and two had a family history of obesity; a heterozygous MC4R variant was also detected in a sibling of one patient.

Results: In the clinical evaluation of the cases, MC4R variants were found to be associated with a phenotype characterized by early-onset, severe obesity and marked hyperphagia. Metabolic evaluation revealed obesity-related metabolic complications, such as insulin resistance, hyperlipidemia, and hepatic steatosis, in some patients. Genetic findings demonstrated the presence of allelic and genotype-phenotype heterogeneity in MC4R-associated obesity. The identification of the same genetic variant in a sibling of one patient during family screening highlighted the importance of molecular diagnosis not only for the evaluation of the index case but also for risk assessment and genetic counseling of family members.

Conclusion: In children with severe obesity that begins at an early age and is accompanied by hyperphagia and rapid growth—particularly in cases with a family history of obesity—monogenic obesity and MC4R gene variants should be considered. Molecular evaluation of the MC4R gene enables the establishment of a definitive diagnosis, prediction of clinical course, and the provision of appropriate genetic counseling and family screening. Furthermore, advances in treatments targeting the melanocortin pathway highlight the growing importance of molecular diagnosis for MC4R-related obesity in future personalized treatment approaches.

Keywords: MC4R, Monogenic Obesity, Hyperphagia, Childhood Obesity, Genetic Mutation.

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IMPAIRED CIRCADIAN BLOOD PRESSURE PATTERN IN PEDIATRIC ALPORT SYNDROME: A SINGLE-CENTER EXPERIENCE

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Aim: Alport syndrome is an inherited progressive glomerular kidney disease. Although hypertension is a recognized complication of the disease, data regarding circadian blood pressure patterns in childhood are limited. We aimed to evaluate ambulatory blood pressure monitoring (ABPM) findings, particularly the prevalence of a non-dipping pattern, in genetically confirmed pediatric patients with Alport syndrome.

Case: This retrospective single-center study included 12 children with genetically confirmed Alport syndrome who underwent ABPM during routine follow-up. Demographic characteristics, genetic findings, urinary albumin-to-creatinine ratio, use of renin–angiotensin system (RAS) blockade, and ABPM parameters were obtained from medical records. A nocturnal decline in systolic and/or diastolic blood pressure of less than 10% compared with daytime values was defined as a non-dipping pattern, whereas a decline between 10% and 20% was considered a normal dipping pattern.

Results: The median age of the patients was 13 years (range, 8–18 years). Pathogenic variants were identified in COL4A3 (n=6), COL4A4 (n=2), and COL4A5 (n=4). All patients had preserved kidney function and persistent microscopic hematuria. The median baseline uACR was 32 mg/g. Eight patients were receiving RAS blockade. Systolic and diastolic non-dipping patterns were detected in 66.7% and 50% of patients, respectively. Among the seven patients who underwent a second ABPM evaluation at least six months later, the prevalence of systolic non-dipping remained high (71.4%), whereas the prevalence of diastolic non-dipping decreased to 14.3%. Notably, all patients demonstrating a normal dipping pattern carried COL4A5 variants. During long-term follow-up, kidney function and albuminuria remained stable in all patients. Non-dipping pattern were not associated with albuminuria.

Conclusion: A high prevalence of non-dipping patterns was observed in this cohort despite the absence of overt hypertension. These findings suggest that abnormalities in circadian blood pressure regulation may occur early in the course of disease. Larger prospective studies are needed to determine the clinical significance of these findings.

Keywords: hypertension, alport, dipping, circadian rhythm

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A NEWLY IDENTIFIED ETFA C.-40G>A MUTATION AND CO-OCCURRING CONGENITAL ADRENAL HYPERPLASIA: A CASE REPORT

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Aim: Glutaric acidemia type 2 (multiple acyl-CoA dehydrogenase deficiency, MADD) is a rare metabolic disorder affecting fatty acid and amino acid metabolism due to electron transfer flavoprotein complex defects. This study presents a novel ETFA gene variant identified concurrently with congenital adrenal hyperplasia (CAH).

Case: A male infant born to consanguineous parents, with a family history of MADD, presented with high birth percentiles, ammonia levels of 111 mg/dl, and blood glucose of 53 mg/dl. Tandem MS analysis revealed elevated C5–C18 acylcarnitines, while urinary organic acid analysis showed high glutaric and ethylmalonic acids. The patient was started on riboflavin, carnitine, and a low-fat diet.

Results: Genetic testing confirmed a homozygous c.-40G > A (5' UTR) variant in the ETFA gene. Simultaneously, persistent 17-OH progesterone elevation led to the identification of a homozygous CYP21A2 mutation, confirming a CAH diagnosis managed with hydrocortisone. During follow-up, the patient also developed cyclic neutropenia and epilepsy.

Conclusion: This case serves as the first clinical evidence supporting the pathogenicity of the ETFA c.-40G > A variant. Integrated metabolic and genetic screening is critical for diagnosing co-occurring rare genetic conditions in neonates with significant family histories or atypical clinical presentations.

Keywords: ETFA, CYP21A2, Congenital Adrenal Hyperplasia, c.-40G>A (5' UTR)

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GROWTH AND MICRONUTRIENT STATUS IN PATIENTS WITH PHENYLKETONURIA

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Aim: Phenylketonuria (PKU) is an autosomal recessive metabolic disorder characterized by elevated phenylalanine levels that may lead to neurocognitive impairment if untreated. This study aimed to evaluate the relationship between treatment compliance, phenylalanine levels, micronutrient status, and growth parameters in patients receiving different PKU treatment modalities.

Material & Method: This retrospective descriptive study was conducted in the Pediatric Metabolism Clinic of Bakırköy Dr. Sadi Konuk Training and Research Hospital. Medical records of 57 patients aged 0–18 years diagnosed with hyperphenylalaninemia or PKU between 2015 and 2022 were reviewed. Demographic, clinical, anthropometric, laboratory, and treatment data were analyzed. Statistical analyses were performed using SPSS 22.0, and $p < 0.05$ was considered significant.

Results: No significant differences were observed between treatment groups or treatment compliance status in terms of anthropometric measurements (height, weight, and head circumference SDS). A small proportion of patients showed growth retardation, mostly attributed to genetic factors. Micronutrient levels were generally similar across groups; mild deficiencies of iron (14%), vitamin B12 (11%), and folate (10%) were detected. Phenylalanine levels were significantly higher in patients with poor dietary compliance both at diagnosis and during follow-up ($p=0.002$). Bone metabolism parameters did not differ significantly between groups.

Conclusion: The absence of differences in growth, development, and micronutrient status among patients according to treatment protocols reflects effective follow-up. Regular monitoring and appropriate dietary management enable patients to achieve physical and neurocognitive outcomes comparable to healthy peers.

Keywords: Phenylketonuria, Hyperphenylalaninemia, Micronutrients, Growth and Development, Treatment Compliance

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LOST IN CODES: ARE CURRENT DIAGNOSTIC CODING SYSTEMS SUFFICIENT FOR PEDIATRIC GENETIC DISEASES?

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Aim: Advances in genetic diagnostic technologies have enabled definitive molecular diagnoses for many inherited childhood diseases. However, the lack of sufficiently specific diagnostic codes for these conditions remains a major limitation for epidemiological surveillance, healthcare planning, reimbursement, and robust national data generation. This study aimed to compare how genetically confirmed pediatric inherited diseases are represented in ICD-10, ICD-11, and the Republic of Türkiye Ministry of Health Rare Diseases Diagnosis List.

Material & Method: Medical records of 4,100 patients who presented to a tertiary pediatric genetics outpatient clinic between April 2022 and December 2025 were retrospectively reviewed. A total of 400 patients with genetically confirmed diagnoses were included, while those with only clinical suspicion of a genetic disorder without molecular or cytogenetic confirmation were excluded. Demographic characteristics, consanguinity status, disease categories, and the presence of a specific diagnostic counterpart for each confirmed diagnosis in ICD-10, ICD-11, and the national Rare Diseases Diagnosis List were evaluated. Coverage rates of the coding systems were compared using Cochran's Q test, and pairwise comparisons were performed with McNemar's test.

Results: Of the 400 patients, 190 were female (47.5%) and 210 were male (52.5%). Consanguinity was present in 164 patients (41.0%), and the most common disease category was monogenic disorders (n = 296, 74.0%). The proportion of diagnoses with a specific corresponding code was 21.3% in ICD-10, compared with 79.8% in ICD-11 and 85.0% in the Rare Diseases Diagnosis List, with significantly different coverage among the three systems (Cochran's Q = 448.59; $p < 0.001$). All pairwise comparisons were statistically significant.

Conclusion: ICD-10 shows substantial limitations in representing genetically confirmed pediatric inherited diseases, whereas ICD-11 may markedly reduce this coding gap by enabling more specific diagnostic coding. The high coverage of the national Rare Diseases Diagnosis List indicates that it can serve as a strong complementary system.

Keywords: Pediatric genetic diseases, diagnostic coding, ICD-10, ICD-11, rare diseases

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IMPLEMENTATION OF RAPID LONG-READ WHOLE-GENOME SEQUENCING IN CRITICALLY ILL PEDIATRIC PATIENTS: A PILOT STUDY FROM A TERTIARY CENTER

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Aim: Critically ill children with suspected genetic disorders often require urgent diagnostic decisions that may affect treatment, transplantation, or prognosis. Rapid whole-genome sequencing can shorten the diagnostic odyssey; however, clinical experience with long-read sequencing in pediatric intensive care remains limited. To evaluate the feasibility, diagnostic yield, turnaround time, and clinical impact of Oxford Nanopore Technologies–based rapid long-read whole-genome sequencing in critically ill pediatric patients.

Material & Method: This pilot study was conducted in the Pediatric Molecular Genetics Research Laboratory of a tertiary children's hospital in Türkiye. Between July 2025 and April 2026, ten critically ill pediatric patients with life-threatening presentations and suspected monogenic disease underwent rapid singleton long-read whole-genome sequencing using the PromethION P2 Solo platform. Peripheral blood samples were processed immediately after receipt. Library preparation, sequencing, variant calling, and clinical interpretation were completed within 48–72 hours. Results were discussed in real time with multidisciplinary clinical teams to support urgent management decisions.

Results: Rapid long-read whole-genome sequencing identified a molecular diagnosis in 5 of 10 patients. Clinically actionable diagnoses included CALFAN syndrome due to a homozygous SCYL1 variant in a patient with acute liver failure, familial hemophagocytic lymphohistiocytosis due to a homozygous STX11 frameshift variant supporting hematopoietic stem cell transplantation planning, MYH1-related muscle disorder in recurrent rhabdomyolysis, and dual fumarate hydratase and N-acetylglutamate synthase deficiencies enabling early metabolic intervention. A heteroplasmic mitochondrial DNA deletion was detected in a patient with multisystem disease, demonstrating the value of long-read sequencing for structural variant detection. In one patient with acute liver failure, rapid nondiagnostic results supported timely liver transplantation, followed by complete recovery.

Conclusion: Rapid ONT-based long-read whole-genome sequencing is feasible in pediatric critical care and can directly influence transplantation, targeted treatment, prognosis, and follow-up.

Keywords: Rapid long-read whole-genome sequencing, pediatric critical care, decision support system

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OVERLOOKED DIAGNOSES IN CHILDREN PRESENTING WITH RHEUMATOLOGIC COMPLAINTS: INHERITED METABOLIC DISEASES

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Aim: Inherited metabolic diseases (IMDs) result from the deficiency or absence of an enzyme or cofactor involved in metabolic pathways, leading to the accumulation or deficiency of specific metabolites. Some IMDs may clinically overlap with rheumatologic disorders, making differential diagnosis challenging. This study aimed to highlight the clinical overlap between IMDs and rheumatologic diseases by evaluating patients referred for rheumatologic complaints who were subsequently diagnosed with an IMD.

Material & Method: Patients referred to the pediatric metabolism outpatient clinic with rheumatologic complaints and diagnosed with an IMD between January 2024 and January 2026 were retrospectively evaluated.

Results: Twenty-two patients, 11 males (50%), with a current median age of 80.5 months were included. The consanguinity rate was 95.5%. Median age at symptom onset was 12 months, median age at diagnosis was 24 months, and median diagnostic delay was 6 months. The most common referral reason was musculoskeletal manifestations, including joint pain, deformity, contractures, and short stature (45.5%), followed by neurological/developmental findings (18.2%) and elevated creatine kinase (CK)/myopathic findings (13.6%). Dysostosis multiplex was the most frequent radiological finding (59.1%). One patient had metaphyseal widening and punctate calcifications, whereas no specific radiological abnormality was detected in 36.4% of patients. Diagnoses included lysosomal storage diseases (MPS I, MPS IVA, MPS VI, alpha-mannosidosis, mucolipidosis type II/III, and multiple sulfatase deficiency) (n=15), glycogen storage disease type V (McArdle disease) (n=3), alkaptonuria (n=2), riboflavin-responsive multiple acyl-CoA dehydrogenase deficiency (n=1), and rhizomelic chondrodysplasia punctata (n=1). Enzyme replacement therapy was the most common treatment (40.9%). Supportive/symptomatic treatment, carbohydrate-rich nutrition before exercise, and vitamin/cofactor therapies were also administered.

Conclusion: IMDs should be considered in the differential diagnosis of children presenting with rheumatologic manifestations, particularly in the presence of neurological findings and consanguinity. Early diagnosis and treatment may prevent progressive skeletal and neurological complications.

Keywords: Inherited metabolic disease, rheumatologic disease, consanguinity

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EVALUATION OF PATIENTS REFERRED WITH SUSPECTED BIOTINIDASE DEFICIENCY AND PHENYLKETONURIA THROUGH THE NATIONAL NEWBORN SCREENING PROGRAM: A SINGLE-CENTER EXPERIENCE

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Aim: This study aimed to evaluate the clinical, demographic, and laboratory characteristics of patients referred with suspected phenylketonuria (PKU) and biotinidase deficiency (BD) through the national newborn screening program.

Material & Method: In this retrospective study, patients referred after abnormal newborn screening results between October 2023 and May 2026 were analyzed. Demographic data, clinical features, biochemical parameters, and available genetic results were evaluated.

Results: A total of 52 patients were included, comprising 39 with suspected BD (15 females, 24 males) and 13 with suspected PKU (7 females, 6 males). All patients were asymptomatic at presentation. Parental consanguinity was present in 44% of cases.Among BD referrals, the mean birth weight was 3156 ± 520 g and the mean gestational age was 38.3 ± 1.2 weeks. The mean age at presentation and diagnosis was 21.8 ± 7.3 days and 29.0 ± 9.1 days, respectively. Of these, 18 patients were classified as normal, 20 as partial BD, and 1 as profound BD. In the patient with profound BD, enzyme activity was markedly reduced (screening: 12–25 MRU; confirmatory test: 4.5%). Mean enzyme activity was 23.3% ± 5.9 in partial BD and 64.0% ± 22.3 in normal cases. Genetic analysis (n=18) revealed common BTD variants, including p.Asp444His and p.Asp424His. Among PKU referrals, the mean age at presentation and diagnosis was 27.8 ± 12.4 days and 31.7 ± 12.3 days, respectively. Four patients were classified as normal, eight as hyperphenylalaninemia, and one as mild PKU. Mean phenylalanine levels were 47.4 ± 10.4 µmol/L in normal cases and 167 ± 29.5 µmol/L in hyperphenylalaninemia. The patient diagnosed with PKU had an initial screening value of 9 mg/dL and, at 56 days of age, phenylalanine level of 615 µmol/L, and revealed p.Leu197Phe and p.Ile224Thr variants.

Conclusion: Early diagnosis and treatment through newborn screening are essential to prevent irreversible complications in inherited metabolic disorders.

Keywords: Biotinidase deficiency, Phenylketonuria, Newborn screening, Inherited metabolic diseases

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EVALUATION OF GENETIC TEST RESULTS IN PEDIATRIC CARDIOLOGY PRACTICE: A SINGLE-CENTER EXPERIENCE

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Aim: Genetic investigations in pediatric cardiology provide significant diagnostic, prognostic, and familial screening benefits in patients with channelopathies, cardiomyopathies, and a family history of sudden cardiac death. The aim of this study was to evaluate the clinical characteristics, indications for genetic testing, and genetic test results of pediatric patients who underwent genetic analysis at our center.

Material & Method: This retrospective study included pediatric patients evaluated in the pediatric cardiology outpatient clinic who underwent genetic analysis. Demographic characteristics, presenting symptoms, electrocardiographic and echocardiographic findings, and genetic test results were reviewed. Indications for genetic testing included suspected long QT syndrome, hypertrophic cardiomyopathy, dilated cardiomyopathy, non-compaction cardiomyopathy, ventricular arrhythmia, syncope, and family history of sudden cardiac death. Genetic results were classified as pathogenic/likely pathogenic variants, variants of uncertain significance (VUS), or negative results.

Results: Pediatric patients who underwent genetic analysis were included in the study. The most common indications for genetic testing were suspected channelopathies and cardiomyopathies. The most frequently identified genetic variants were detected in the KCNQ1, SCN5A, MYH7, KCNH2, and TNNT2 genes. Pathogenic or likely pathogenic variants were identified in some patients, while variants of uncertain significance were observed in another group. Genetic analysis results were found to support the diagnostic approach, particularly in patients with suspected channelopathies and cardiomyopathies, and contributed to familial screening.

Conclusion: Genetic testing provides significant contributions to the evaluation of channelopathies and cardiomyopathies in pediatric cardiology practice. Interpretation of genetic findings together with clinical features is crucial for appropriate risk stratification, treatment planning, and family screening. Our single-center experience supports the growing importance of genetic investigations in pediatric cardiac diseases.

Keywords: Pediatric cardiology, genetic testing, channelopathy, cardiomyopathy, sudden cardiac death

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THE RELATIONSHIP BETWEEN MOTHERS' BREASTFEEDING SELF-EFFICACY PERCEPTIONS AND FATHERS' BREASTFEEDING SUPPORT

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Aim: Although many efforts promote breastfeeding globally and nationally, infant breastfeeding durations remain below desired levels. This study aimed to determine the relationship between maternal breastfeeding self-efficacy and fathers' support.

Material & Method: The sample of this study, which was planned with a descriptive and correlational design, consisted of breastfeeding mothers and their spouses (n=170) in a provincial center in Central Anatolia between March 30, 2025, and March 15, 2026. In the study, for which ethics committee approval, institutional permissions, and participant consents were obtained, data were collected using a Questionnaire Form, the 'Breastfeeding Self-Efficacy Scale', and the 'Paternal Support in Breastfeeding Scale'. Data evaluation was performed using statistical software with descriptive statistics, independent groups t-test, one-way analysis of variance (ANOVA), post hoc tests (Tukey, LSD), Pearson correlation, and regression analyses.

Results: As a result of the research, it was determined that the mean total score of mothers' breastfeeding self-efficacy was 56.96±10.16, and the mean general score of fathers' breastfeeding support was 3.94±0.76. According to the scale scores, it was determined that mothers had a moderate-to-high level of breastfeeding self-efficacy perception, and paternal support in breastfeeding was also high. A positive and significant relationship ($r=0.277$; $p < 0.01$) was found between mothers' breastfeeding self-efficacy perceptions and fathers' breastfeeding support. According to the regression analysis, it was determined that fathers' breastfeeding support had a positive and significant effect on mothers' breastfeeding self-efficacy perceptions ($\beta=0,277$; $t=3,736$; $p < 0,001$).

Conclusion: The findings emphasize the determining role of spousal support in the breastfeeding process and prove that fathers' active participation in the process will increase mothers' breastfeeding self-efficacy. Accordingly, it is recommended that breastfeeding education provided in the prenatal and postnatal periods should not only be aimed at mothers but should be structured with a "mother-father couple" focus.

Keywords: Breastfeeding, Self Efficacy, Paternal Support, Social Support, Nursing

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AN INVESTIGATION OF THE EFFECT OF BREASTFEEDING ON PAIN ASSOCIATED WITH THE ADMINISTRATION OF COMBINED VACCINES IN INFANTS

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Aim: The aim of this study is to examine the effect of breastfeeding on pain experienced by infants during the administration of a combination vaccine, as well as changes in heart rate (HR) and oxygen saturation (SPO2) during this process.

Material & Method: This study was conducted using a randomized controlled design with repeated measurements. The study involved a total of 70 healthy infants aged 2 to 6 months who received the pentavalent vaccine and met the inclusion criteria. Data were collected using the Neonatal Infant Pain Scale (NIPS). Two minutes before the vaccination, the mothers of the infants in the study group held their babies in the cradle hold breastfeeding position and began breastfeeding. While breastfeeding continued, HR and SPO2 values were measured two minutes before the vaccination (pre-procedure), one minute after the vaccination (during the procedure), and three minutes after the vaccination (post-procedure), followed immediately by the NIPS assessment (pre-procedure). In the control group, the mothers did not breastfeed their infants; only the vaccination and the measurements performed in the study group were conducted. The data were analyzed using SPSS software.

Results: In the research group, the infants' total NIPS scores showed an increase during the procedure (3.46 ± 1.58) compared to pre-procedure levels, followed by a statistically significant decrease (1.43 ± 1.85) post-procedure (Table 1). The infants' HR and SPO2 values increased during the procedure compared to pre-procedure levels, followed by a statistically significant ($p < 0.001$) decrease (Table 2). A weak, negative, and statistically significant correlation was found between the infants' post-procedure SPO2 values and their mean NIPS total scores (Table 3).

Table 1. Mean Total NIPS Scores for Infants at Measurement Time Points by Group

Groups	Pre-Trade (2 minutes before the vaccination) NIPS[2]	During the procedure (1 minute after the vaccination) NIPS[2]	After the procedure (3 minutes after the vaccination) NIPS[2]

	Mean±SD[1]	Mean±SD[1]	Mean±SD[1]
Intervention Group (n=35)	1,09±1,54	3,46±1,58	1,43±1,85
Control Group (n=35)	1,74±2,02	5,66±1,49	4,23±2,07
[1]SD: Standard Deviation. [2]NIPS: Neonatal Infant Pain Scale.			

Table 2. Mean Heart Rate and Oxygen Saturation Values at Measurement Times by Group

Measurement times and parameters	Intervention Group(n=35) Mean±SD[3]	Control Group(n=35) Mean±SD[3]	**Test value: [1]F;p**
Heart Rate(HR):			
Pre-Trade (2 minutes before the vaccination)	140,74±2,16	138,77±2,29	0,312; 1,047
During the procedure (1 minute after the vaccination)	146,54±2.28	148,20±2,79	
After the procedure (3 minutes after the vaccination)	144,43±1,88	141,74±22,93	
Test value: [2]RM-ANOVA; p	62,914; <**0,001**	60,743; **<0,001**	
Oxygen Saturation (SPO_2):			
Pre-Trade (2 minutes before the vaccination)	96,43±1,20	96,43±,98	**0,005**; 5,412
During the procedure (1 minute	92,83±1,99	91,80±1,21	

after the vaccination)			
After the procedure (3 minutes after the vaccination)	94,97±1,15	94,77±1,24	
Test value: [2]RM-ANOVA; p	64,657; <**0,001**	58,609; <**0,001**	
[1]Mixed design repeated measures ANOVA. [2]Repeated-Measures ANOVA. 3SD: Standard Deviation.			

Table 3. Comparison of Average NIPS Scores with Infants' Peak Heart Rate and Oxygen Saturation Values by Measurement Time

Parameters	Pre-Trade (2 minutes before the vaccination)NIPS[2]	During the procedure (1 minute after the vaccination)NIPS[2]	After the procedure (3 minutes after the vaccination)NIPS[2]
Heart Rate(HR):			
Test value; [1]r; p	0,068; 0,578	0,078; 0,522	-0,151; 0,212
Oxygen Saturation (SPO_2):			
Test value: [1]r; p	0,108;0,375	-0,058;0,634	-0,305;**0,010**
[1]Pearson Correlation Test. [2]NIPS: Neonatal Infant Pain Scale.			

Conclusion: Consequently, when administering vaccines to infants, it is recommended to encourage the use of breastfeeding, which is a method that requires no preparation, is inexpensive, and is easy to administer.

Keywords: pain, pain management, infant, breastfeeding, combined vaccination

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AN EXAMINATION OF THE LEVELS OF READINESS FOR MEDICAL ARTIFICIAL INTELLIGENCE AMONG NURSES WORKING IN PUBLIC HOSPITALS

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Aim: Artificial intelligence (AI) applications are increasingly integrated into clinical practice; however, evidence regarding AI readiness among practicing nurses remains limited. This study evaluated medical AI readiness among nurses working in a public hospital and examined sociodemographic, educational, professional, and institutional factors associated with readiness.

Material & Method: A cross-sectional, descriptive study was conducted with 303 nurses. The Medical Artificial Intelligence Readiness Scale for Medical Students (MAIRS-MS; 22 items, four subscales: Cognition, Ability, Vision, Ethics; total score 22–110) was administered alongside a sociodemographic/professional form. Univariate analyses included Mann-Whitney U, Kruskal-Wallis with Bonferroni post-hoc, and Spearman , with Benjamini-Hochberg false discovery rate correction. Multivariate analyses comprised MANOVA, multiple linear regression hierarchical regression with four predictor blocks and forward stepwise regression as an exploratory sensitivity analysis. Statistical significance was set at $p < 0.05$.

Results: The mean MAIRS-MS total score was 72.52 ± 15.51 (Cronbach's $\alpha = 0.959$), indicating moderate-to-upper-moderate readiness. The highest mean subscale score was Ability (27.58 ± 6.39) and the lowest was Vision (9.70 ± 2.62). No variable demonstrated a robust univariate effect after FDR correction. MANOVA revealed a small but significant multivariate effect of total professional experience (Pillai's Trace=0.054, p=0.036). Enter and hierarchical regression models were not statistically significant; explained variance remained low across all outcomes (R^2 range: 0.020–0.046), and no hierarchical block produced a significant ΔR^2. An exploratory negative signal for institutional tenure ≥11 years was observed in the Ethics subscale (β=-0.188, p=0.026), supported by stepwise regression in the Ability and Ethics subscales, but interpreted cautiously given low model fit and the cross-sectional design.

Conclusion: Nurses demonstrated moderate AI readiness, while conventional sociodemographic and professional variables explained little variance in readiness scores. Future studies should examine factors such as digital self-efficacy, technology acceptance, AI anxiety, institutional support, and AI training quality.

Keywords: artificial intelligence, nurses; readiness, MAIRS-MS, nursing workforce

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NURSING CARE OF A NEWBORN WITH SPINA BIFIDA IN THE NEONATAL INTENSIVE CARE UNIT

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Aim: Spina bifida is a congenital neural tube defect associated with significant neurological, musculoskeletal, urinary, and gastrointestinal complications. Newborns with spina bifida require specialized multidisciplinary care in the Neonatal Intensive Care Unit (NICU) to prevent complications and optimize outcomes. This case report presents nursing care for a newborn diagnosed with spina bifida and emphasizes comprehensive nursing management in the NICU.

Case: A newborn diagnosed prenatally with spina bifida was admitted to the NICU immediately after birth. Initial assessment revealed a lumbosacral myelomeningocele sac. Nursing interventions included protection of the neural tissue, prevention of infection, maintenance of skin integrity, positioning to avoid pressure on the lesion, pain assessment and management, nutritional support, monitoring of neurological status, bladder and bowel management, and preparation for surgical intervention.

Results: The infant was born at 37 weeks' gestation, weighing 3110 g, with an Apgar score of 6. Due to spina bifida and related complications, the newborn was admitted to the NICU. A VP shunt was placed at one month of age for hydrocephalus but was later removed because of infection and replaced with an EVD. The infant presented with vomiting, lower-extremity paralysis, and moderate pain (CRIES score: 5). Nursing assessments identified risks of infection, impaired mobility, pain, nutritional imbalance, and neurodevelopmental complications. Interventions focused on neurological assessment, pain control, infection prevention, nutritional and skin care, positioning, and parental education. Following EVD insertion and multidisciplinary management, the infant's condition stabilized. Prompt identification of complications and targeted nursing care helped prevent further neurological deterioration and supported recovery.

Conclusion: Nursing care plays a critical role in managing newborns with spina bifida in the NICU. Early assessment, prevention of complications, family-centered care, and multidisciplinary collaboration are essential for improving outcomes and supporting family adaptation. Evidence-based nursing interventions contribute significantly to care quality and the long-term well-being of infants with spina bifida.

Keywords: spina bifida, neural tube defects, neonatal nursing, neonatal intensive care unit

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THE EFFECT OF THE TONSILLECTOMY DIET GIVEN TO CHILDREN WHO HAVE UNDERGONE ADENOTONSILLECTOMY ON BLEEDING AND PAIN IN THE TONSILLAR BED

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Aim: This study aimed to investigate the effect of education on the tonsillectomy diet following adenotonsillectomy in children on bleeding and pain.

Material & Method: This study was conducted using a randomized controlled design with repeated measures (ClinicalTrials.gov ID: NCT06988748). The study was conducted with a total of 78 children who underwent adenotonsillectomy and met the inclusion criteria. Data were collected using the Post-Adenotonsillectomy Follow-Up Form and the Wong-Baker Faces Pain Rating Scale (WBFPRS). The children and caregivers in the study group received training on the tonsillectomy diet. The effect of the tonsillectomy diet on bleeding was assessed 4, 8, and 24 hours after surgery, and 7th day. The effect on pain was assessed at 0 minutes, 4, 8, and 24 hours, and on the 7th, day following surgery. The data were analyzed using SPSS 22.0. The effect size was interpreted based on the absolute value ranges of the r value.

Results: There was no significant difference in the initial assessment of children's post-adenotonsillectomy pain scores and bleeding status by group ($p > 0,05$). There was a significant difference between the groups in subsequent measurements ($p < 0,05$). The reason for this difference is that the children in the study group had lower average pain scores and less bleeding. Education on the tonsillectomy diet provided to children who underwent adenotonsillectomy was moderately effective in reducing bleeding at the incision site (Table 1 and Figure 1). Education on the tonsillectomy diet provided to children who underwent adenotonsillectomy was highly effective in reducing their pain scores (Table 2 and Figure 2).

Figure 1. Comparison of Postoperative Bleeding in Children by Group Based on Repeated Measurements

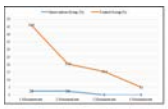


Figure 2. Comparison of Mean Total WBFPRS Scores in Children Undergoing Adenotonsillectomy by Group in Repeated Measurements

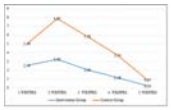


Table 1. Comparison of Postoperative Bleeding in Children by Group Based on Repeated Measurements

Measurement Times - Characteristics of Bleeding	**Intervention Group(n = 39)**	**Control Group(n = 39)**	Between groups:[1,2] X^2; p	Effect size [3] V
	n (%)	**n (%)**		
1.Measurement (4th hour after operation)				
Bleeding present	1(2,6)	17(43,6)	[1] 18,489; **<0,001**	0,487
Pink / blood without clots	*1(2,6)*	*8(20,5)*		
Bright red / non-clotted blood	*0(0,0)*	*3(7,7)*		

Dark red / clotted blood	*0(0,0)*	*3(7,7)*		
2. Measurement (8th hour after operation)				
Bleeding present	1(2,6)	7(17,9)	[2] **p<0,056**	0,254
Pink / blood without clots	*1(2,6)*	*3(7,7)*		
Bright red / non-clotted blood	*0(0,0)*	*2(5,1)*		
Dark red / clotted blood	*0(0,0)*	*2(5,1)*		
3. Measurement (24th hour after operation)				
Bleeding present	0(0,0)	6(15,4)	[2]**p<0,025**	0,289
Pink / blood without clots	*0(0,0)*	*2(5,1)*		
Bright red / non-clotted blood	*0(0,0)*	*1(2,6)*		
Dark red / clotted blood	*0(0,0)*	*1(2,6)*		
Ground brown/clotted blood	*0(0,0)*	*2(5,1)*		
4. Measurement (7th day after operation)				
Bleeding present	0(0,0)	2(5,1)	[2]**p<0,494**	0,162
Pink / blood without clots	*0(0,0)*	*2(2,6)*		
Bright red / non-clotted blood	*0(0,0)*	*1(2,6)*		
Dark red / clotted blood	*0(0,0)*	*0(0,0)*		

Within the group:Test value; [4]Q; p	2,000; 0,572	21,529; **<0,001**		
Effect size [5]W	0,017	0,184		

[1]Pearson's Chi-Square Test. [2]Fisher's Exact Test (The statistical test value (p-value) is provided). [3]Cramer's V/Phi coefficient (The effect size was calculated using Cramer's V/Phi coefficient based on the cell frequencies in the 2x2 contingency table). [4]Cochran's Q test (In the within-group analysis, the difference in the presence of bleeding between measurements 1–4 was analysed). [5] Kendall's W.

Table 2. Comparison of Mean Total WBYADÖ Scores in Children Undergoing Adenotonsillectomy by Group in Repeated Measurements

Measurement Times - Characteristics of Bleeding	**Intervention Group (n = 39)**	**Control Group (n = 39)**	**Between groups:Test value; p**	**Effect size**
	Mean ± SD[4](min[5] - max[6])	**Mean ± SD[4](min[5] - max[6])**	**[1]M-U; p**	**r**
1.Measurement (0th minute before operation)				
[3]WBFPRS	2,56±0,85 (1-4)	2,46±0,68 (1-3)	707,500;0,560	0,066
2.Measurement (4th hour after operation)				
[3]WBFPRS	3,26±0,76 (2-5)	4,63±0,59(3-5)	158,500; **<0,001**	0,714
3. Measurement (8th hour after operation)				
[3]WBFPRS	2,06±0,82 (1-4)	3,78±0,84(2-5)	129,500; **<0,001**	0,728
4. Measurement (24th hour after operation)				
[3]WBFPRS	1,18±0,683(0-4)	2,54±1,20(0-5)	270,000; **<0,001**	0,587
5. Measurement (7th day after operation)				
[3]WBFPRS	0,24±0,39(0-1)	0,67±0,71(0-3)	505,000;0,004	0,324

Within the group.Test value; [2]X[2]; p	127,789; **<0,001**	131,291; **<0,001**		
[1]M-U: Mann-Whitney U Test. [2]Friedman Test (In the within-group analysis, the difference between the mean total WBFPRS scores across Measurements 1–5 was analyzed). [3]WBFPRS: Wong-Baker Faces Pain Rating Scale. [4]SD: Standard Deviation. [5]Min: Minimum. [6]Max: Maximum.				

Conclusion: It has been determined that the tonsillectomy diet education provided to children and their families following an adenotonsillectomy is effective in reducing bleeding and pain. In this regard, providing tonsillectomy diet education to children and their caregivers reduces children's pain levels and prevents bleeding complications.

Keywords: Adenotonsillectomy, tonsillectomy diet, child, pain, bleeding

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THE RELATIONSHIP BETWEEN DIGITAL GAME ADDICTION AND DIGITAL AMNESIA IN ADOLESCENTS

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Aim: This study was conducted to examine the relationship between digital game addiction and digital amnesia among adolescents within the context of sociodemographic variables.

Material & Method: The study was designed as a descriptive, correlational, cross-sectional study. The sample consisted of 230 adolescents aged 12–18 years attending middle and high schools in a single province. Data were collected using a Personal Information Form, the Digital Game Addiction Scale (DGAS), and the Digital Amnesia Scale Adolescent Form (DAS-AF). In addition to descriptive statistics, the data were analyzed using Pearson correlation analysis, independent samples t-test, one-way analysis of variance, and multiple linear regression analysis; the significance level was set at $p < 0.05$.

Results: The mean age of the participants was 14.64±2.11 years, and 52.6% were girls. The internal consistency coefficients were $\alpha=0.89$ for the DGAS and $\alpha=0.90$ for the DAS-AF. A positive and significant relationship was found between digital game addiction and digital amnesia ($r=0.447$; $p < 0.001$). Likewise, the relationship between digital game addiction and daily gaming time was also significant ($r=0.797$; $p < 0.001$). In contrast, neither digital game addiction nor digital amnesia scores differed significantly by sex or school type, and the differences between groups were not statistically significant ($p > 0.05$). In the regression model controlling for sociodemographic variables, digital game addiction was identified as the only significant predictor of digital amnesia ($\beta=0.383$; $p < 0.001$), and the model explained 21.3% of the total variance ($F=10.08$; $p < 0.001$).

Conclusion: The findings indicate that as the level of digital game addiction increases among adolescents, the level of digital amnesia also increases, and that this relationship is independent of sociodemographic variables. Accordingly, monitoring cognitive and memory processes in adolescents at risk of addiction appears to be important. It is recommended that the cognitive consequences of digital game use be addressed in school-based preventive programs.

Keywords: digital game addiction, digital amnesia, adolescents, cognitive offloading, memory

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THE EFFECT OF AURICULAR POSITION ON MEASUREMENT VALUES AND COMFORT IN MEASURING BODY TEMPERATURE BY TYMPANIC METHOD IN PEDIATRIC PATIENTS

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Aim: The study was conducted as a randomised controlled trial to examine the effect of auricula positioning on measurement values and comfort during tympanic temperature measurement in paediatric patients aged 3–17 years, hospitalised in the Paediatric Intensive Care Unit between December 2022 and March 2024.

Material & Method: The sample comprised 68 patients who met the inclusion criteria, with 34 in the experimental group and 34 in the control group. Data were collectedusing a Data Collection Form, Kolcaba's Comfort Daisies and the Visual Analogue Scale (VAS). Statistical analyses were performed using IBM SPSS® 27.0 software. In the experimental group, measurements were taken first by positioning the auricula up and back, then without positioning; in the control group, measurements were taken first without positioning the auricula, then with positioning. A two-minute interval was maintained between measurements. The groups were homogeneous in terms of individual and intensive care environment characteristics.

Results: No difference was found between measurements with and without positioning in the experimental group. In the control group, the temperature measurement was 0.19°C higher ($p < 0.001$). No significant difference was found between Comfort Daisies and VAS scores with and without auricula positioning in either group ($p > 0.05$). Additionally, Kolcaba's Comfort Daisies was determined to be a useful tool forassessing the comfort of pediatric patients.

Conclusion: In conclusion, there was no difference in tympanic temperature measurement values or comfort scores whether the auricula was positioned or not, indicating that both methods are usable. However, it is recommended to repeat studies in pediatric patients with larger samples.

Keywords: body temperature, auricular position, comfort, tympanic thermometer, pediatrics

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THE EFFECT OF VIRTUAL REALITY ON ANXIETY AND PHYSIOLOGICAL PARAMETERS DURING HIGH-FLOW NASAL OXYGEN THERAPY IN CHILDREN: A RANDOMIZED CONTROLLED TRIAL

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Aim: This randomized controlled trial was conducted to evaluate the effect of a virtual reality application on anxiety levels and physiological parameters in children receiving high-flow nasal oxygen therapy in a pediatric intensive care unit.

Material & Method: The study was conducted between March 2025 and March 2026 in the pediatric intensive care unit of a teaching and research hospital. Participants who met the inclusion criteria were assigned to an experimental (n=30) and a control (n=30) group using stratified block randomization based on age group. Children in the experimental group were shown a 10-minute video via virtual reality goggles during high-flow nasal oxygen therapy; the control group received routine care. Data were collected using the Child and Parent Demographic Information Form, the Physiological Parameters Recording Form, and the Children's Emotional Expression Scale (CEMS). Heart rate, respiratory rate, oxygen saturation, and anxiety levels were assessed before and after treatment by an independent nurse trained in the use of the data collection tools. Data were analyzed using SPSS 26.0, and a rater who was unaware of the group assignments was assigned to ensure rater blindness.

Results: The experimental and control groups were similar in terms of sociodemographic characteristics, baseline physiological parameters, and CEMS scores ($p > 0.05$). Following the intervention, the mean CEMS score in the experimental group was found to be significantly lower than that in the control group ($p < 0.05$). Additionally, a significant decrease in heart rate and respiratory rate, and a significant increase in oxygen saturation were observed in the experimental group ($p < 0.05$)(Table 1, Table 2 and Table 3).

Table 1. Distribution and Comparison of Demographic Characteristics of Children and Parents

		Experimental group	Experimental group	Control group	Control group	X2	P
		N	%	N	%		
Gender	Male	15	50,0	14	46,7	0,07	0,78
	Female	15	50,0	16	53,3		

Age	7 8 9 10 11 12	4 5 5 5 5 6	13.3 16.7 16.7 16.7 16.7 20.0	5 5 5 5 5 5	16.7 16.7 16.7 16.7 16.7 16.7	0.20	0,99
Diagnosis	Bronchopneumonia Other	30 0	100.0 0.0	30 0	100.0 0.0	-	-
Mother's education level	High school Bachelor's degree	15 15	50.0 50.0	15 15	50.0 50.0	-	-
Father's education level	High school Bachelor's degree	15 15	50.0 50.0	15 15	50.0 50.0	-	-
HFNC treatment history	No Yes	30 0	100.0 0.0	30 0	100.0 0.0	-	-

χ^2: Chi-square test

Table 2. Comparison of the Virtual Reality and Control Groups in Terms of Physiological Parameters

		Experimental group	Experimental group	Control group	Control group	**t/z**	**P**
		X	**Ss**	**X**	**Ss**		
Heart rate	Pre-test Post-test t p	122.10 96.33 20.96 <0.01	5.32 6.04 20.96 <0.01	121.00 117.33 6.37 <0.01	5.25 5.31 6.37 <0.01	0.81 -14.31	0,42 <0.01

Respiratory rate	Pre-test Post-test t p	27.30 20.90 13.44 <0.01	2.74 2.35 13.44 <0.01	27.00 26.20 3.61 <0.01	1.88 1.63 3.61 <0.01	0,49 -10.14	0,62 <0.01
Oxygen saturation	Pre-test Post-test t p	93.53 98.63 -20.72 <0.01	1.14 0,85 -20.72 <0.01	93.40 94.50 -7.50 <0.01	1.13 1.25 -7.50 <0.01	0,46 -14.95	0,65 <0.01

X̄: Mean; SD: Standard deviation; t: Paired-samples t test; t/z: Independent-samples t test / Mann-Whitney U test; p<0.05

Table 3. Comparison of the Virtual Reality and Control Groups in Terms of Anxiety

		Experimental group	Experimental group	Control group	Control group	t/z	P
CEMS Facial expression	Pre-test Post-test t p	3.53 1.17 23.31 <0.01	0,51 0.38 23.31 <0.01	3.57 4.03 -3,50 <0.01	0,50 0,67 -3,50 <0.01	-0.26 -20.43	0.80 <0.01
CEMS Vocalization	Pre-test Post-test t p	3.30 1.37 16.55 <0.01	0,88 0.61 16.55 <0.01	3.30 3.43 -0.85 0,40	0,88 0.77 -0.85 0,40	0.0 -11.45	1.00 <0.01
CEMS Activity	Pre-test	2.77	0.50	2.93	0.58	-1.18	0.24

	Post-test t p	1.40 15.27 <0.01	0.50 15.27 <0.01	2.97 -0.37. 0.71	0.49 -0.37. 0.71	-12.28	<0.01
CEMS Interaction	Pre-test Post-test t p	3.03 1.20 16.96 <0.01	0,72 0,41 16.96 <0.01	3.00 2.73 2.80 <0.01	0,64 0,69 2.80 <0.01	0.19 -10.47	0,85 <0.01
CEMS Cooperation	Pre-test Post-test t p	3.00 1.27 -4.88 <0.01	0,59 0,45 -4.88 <0.01	3.07 2.83 -1,94 0,05	0,25 0,59 -1,94 0,05	-0.53* -6.51*	0,60 <0.01
CEMS Total	Pre-test Post-test t p	15.60 6.40 41.48 <0.01	1.61 1.22 41.48 <0.01	15.87 16.07 -0.63 0,53	1.28 1.55 -0.63 0,53	-0.71 -26.81	0,48 <0.01

*: Mann-Whitney U test; p<0.05. CEMS: Children's Emotional Manifestation Scale

Conclusion: Virtual reality applied during high-flow nasal oxygen therapy reduces children's anxiety levels and positively affects their physiological parameters. The virtual reality application is an effective, safe, and non-pharmacological nursing intervention that can be used during high-flow nasal oxygen therapy in pediatric intensive care units.

Keywords: High-Flow Nasal Oxygen, Pediatric Respiratory Failure, Pediatric Nursing, Virtual Realty, Anxiety

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ASSOCIATION OF NOS GENE VARIANTS WITH NAFLD IN ADOLESCENTS WITH OBESITY

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Aim: This study aimed to investigate the potential role of gene variants related to the nitric oxide synthase (NOS) enzyme—iNOS rs1060826, eNOS rs1799983, and eNOS 27-bp VNTR—in the etiopathogenesis of non-alcoholic fatty liver disease (NAFLD) in adolescents.

Material & Method: This cross-sectional study included adolescents with obesity aged 10–19 years, with a body mass index standard deviation score (BMI-SDS) ≥2 (n=104), and age- and sex-matched healthy individuals (n=64). The iNOS rs1060826 and eNOS rs1799983 variants were analyzed using the PCR-RFLP method, while the eNOS 27-bp VNTR variant was analyzed using PCR. The distribution of gene variants was compared between the obese group and the healthy control group. In addition, their associations with clinical and laboratory parameters were evaluated among adolescents with obesity.

Results: No significant association was found between the iNOS rs1060826 and eNOS rs1799983 gene variants and obesity, or between the eNOS 27-bp VNTR variant and the presence of NAFLD. However, in the obese group, particularly among individuals with NAFLD, the iNOS rs1060826 GG genotype was associated with lower diastolic blood pressure (DBP) (p=0.011). Evaluation of clinical and laboratory parameters showed that individuals carrying the eNOS rs1799983 TT genotype in the NAFLD-positive group tended to have higher insulin resistance, as assessed by HOMA-IR (p=0.051).

Conclusion: No significant difference was observed in the genotype distributions of the three functional NOS-related gene variants between adolescents with obesity and healthy controls. However, the association of the iNOS rs1060826 GG genotype with lower DBP, together with the tendency toward higher HOMA-IR levels among NAFLD-positive individuals carrying the eNOS rs1799983 TT genotype, suggests that NOS gene variants may play a role in cardiometabolic processes related to obesity and NAFLD. In particular, the iNOS rs1060826 variant may be considered an important genetic variant that could influence the regulation of diastolic blood pressure through its potential effects on nitric oxide production.

Keywords: Obesity, Nitric Oxide Synthase, Functional Gene Variant, NAFLD, DNA

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INVESTIGATION OF VDR GENE VARIANTS IN ADOLESCENTS WITH NAFLD

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Aim: The aim of this study was to compare Vitamin D Receptor (VDR) gene variants in adolescents with non-alcoholic fatty liver disease (NAFLD) and healthy controls, and to evaluate the possible effects of these variants on clinical and laboratory parameters.

Material & Method: This cross-sectional study included overweight/obese individuals aged 10–19 years and healthy controls. All participants underwent abdominal ultrasonography and were classified as NAFLD (+) or NAFLD (-). Clinical evaluation included measurements of BMI, waist circumference, systolic blood pressure (SBP), and diastolic blood pressure (DBP). Laboratory parameters included HbA1c, HOMA-IR, liver function tests, lipid profile, renal function tests, thyroid function tests, and cortisol levels. Genomic DNA samples isolated from peripheral blood were genotyped for the VDR rs731236 (TaqI), rs2228570 (FokI), and rs1544410 (BsmI) variants using the PCR-RFLP method.

Results: A total of 171 individuals with a mean age of 14.2±2.5 years were included in the study; 109 were overweight/obese and 62 were healthy controls. Waist circumference, GGT, total cholesterol, and LDL-cholesterol levels were significantly higher in NAFLD(+) individuals compared with NAFLD(-) individuals. Among overweight/obese individuals without NAFLD, BMI, waist circumference, TSH, and GGT levels were higher than those in healthy controls. No significant differences were observed between the overweight/obese group and healthy controls in terms of genotype or allele frequencies of the three investigated VDR gene variants. Within the overweight/obese group, SBP was lower in individuals carrying the rs1544410 GG and rs731236 TT genotypes. BMI was significantly lower in individuals with the rs2228570 CC genotype, while cortisol levels were significantly lower in those with the rs731236 CC genotype.

Conclusion: The VDR rs731236, rs2228570, and rs1544410 variants did not show significant differences in genotype or allele distribution between overweight/obese individuals and healthy controls. However, these variants may be associated with blood pressure, BMI, and cortisol levels in overweight/obese adolescents.

Keywords: NAFLD, Vitamin D Receptor, Obesity, Adolescent, DNA

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EVALUATION OF GENETIC TESTING RESULTS IN PATIENTS PRESENTING WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER: A SINGLE-CENTER EXPERIENCE

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Aim: Attention-deficit hyperactivity disorder (ADHD) is one of the most common neurodevelopmental disorders of childhood, with a highly heterogeneous etiology. Recent advances in genetic diagnostic methods have contributed to a better understanding of the genetic basis underlying neurodevelopmental and systemic findings accompanying ADHD. This study aimed to evaluate the diagnostic contribution of genetic investigations in patients presenting with ADHD.

Material & Method: In this retrospective study, patients referred to the pediatric genetics outpatient clinic with findings of ADHD were evaluated. Chromosomal microarray analysis (CMA), clinical exome sequencing (CES), and targeted gene analyses were performed in selected cases. Detected variants were classified according to ACMG criteria.

Results: Genetic investigations revealed clinically significant findings in a considerable proportion of patients. Pathogenic copy number variants (CNVs) involving chromosomal regions 2p16.3, Xp11.22, Xq25, 16p11.2, 16p13.3, 16p13.11, and 18p11.3 were identified in seven patients. In addition, pathogenic or likely pathogenic variants were detected in the ANKRD11, SHANK2, MYPN, POGZ, and CACNA1A genes. One patient harbored a homozygous missense variant in ZNF407, and another patient had a marker chromosome. A deletion involving the DMD gene was detected in one patient presenting with ADHD, who also had elevated creatine kinase levels. Variants of uncertain significance (VUS) were identified in the CNOT3, SETBP1, TSC1, and FGF14 genes in four patients. ADHD was frequently accompanied by intellectual disability, speech disorder, epilepsy, dysmorphic facial features, and congenital anomalies.

Conclusion: The underlying genetic etiology in patients presenting with ADHD is highly heterogeneous. The diagnostic yield of genetic investigations increases particularly when accompanied by neurodevelopmental or systemic findings. ADHD may represent a component of the behavioral phenotype in genetic disorders such as Duchenne muscular dystrophy and tuberous sclerosis. Careful evaluation of behavioral phenotypes can significantly contribute to the recognition of underlying genetic diseases.

Keywords: Attention-deficit hyperactivity disorder; Genetic etiology; Copy number variation; Neurodevelopmental disorders;

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BIOINFORMATIC ANALYSIS OF DIFFERENTIAL GENE EXPRESSION IN PRIMARY OBSTRUCTIVE MEGAURETER AND VESICOURETERAL REFLUX

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Aim: Primary obstructive megaureter (POM) and vesicoureteral reflux (VUR) are two important urinary system diseases in childhood characterized by ureteral dilatation and clinically similar findings. However, the underlying molecular mechanisms of these two diseases are thought to be different. In this study, we aimed to evaluate differential gene expression profiles between POM and VUR cases using bioinformatic methods and to investigate potential molecular and genetic mechanisms that may contribute to differential diagnosis.

Material & Method: Gene expression data were obtained from the GSE195849 series in the NCBI GEO database (n=12). Differential gene expression analysis was performed by comparing primary VUR and obstructive megaureter groups (adj.P.Val < 0.05). Only genes showing increased expression in the primary VUR group (logFC > 0) were evaluated. Significant genes were analyzed for protein–protein interaction networks using the STRING database, and the MCL clustering algorithm was applied to identify functional modules within the network.

Results: Analysis revealed significant differences in gene expression profiles between the POM and VUR groups. In the VUR group, expression levels of MMP3, MMP12, and FCGR3A, which are associated with extracellular matrix remodeling and inflammatory processes, were found to be higher compared to the POM group. In contrast, some genes showed higher expression in the POM group.

Conclusion: Underlying molecular profiles may differ in POM and VUR presenting with ureteral dilatation. These findings may contribute to molecular-based diagnostic approaches in pediatric urinary system diseases. In the future, with the accumulation of more data and larger-scale studies, molecular-based monitoring and prognostic evaluation of pediatric urinary system diseases may become possible.

Keywords: Vesicoureteral reflux, Primary obstructive megaureter, Bioinformatics, Differential gene expression, Pediatric urology

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PREDICTORS OF ARTHROPATHY IN PROPHYLAXIS-TREATED HEMOPHILIA PATIENTS: A RETROSPECTIVE COHORT STUDY

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Aim: Although prophylactic factor replacement therapy reduces bleeding frequency in hemophilia patients, joint damage may continue to progress in some individuals. This study aimed to evaluate the determinants of arthropathy development in hemophilia patients receiving prophylaxis.

Material & Method: A total of 99 patients under 25 years of age with hemophilia A and B followed between 2000 and 2018 were retrospectively analyzed. Demographic characteristics, disease severity, duration of prophylaxis, annual bleeding rate (ABR), annual joint bleeding rate (AJBR), and presence of arthropathy were assessed. Logistic regression and correlation analyses were performed to identify factors associated with arthropathy.

Results: Of the patients, 76.8% had hemophilia A and 23.2% had hemophilia B. Despite significant differences in baseline factor levels between disease severity groups, ABR and AJBR values were similar across groups under prophylaxis. Age and duration of follow-up were significantly associated with arthropathy (OR: 1.28, p=0.03 and OR: 1.26, p=0.009, respectively), whereas no significant association was found between ABR or AJBR and arthropathy. A positive correlation was observed between follow-up duration and arthropathy (Spearman rho=0.301, p=0.012). The multivariable model demonstrated high discriminatory performance (AUC-ROC=0.914).

Conclusion: In hemophilia patients receiving prophylaxis, arthropathy development is associated with cumulative disease burden and duration of exposure rather than current bleeding frequency. These findings underscore the critical importance of early-initiated and uninterrupted prophylaxis in preserving long-term joint health.

Keywords: prophylaxis, arthropathy, joint damage, hemophilia

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PROFOUNDLY ACCELERATED IMMUNE AGING IN INHERITED METABOLIC DISEASES: IMMUNOPHENOTYPIC EVIDENCE FROM SEVEN CASES

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Aim: Biological ageing is shaped by metabolic stress and chronic antigenic burden in addition to chronological age. While premature immune ageing is recognised in chronic inflammatory disorders, its presence in severe inherited metabolic diseases remains poorly characterised. This study investigates immunosenescence- and inflammaging-related immune alterations in this underexplored population.

Material & Method: This cross-sectional phenotypic study included seven patients with high-burden IMDs, including mitochondrial neurogastrointestinal encephalomyopathy (MNGIE), methylmalonic acidemia (MMA), propionic acidemia (PA), Oxidative phosphorylation disorder(OXPHOS) and lysinuric protein intolerance (LPI). All patients experienced frequent metabolic decompensation (> 5 crises/year), with evaluations during clinically stable, infection-free periods of at least one month, and CMV-seropositive excluded to minimise confounding. Systemic inflammatory biomarkers derived from complete blood count included the Systemic Immune-Inflammation Index (SII), neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), and lymphocyte-to-monocyte ratio (LMR). Lymphocyte immunophenotyping included CD4/CD8 ratio assessment. Reference ranges were NLR 1.0–3.0, PLR 50–150, SII 300–600, LMR 3.0–5.0, and CD4/CD8 ratio 1.0–3.0. Immune Risk Phenotype (IRP) was defined as CD4/CD8 ≤1.00, with inflammatory risk thresholds set at SII > 900 and PLR > 150.

Results: Immune alterations consistent with premature immune ageing were observed across the cohort. Baseline demographic, clinical and immunosenescence biomarker characteristics of the study population are summarised in Table 1. A patient with MNGIE showed marked systemic inflammation (SII 1097.1, PLR 210). A patient with MMA fulfilled IRP criteria with a CD4/CD8 ratio of 1.00, indicating age-like immune remodeling. A patient with LPI exhibited reduced LMR (2.33), suggestive of impaired immune homeostasis. Overall, findings indicated persistent low-grade inflammation and dysregulated immune balance consistent with an inflammaging-like phenotype despite young chronological age.

Table 1. Baseline Demographic, Clinical and Immunosenescence Biomarker Characteristics of the Study Population

Patient Initials	Age	Disease	NLR (Neutrophil-to-Lymphocyte Ratio)	PLR (Platelet-to-Lymphocyte Ratio)	SII (Systemic Immune-Inflammation Index)	LMR (Lymphocyte-to-Monocyte Ratio)	CD4/CD8 Ratio
Case 1	20	MNGIE	2.43	**210**	**1097.10**	3.25	3.21
Case 2	26	MMA	1.48	120	514.22	13.99	**1.00**
Case 3	26	MMA	1.43	110	502.50	16.56	1.07
Case 4	23	MMA	2.71	90	436.22	4.46	1.23
Case 5	18	LPI	1.84	60	299.86	**2.33**	2.19
Case 6	2	PA	0.32	140	240.77	6.74	1.87
Case 7	9	OXPHOS	0.50	100	98.13	17.52	1.07

MNGIE: Mitochondrial NeuroGastroIntestinal Encephalomyopathy MMA: MethylMalonic Acidemia PA: Propionic Acidemia LPI: Lysinuric Protein Intolerance OXPHOS: OXidative PHOSphorylation disorder

Conclusion: Severe IMDs with recurrent metabolic instability may be associated with immune alterations resembling accelerated immunosenescence, independent of age. Readily available inflammatory indices and lymphocyte subset profiling may serve as accessible markers for identifying patients at risk of premature immune ageing. Larger prospective studies are warranted to validate these observations and clarify their clinical implications.

Keywords: Inherited metabolic diseases, Accelerated immune ageing, Inflammaging, Lymphocyte subsets, Systemic immune-inflammation index(SII)

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CLINICAL AND LABORATORY FOLLOW-UP DATA IN PEDIATRIC PATIENTS WITH SMA RECEIVING NUSINERSEN TREATMENT

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Aim: This study aimed to evaluate clinical and laboratory follow-up data of pediatric patients with spinal muscular atrophy (SMA) receiving nusinersen, including laboratory parameters, safety data, and clinical characteristics monitored during treatment.

Material & Method: Forty-four patients followed for SMA in our hospital were retrospectively evaluated. The main analysis group consisted of 29 nusinersen-treated patients. Demographic characteristics, SMN2 copy number, treatment initiation age, respiratory and nutritional status, complete urinalysis findings, platelet counts, serious adverse events, and motor function scores were recorded.

Results: Among 29 patients, 19 (65.5%) were male and 10 (34.5%) female. SMN2 copy number was two in 22 patients (75.9%) and three in seven (24.1%). Median treatment initiation age was 23 days. Overall, 80.8% were followed on room air; rates were 73.7% in patients with two SMN2 copies and 100% in those with three copies. Patients requiring respiratory support received noninvasive ventilation or tracheostomy support. Complete urinalysis follow-up was performed in 28 patients, and no treatment modification was required due to urinalysis findings. No marked thrombocytopenia or serious laboratory toxicity was observed. In patients with motor function data, median 6–12-month CHOP INTEND score was 59.5.

Conclusion: Clinical and laboratory safety monitoring in pediatric SMA patients receiving nusinersen remained largely stable and consistent with the literature. The first treatment age of 23 days was similar to United States data reporting treatment access within 20–30 days. No serious renal adverse events, marked thrombocytopenia, or laboratory abnormalities requiring treatment modification were detected, consistent with Nagarajan et al. Similar to De Vivo et al., earlier treatment tended to be associated with better motor outcomes. These findings suggest that nusinersen is well tolerated and emphasize early treatment. Larger prospective studies are needed.

Keywords: Nusinersen, pediatric patient, spinal muscular atrophy

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CLINICAL AND GENETIC CHARACTERISTICS OF PEDIATRIC FMF ON LOW-DOSE COLCHICINE

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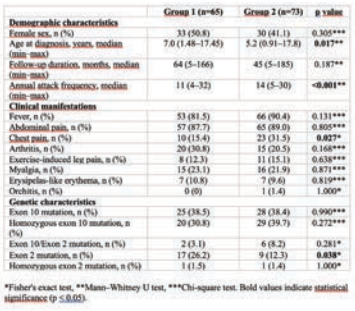
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Aim: Familial Mediterranean fever (FMF) is the most common monogenic autoinflammatory disease characterized by recurrent inflammatory attacks. Although colchicine is the cornerstone of treatment for disease control and prevention of amyloidosis, maintenance dose requirements may vary among patients. This study aimed to evaluate the clinical and genetic characteristics associated with colchicine dose requirement in clinically controlled pediatric FMF patients.

Material & Method: Patients younger than 18 years who fulfilled the Yalçınkaya–Özen and/or Eurofever/PRINTO criteria, had an International Severity Scoring System for Familial Mediterranean Fever (ISSF) score ≤2, and had no change in colchicine dose for at least two years were included. Patients were divided into two groups according to age-adjusted colchicine dose: low-dose colchicine (Group 1) and standard-dose colchicine (Group 2).

Results: A total of 138 patients were included (Group 1: n=65; Group 2: n=73). There were no significant differences between the groups regarding sex distribution or follow-up duration (p=0.305 and p=0.187, respectively). Age at diagnosis was higher in Group 1 (p=0.017), whereas the annual number of attacks was greater in Group 2 (p < 0.001). Chest pain was significantly more frequent in Group 2 (p=0.027). In genetic analyses, the frequency of exon 10 mutations was comparable between the groups (p=0.990), while exon 2 mutations were more common in Group 1 (p=0.038) (Table 1). The most frequent MEFV mutation was heterozygous M694V, and the overall MEFV mutation distribution did not differ significantly between the groups (p=0.681).

Table 1. Clinical and Genetic Characteristics of Patients with Familial Mediterranean Fever According to Colchicine Dose



	Group 1 (n=65)	Group 2 (n=73)	p value
Demographic characteristics			
Female sex, n (%)	33 (50.8)	30 (41.1)	0.305***
Age at diagnosis, years, median (min–max)	7.0 (1.48–17.45)	5.2 (0.91–17.8)	**0.017****
Follow-up duration, months, median (min–max)	64 (5–166)	45 (5–185)	0.187**
Annual attack frequency, median (min–max)	11 (4–32)	14 (5–30)	**<0.001****
Clinical manifestations			
Fever, n (%)	53 (81.5)	66 (90.4)	0.131***
Abdominal pain, n (%)	57 (87.7)	65 (89.0)	0.805***
Chest pain, n (%)	10 (15.4)	23 (31.5)	**0.027***
Arthritis, n (%)	20 (30.8)	15 (20.5)	0.168***
Exercise-induced leg pain, n (%)	8 (12.3)	11 (15.1)	0.638***
Myalgia, n (%)	15 (23.1)	16 (21.9)	0.871***
Erysipelas-like erythema, n (%)	7 (10.8)	7 (9.6)	0.819***
Orchitis, n (%)	0 (0)	1 (1.4)	1.000*
Genetic characteristics			
Exon 10 mutation, n (%)	25 (38.5)	28 (38.4)	0.990***
Homozygous exon 10 mutation, n (%)	20 (30.8)	29 (39.7)	0.272***
Exon 10/Exon 2 mutation, n (%)	2 (3.1)	6 (8.2)	0.281*
Exon 2 mutation, n (%)	17 (26.2)	9 (12.3)	**0.038***
Homozygous exon 2 mutation, n (%)	1 (1.5)	1 (1.4)	1.000*

*Fisher's exact test, **Mann–Whitney U test, ***Chi-square test. Bold values indicate statistical significance ($p < 0.05$).

Conclusion: Low-dose colchicine may provide adequate disease control in selected pediatric FMF patients. Colchicine dosing strategies should be individualized, considering the risk of subclinical inflammation and amyloidosis.

Keywords: Familial Mediterranean fever; colchicine; MEFV mutation

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IDENTIFICATION OF A NOVEL METABOLIC SIGNATURE AND DIAGNOSTIC BIOMARKER PANEL FOR ORGANIC ACIDEMIAS USING UNTARGETED METABOLOMICS

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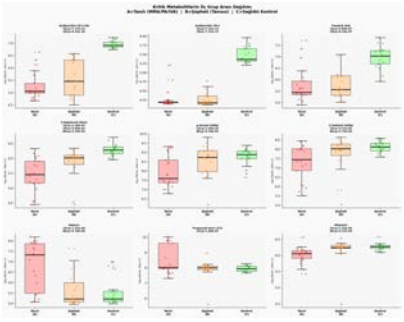
Aim: Organic acidemias (OAs), including methylmalonic acidemia (MMA), propionic acidemia (PA), and isovaleric acidemia (IVA), are rare but life-threatening inherited metabolic disorders. Their clinical manifestations are nonspecific, particularly during the early stages of disease, which may delay diagnosis and increase the risk of irreversible neurological injury. This study aimed to characterize metabolomic differences among patients with confirmed OAs (Group A), clinically suspected but undiagnosed individuals (Group B), and healthy controls (Group C), identify potential diagnostic biomarkers, and determine whether suspected cases exhibit metabolic signatures consistent with OAs.

Material & Method: The study cohort comprised 60 participants: 21 patients with confirmed OAs, 19 clinically suspected but undiagnosed individuals, and 20 healthy controls. Untargeted plasma metabolomic profiling was performed using ultra-high-performance liquid chromatography coupled with tandem mass spectrometry (UHPLC–MS/MS) on an Orbitrap 240 mass spectrometer (Thermo Fisher Scientific) operated in data-dependent acquisition (DDA) mode. Metabolites differing significantly between groups were evaluated using a hierarchical scoring system ranging from 1 to 5. This system ranked candidate biomarkers according to their statistical significance ($p < 0.05$) and their capacity to distinguish both patient groups from the healthy control group.

Results: Compared with healthy controls, 287 metabolites were significantly altered in Group A and 56 in Group B. The findings demonstrated that clinically suspected cases exhibited a distinct metabolic profile sharing features with the confirmed OA group. Among the evaluated metabolites, 3-heptenoylglycine emerged as the most robust shared biomarker, receiving the highest score (Score5). Its levels were significantly decreased in both patient groups relative to controls and differed between Groups A and B. Four medium- to long-chain acylcarnitines—C8:1-OH, C8:1, C6:1, and C9-oxo—and fumaric acid were also markedly decreased in both OA-related groups. These alterations may reflect secondary disturbances in carnitine metabolism, fatty-acid oxidation, and tricarboxylic acid cycle function. In addition, increased concentrations of the gut microbiome-derived metabolites p-cresol sulfate and 3-indoxyl sulfate in Group A may indicate the

influence of long-term dietary patterns, altered intestinal microbial metabolism, or disease-related metabolic adaptation. Distributions of key metabolites are presented in Figure 1.

Figure 1. Distribution of key metabolites among patients with confirmed organic acidemias (Group A), clinically suspected but undiagnosed individuals (Group B), and healthy controls (Group C).



Conclusion: Untargeted metabolomics revealed clinically relevant metabolic disturbances in patients with confirmed OAs and in clinically suspected but undiagnosed individuals. The shared abnormalities observed in Group B suggest biochemical alterations compatible with impaired mitochondrial energy metabolism, although diagnostic confirmation remains necessary. A candidate four-biomarker panel comprising 3-heptenoylglycine, two selected acylcarnitines, and fumaric acid may provide a complementary approach to clinical and biochemical screening strategies. Further validation in larger, independent cohorts is required before this panel can be incorporated into diagnostic practice.

Keywords: Organic Acidemia, Untargeted Metabolomics, Biomarker Discovery

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HETEROZYGOUS MUTATION IN THE GSD-1B GENE: TRANSITION FROM CLASSICAL LOSS OF FUNCTION TO GLYCOSYLATION DEFECT

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Aim: Biallelic mutations in the SLC37A4 gene are classically associated with Glycogen Storage Disease Type 1b (GSD-1b). However, in recent years, it has been demonstrated that specific heterozygous variants in the G6PT1 protein alter intracellular localization, redirecting it from the endoplasmic reticulum to the Golgi apparatus. This process disrupts the N-glycosylation pathway, leading to a phenotype resembling congenital disorders of glycosylation (CDG). This study presents an atypical case of SLC37A4-CDG caused by the rare p.Gly335Glu variant

Material & Method: A forty-day-old female patient was evaluated for growth retardation and elevated liver enzymes (ALT: 92 U/L, AST: 125 U/L, GGT: 140 U/L). Physical examination revealed inverted nipples and gluteal atrophy, which are characteristic phenotypic markers for CDG. Notably, neutropenia or hypoglycemia, which are typically consistent with GSD-1b, were not observed. An increase in growth velocity was achieved with medium-chain triglyceride (MCT) supplementation.

Results: Genetic analysis identified a heterozygous c.1004G > A (p.Gly335Glu) variant in the SLC37A4 gene. Transferrin isoelectric focusing (TIEF) analysis revealed a "right-shifted" profile characterized by a decrease in the tetrasialo fraction (45.86%) and a significant increase in the pentasialo fraction (51.14%), which differs from classical CDG patterns. This profile remained stable during a follow-up analysis six months later (49.43% pentasialo).

Conclusion: It is hypothesized that variants affecting specific regions of the G6PT1 protein lead to the relocalization of the mutant protein to the Golgi, thereby impairing the glycosylation process. Conversely, the classical GSD phenotype is suppressed because the wild-type allele maintains functional glucose transport within the endoplasmic reticulum. The p.Gly335Glu variant and the accompanying pentasialo-dominant transferrin pattern support the presence of a genuine glycosylation defect. SLC37A4-CDG should be considered in the differential diagnosis of neonates with unexplained liver enzyme elevation and specific phenotypic clues like inverted nipples, even in the absence of GSD findings

Keywords: SLC37A4, CDG, GSD-1b, Heterozygosity, p.Gly335Glu

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FROM HIP PAIN TO EXTENSIVE ABSCESS FORMATION

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Aim: Staphylococcus aureus is a leading cause of invasive bacterial infections in childhood, predisposed to causing soft tissue and deep-seated infections. Although musculoskeletal and soft tissue infections are uncommon in pediatric patients, their potentially severe clinical course requires early diagnosis and targeted therapy.

Case: A 14-year-old boy was admitted to our infectology department because of left-sided lumbar pain with limited range of motion of the left hip.

Results: Laboratory investigations showed mildly elevated inflammatory markers with a normal white blood cell count. Hip radiography excluded traumatic injury and osseous abnormalities. Soft tissue ultrasound demonstrated mild inhomogeneity of the left gluteal muscle, raising suspicion of gluteal myositis. Neurological examination revealed no focal neurological deficits or muscle weakness. Following orthopedic evaluation, MRI was performed and demonstrated moderate inflammatory changes of the left sacroiliac joint accompanied by myositis involving the left iliacus muscle. Following blood culture sampling, empiric intravenous cefazolin therapy was initiated. Within 24 hours, blood cultures became positive, while the patient's pain rapidly worsened, accompanied by significant elevation of inflammatory markers. On the third hospital day, fever developed and inflammatory markers further increased. Blood cultures confirmed methicillin-susceptible Staphylococcus aureus (MSSA). Repeated MRI demonstrated extensive progression with a multiloculated retro-infraperitoneal abscess formation behind the left iliopsoas muscle and a narrow epidural abscess in the sacral region. On the fifth hospital day surgical drainage was performed. Follow-up MRI showed significant regression. Intravenous cefazolin therapy was continued for 14 days after source control and negative blood cultures, followed by oral clindamycin. Combined surgical intervention, antimicrobial treatment and physiotherapy resulted in gradual clinical improvement.

Conclusion: This case highlights the rapid progression and extensive abscess formation that may occur in pediatric MSSA infections despite initially mild and nonspecific symptoms. Early MRI imaging, targeted antibiotic therapy, and adequate surgical source control are essential for favorable outcomes.

Keywords: Iliopsoas abscess, Musculosceletal infection, Methicillin-susceptible Staphylococcus aureus (MSSA)

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TEMPORAL CLUSTERING OF MRSA COLONIZATION AND BLOODSTREAM INFECTIONS IN PRETERM NEONATES: A SINGLE-CENTER CASE SERIES

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Aim: Methicillin-resistant Staphylococcus aureus (MRSA) is an important healthcare-associated pathogen that can cause both colonization and invasive infections in neonatal intensive care units. This study aimed to evaluate the clinical characteristics of MRSA-positive neonates identified during a defined period in our unit and to assess the infection control process implemented during this period.

Case: This retrospective observational study included neonates diagnosed with MRSA colonization or bloodstream infection during a defined period in a tertiary neonatal intensive care unit. Demographic characteristics, microbiological findings, accompanying risk factors, administered treatments, and clinical outcomes were retrospectively evaluated. MRSA growth in nasal swab and tracheal aspirate cultures was defined as colonization, whereas MRSA growth in blood culture was considered invasive infection.

Results: During the study period, MRSA positivity was identified in a total of 10 preterm neonates. MRSA was isolated from blood cultures in 5 patients, nasal swab cultures in 4 patients, and tracheal aspirate culture in 1 patient. The median gestational age was 28 weeks (24–34), and the median birth weight was 1120 g (520–1960). Most patients with bloodstream infection were extremely preterm and very low birth weight infants. MRSA positivity was detected within the first two weeks of life in the majority of cases. Systemic treatment was administered to 5 patients with invasive infection. Three patients died. Eradication was achieved following intranasal mupirocin treatment in patients with nasal colonization. The temporal proximity of MRSA-positive cultures and overlapping hospitalization periods suggested a possible MRSA cluster within the unit.

Conclusion: In our study, the temporal clustering of MRSA-positive cultures associated with both colonization and invasive infection in preterm neonates suggested an MRSA cluster within the unit. Our findings indicate that active surveillance cultures, early infection control measures, and decolonization strategies may play a critical role in the early recognition and containment of MRSA transmission among high-risk preterm neonates.

Keywords: Methicillin-Resistant Staphylococcus aureus, Premature, Colonization, Cross Infection, Bloodstream Infection

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COULD IT HAVE BEEN PREVENTED?

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Aim: Acute necrotizing encephalopathy (ANE) is an extremely rare neurological complication of influenza infection in children. Increasing evidence in recent years has highlighted the potential importance of influenza vaccination in the prevention of this severe condition. Our aim is to present a case of influenza-associated ANE, highlighting its clinical presentation, radiological findings, therapeutic management, and the importance of early intervention.

Case: We report the case of a previously healthy 6-year-old girl who developed low-grade fever followed by rapidly progressive impairment of consciousness and generalized seizures. Following the seizures, she failed to regain consciousness. After repeated administration of midazolam, she was intubated and admitted to our Pediatric Intensive Care Unit. Initial brain magnetic resonance imaging demonstrated extensive intracranial lesions characteristic of acute necrotizing encephalopathy. Lower respiratory tract PCR testing confirmed Influenza A infection. Following admission, the patient received a loading dose of levetiracetam and, within 24 hours she was started on pulse corticosteroid therapy and intravenous immunoglobulin. On the second day of hospitalization, a single dose of tocilizumab was administered.

Results: After 16 days of intensive care management, she was transferred to our Department of Neurology. At the time of transfer, the child exhibited severe encephalopathy and flaccid tetraparesis. Under targeted therapy, her level of consciousness gradually improved; she began to communicate using a few words and, with regular physiotherapy, started to actively move her extremities, which had become mildly spastic. Hyperkinetic involuntary movements also emerged during recovery. The patient had not received seasonal influenza vaccination prior to the onset of illness.

Conclusion: This case highlights a rare but severe neurological complication of influenza infection and emphasizes the importance of early recognition of presenting symptoms and timely initiation of immunomodulatory therapy. Furthermore, it underlines the presumed preventive role of influenza vaccination in reducing the risk of acute necrotizing encephalopathy.

Keywords: Acute necrotizing encephalopathy, Influenza A, Influenza vaccination, Encephalopathy

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PEDIATRIC ECHINOCOCCOSIS - A RARE DISEASE AND EVEN RARER DIAGNOSIS

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Aim: Cystic echinococcosis is a globally widespread zoonosis caused by the infection of various organs by the larvae of the Echinococcus granulosus parasite. According to 2023 data from the European Centre for Disease Prevention and Control, the number of reported echinococcosis cases in the European Union showed a marked increase compared to previous years.

Case: A four year old boy presented to our emergency department with a three-week history of constipation, low-grade fever, coughing, and a single episode of hemoptysis.Physical examination revealed diminished breath sounds over the left lung, hepatomegaly, and a round mass palpable suprapubically. Chest X-ray showed a round mass in the lower left lobe. Ultrasound demonstrated pleural effusion and a cystic mass, along with hepatomegaly, three cystic masses of similar morphology in the liver and one adjacent to the urinary bladder.The radiological findings raised the suspicion of echinococcosis; therefore, the child was admitted to the infectious disease department. MRI scans were consistent with the characteristic findings in echinococcosis. Oral albendazole was initiated, however, during the observational period the patient's cough worsened, and bronchial leakage of the cyst was suspected.Surgical removal of the cysts, prioritizing the removal of the pulmonary lesion, was decided upon, with the abdominal cysts being removed at a later date.To eradicate any protoscolices that may have entered the bloodstream during surgery, a two-week postoperative course of praziquantel therapy was administered on both occasions.

Results: Albendazole treatment is planned for one year from the date of the final surgery, along with laboratory and long-term radiological follow-up.

Conclusion: Based on the rising incidence currently observed in Europe, an increasing number of echinococcosis cases should be expected, including within the pediatric population. In cases of childhood echinococcosis, simultaneous involvement of the liver and lungs is not uncommon; following a prolonged asymptomatic course, it may present with abdominal complaints and respiratory symptoms.

Keywords: Cystic echinococcosis, Echinococcus granulosus, Albendazole, Praziquantel

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SEPSIS? KAWASAKI? KAWASAKI DISEASE SHOCK SYNDROME!

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Aim: Kawasaki disease (KD) is one of the most common childhood vasculitides and is the leading cause of acquired heart diseases in children in developed countries. A rare and severe form is Kawasaki disease shock syndrome (KDSS), which is characterized by hypotension and poor perfusion.

Case: A 4-month-old infant was admitted due to fever and vomiting. On examination, the infant appeared ill and pale with mild jaundice and erythema surrounding the BCG vaccination site. Non-purulent conjunctivitis was also observed. Due to hypotension, she required repeated fluid boluses. Laboratory tests showed elevated inflammatory markers, mild leukopenia, direct hyperbilirubinemia, hypoalbuminemia, hypogammaglobulinemia and prolonged INR. Empirical ceftriaxone therapy was initiated because of suspected sepsis. Subsequently, a maculopapular rash appeared. Based on the initial hypogammaglobulinemia and the suspicion of sepsis, Pentaglobin therapy was administered in addition to the antibiotic treatment. Despite this, the fever persisted, and laboratory tests showed worsening anemia and thrombocytopenia. Cardiological evaluation revealed low-voltage ECG, while echocardiography confirmed normal coronary arteries. However, elevated troponin and pro-BNP levels raised the possibility of myocarditis. Follow-up examination showed small amount of pericardial effusion. Microbiological studies were negative. Based on the persistent fever, non-purulent conjunctivitis, cheilitis, maculopapular rash and negative microbiological findings, incomplete KD was suspected. Therefore, high-dose IVIG and methylprednisolone therapy were initiated. Following the resolution of severe thrombocytopenia, ASA was added. However, persistent fever and unchanged laboratory parameters prompted a second dose of IVIG for suspected refractory KD. Although her condition improved, the fever did not resolve, inflammatory markers started to rise again, and follow-up echocardiography showed new-onset coronary artery dilatation.

Results: Based on the clinical findings, including hypotension and signs of poor perfusion, we diagnosed KDSS.

Conclusion: Coronary artery involvement occurs more frequently in KDSS than in KD. Furthermore, delayed diagnosis may have fatal consequences. Therefore, timely diagnosis and prompt initiation of treatment are essential.

Keywords: Kawasaki disease shock syndrome, Coronary dilatation

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ASSOCIATION BETWEEN C-REACTIVE PROTEIN-TO-ALBUMIN RATIO AND MORBIDITY IN INFANTS HOSPITALIZED FOR BRONCHIOLITIS

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Aim: This study aimed to evaluate the association between the C-reactive protein/albumin ratio (CAR) and clinical prognostic indicators in infants younger than 6 months who were hospitalized with a diagnosis of bronchiolitis.

Material & Method: This single-center, descriptive, retrospective study included infants aged 1–6 months who were hospitalized with a diagnosis of bronchiolitis in the General Pediatrics Clinic of Başakşehir Çam and Sakura City Hospital between January 1, 2024, and February 28, 2025. Demographic characteristics such as birth weight, gestational age, and sex, as well as clinical data including duration of oxygen therapy, length of hospital stay, presence of hyponatremia, need for non-invasive mechanical ventilation (NIV), duration of NIV, and requirement for intensive care unit (ICU) admission were retrospectively obtained from medical records.

Results: The discriminative performance of the C-reactive protein/albumin ratio (CAR) for different clinical outcomes was assessed using receiver operating characteristic (ROC) analysis. For ICU admission, the area under the curve (AUC) for CAR was 0.640, with a cut-off value of 0.131, sensitivity of 67%, and specificity of 55%. This result was statistically significant (p=0.036), with a 95% confidence interval (CI) of 0.522–0.757. For prolonged hospitalization (> 7 days), the AUC of CAR was 0.570 with a 95% CI of 0.490–0.650. Regarding the need for mechanical ventilation, ROC analysis revealed an AUC of 0.751 for CAR, with a cut-off value of 0.293, sensitivity of 60%, and specificity of 70%. This result was considered to be close to statistical significance (p=0.056), with a 95% CI of 0.524–0.977. Overall, CAR demonstrated a significant discriminative ability particularly in predicting ICU admission.

Conclusion: The findings of this study suggest that the C-reactive protein/albumin ratio may be associated with disease severity and clinical course in infants aged 0–6 months hospitalized with bronchiolitis. CAR showed a significant discriminative ability, especially in predicting ICU admission.

Keywords: Bronchiolitis, C-reactive protein, Albumin, CRP/albumin ratio, Clinical prognosis

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PREVALENCE OF ACUTE RHEUMATIC FEVER IN THE 2019 SARS-COV-2 PANDEMIC

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Aim: Enhanced masking and social distancing during the 2019 SARS-CoV-2 pandemic led to a significant decline in ARF cases.

Material & Method: "A retrospective, single-center study was conducted, encompassing patients diagnosed with ARF at a tertiary hospital over a four-year period (March 2018 – March 2022).

Results: The incidence of Acute Rheumatic Fever (ARF) worldwide ranges from 8 to 51 per 100,000 individuals. It primarily affects children between the ages of 5 and 15 following a Group A streptococcal infection. ARF and its consequence, Rheumatic Heart Disease (RHD), contribute significantly to cardiovascular morbidity and mortality in developing countries. Generally considered a disease of poverty and low socioeconomic status, RHD affects populations during their most productive years.In this context, the study analyzed 53 patients (29 males, 24 females) with a mean age of 18.1 ± 3.5 years. It was found that the vast majority (98.1%) of these patients were admitted to the hospital before March 2020, whereas only one admission was recorded in 2021, coinciding with the post-pandemic period.Upon examining clinical findings, various ECG changes, such as incomplete right bundle branch block and first-degree AV block, were observed in 30.2% of the patients. Additionally, arthritis was detected in 73.6%, and first-degree mitral regurgitation (MR) was identified in 52.8% of the cases. Regarding treatment processes, 72.9% of the patients received steroids; among those who were prescribed nonsteroidal anti-inflammatory drugs, 62.3% were treated with naproxen and 17.0% with aspirin. Furthermore, it was determined that 19 patients (35.8% of the group) received treatment for chronic heart failure (CHF), thereby substantiating the clinical course and therapeutic management of the disease with empirical data.

Conclusion: The significant decline in ARF cases during the COVID-19 pandemic, driven by masking and social distancing, underscores the importance of maintaining these measures in daily life.

Keywords: Acute rheumatic fever, SARS-CoV-2, child, hygiene, Social Distance

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EVALUATION OF VACCINE HESITANCY AMONG POSTPARTUM MOTHERS IN OUR HOSPITAL: A SINGLE-CENTER EXPERIENCE

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Aim: Vaccine hesitancy has emerged as a growing global public health concern, threatening the effectiveness of immunization programs. This study aimed to evaluate vaccine-related attitudes, the prevalence of vaccine hesitancy, and associated factors among postpartum mothers in our hospital.

Material & Method: This descriptive, cross-sectional study included 50 mothers who delivered at our center. Data were collected a structured questionnaire.

Results: Of the participants, 46% had been vaccinated, while 54% were unvaccinated or hesitant (Table 1). A significant association was found between education level and vaccination status (p=0.032), and a strong relationship was observed between belief in vaccine effectiveness and vaccination uptake (p < 0.001) (Table 2). Vaccine hesitancy was significantly higher among individuals influenced by social media (p=0.018) (Table 3). The most common reasons for hesitancy were fear of side effects and lack of trust.

Table 1. Distribution of Vaccination Status According to Maternal Age Groups

Distribution of Vaccination Status According to Maternal Age Groups			
Age Group (years)	**Vaccinated n (%)**	**Not Vaccinated n (%)**	**p-value**
18–24	4 (40%)	6 (60%)	
25–29	8 (53%)	7 (47%)	
30–34	7 (54%)	6 (46%)	
≥35	4 (33%)	8 (67%)	
Total	**23 (46%)**	**27 (54%)**	**0.412**

Table 2. Association Between Educational Level and Vaccination Status

Association Between Educational Level and Vaccination Status

Education Level	Vaccinated n (%)	Not Vaccinated n (%)	p-value
Primary School	3 (25%)	9 (75%)	
High School	7 (39%)	11 (61%)	
University	13 (65%)	7 (35%)	
Total	**23 (46%)**	**27 (54%)**	**0.032**

Table 3. Association Between Belief in Vaccine Effectiveness and Vaccination Status

Association Between Belief in Vaccine Effectiveness and Vaccination Status

Belief in Effectiveness	Vaccinated n (%)	Not Vaccinated n (%)	p-value
Yes	18 (78%)	5 (22%)	
No	2 (15%)	11 (85%)	
Undecided	3 (27%)	8 (73%)	
Total	**23 (46%)**	**27 (54%)**	**<0.001**

Conclusion: In conclusion, improving education, strengthening trust in healthcare professionals, and implementing effective communication strategies are essential to reduce vaccine hesitancy among mothers.

Keywords: Vaccine hesitancy, maternal health, immunization, vaccine confidence, public health

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PUBLIC HEALTH RELEVANCE OF SOCIAL PEDIATRICS IN TÜRKIYE: A BIBLIOMETRIC STUDY

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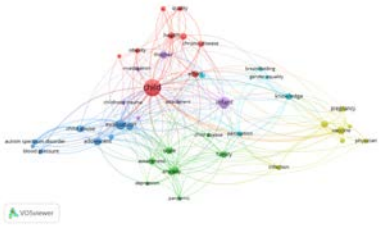
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Aim: Social pediatrics integrates children's health with their social and environmental context. It is grounded in children's rights and bridges clinical care with public health through social determinants of health. This study aims to analyze the bibliometric characteristics and thematic distribution of theses in social pediatrics in Türkiye, and to evaluate their alignment with priority areas of public health.

Material & Method: A bibliometric search was conducted in the National Thesis Center database. All theses from the Department of Social Pediatrics were evaluated. Each thesis was categorized by its main themes, scope, thesis type, and year of publication. VOSviewer was used for network analysis, and the Mann-Kendall test was used for trend analysis.

Results: A total of 56 theses published (earliest in 2009) in the Department of Social Pediatrics were analyzed. Of these, 42.9% were doctoral dissertations, 32.1% were medical specialty in Child Health and Diseases theses, and 25.0% were master's theses. The annual number of theses showed a significant increasing trend (p=0.014), with a peak in 2024 (17.9%). Regarding scope, 80.4% addressed social determinants of health or preventive approaches; 10.7% were purely clinical; and 8.9% focused only on routine child health monitoring. The most common themes were child abuse/neglect (12.5%), vaccine hesitancy (10.7%), nutrition/obesity/vitamin D/iron (10.7%), maternal mental health and child attachment (10.7%), chronic disease (10.7%), sleep problems (8.9%), screen/media exposure (7.1%), adolescent mental health/peer bullying (7.1%), and COVID-19 (7.1%). In contrast, several public health issues were minimally represented such as secondhand smoke, chemical exposure (only bisphenol A), and child health in war/disaster (1.8% each), while climate change, exposure to lead/heavy metals, child labor, and early marriage were completely absent (Figure-1).

Figure-1. Thematic network of social pediatrics theses



Conclusion: The significant increasing trend indicates growing academic interest in the field. Yet thematic concentration and the near-absence of environmental exposures reveal an important gap between social pediatrics and current public health priorities.

Keywords: Social Determinants of Health, Child Health, Public Health, Bibliometrics

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IS CACOONING AGAINST INFLUENZA A STRATEGY ONLY FOR INFANTS?

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Aim: Our aim was to assess knowledge and attitudes of parents regarding influenza infections and influenza vaccines.

Material & Method: 220 parents were enrolled between January 2024 and April 2024 to conduct this cross-sectional survey study.

Results: In addition to the 'Turkish National Immunization Programme for Children', 51.8% of index children of our study population were found to be vaccinated with any of the optional vaccines according to their parents' declarations; however, influenza vaccination rates lagged behind rotavirus and meningococcal vaccinations with 11.8%. The median 'Total Parental Knowledge Score' was 7 out of ten points in our study population. Higher influenza vaccine uptake rates in index children were observed among parents who were aware of influenza complications&vaccines and were willing to vaccinate their children with influenza vaccines; and among those who gather influenza vaccine information from pediatricians.

Conclusion: There were still knowledge gaps with regards to pediatric influenza vaccinations, even if the median parental knowledge score for influenza infections was high. Risk groups should be particularly highlighted not only by pediatricians but also by other specialties as it's a well known fact that children are the main source of transmission within a community or household. Achieving high influenza vaccination coverage among infants, children, and adolescents still remains a priority to protect them and the society in general not only against influenza complications but also against the disease.

Keywords: influenza, infection, vaccine, parental knowledge, attitude

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CLINICAL AND IMMUNOLOGICAL FEATURES OF CHILDREN PRESENTING WITH RECURRENT INFECTIONS

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Aim: Recurrent infections are a common reason for referral in pediatric practice and may represent the first manifestation of primary immunodeficiencies.However, in most cases, they are associated with non-immunological factors such as atopic diseases, environmental exposures, and age-related immune immaturity.This study aimed to evaluate the clinical and immunological characteristics of children presenting with complaints of frequent infections.

Material & Method: This retrospective study included a total of 65 pediatric patients who presented to the Pediatric Immunology and Allergy outpatient clinic within the last 3 months.Demographic characteristics, environmental exposures, clinical diagnoses,and laboratory parameters (immunoglobulin levels, lymphocyte, neutrophil, eosinophil counts, and vitamin D levels)were analyzed.Atopic status was assessed using skin prick tests,and specific allergen sensitizations. In selected patients, B-cell subgroups were evaluated using flow cytometry.

Results: The mean age was 5.67 ±3.48 years, and 69.2% were male.The most common presenting symptoms were cough (46.2%) and rhinorrhea (26.2%).Asthma was present in 50.8% of patients, and 47.7% had exposure to household cigarette smoke. Daycare attendance was reported in 43.1% of patients, and 15.4% had a sibling attending daycare.Hospitalization history was in 21.5% of patients.Immunological abnormalities were detected in 23.1% (n=15), with transient hypogammaglobulinemia of infancy being the most common diagnosis (12.3%).Atopic sensitization was in 32.3% of patients.Total IgE levels were significantly higher in patients with sensitization($p < 0.001$),while eosinophil counts showed borderline significance ($p=0.054$).In the subgroup of patients who underwent advanced immunological evaluation, the mean switched memory B-cell percentage was 76.3 ± 19.69%, and the naïve B-cell percentage was 7.60±3.69%. Inhaled corticosteroids were used in 34.4% of patients, antihistamines in 18.8%,combined antihistamine and montelukast in 14.1%,and ICS+LABA in 7.8%. Intravenous immunoglobulin was administered in 6.3% of patients.Vitamin D deficiency was detected in 30.8% of patients.

Conclusion: These findings highlight the importance of a comprehensive and multidisciplinary approach, including evaluation of immunological,environmental,and atopic factors,in children presenting with recurrent infections.

Keywords: Primary immunodeficiency, Recurrent infections, Children, Allergic disease

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RETHINKING JAUNDICE RISK FACTORS IN THE ERA OF GLOBAL MIGRATION

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Aim: To evaluate the etiological characteristics, frequencies, and clinical outcomes of newborns ≥ 35 weeks of gestation treated for indirect hyperbilirubinemia, focusing on the impact of shifting demographics and social vulnerability on disease severity.

Material & Method: This retrospective study analyzed 300 newborns (≥ 35 weeks gestation) hospitalized for indirect hyperbilirubinemia between February 2019 and March 2021. Data including clinical examinations, blood groups, direct Coombs (DC) tests, G6PD levels, and infectious markers (CRP, procalcitonin, cultures) were analyzed. Native and immigrant populations were compared to identify disparities in clinical presentation and therapeutic needs.

Results: The mean admission age was 74 hours, with a mean total bilirubin (TB) of 14.5 ± 6.4 mg/dL. Primary etiologies were hematological factors (44%), infectious causes (39%—including 8.3% urinary tract infections), and pathological weight loss (29%). ABO incompatibility was the most common hematological subgroup (44%). DC positivity was 33% overall, rising to 60% in ABO and 57% in Rh incompatibilities. Rare causes including hypothyroidism (2.3%), galactosemia (1%), pyruvate kinase deficiency (0.3%), hereditary spherocytosis (0.3%), and birth traumas (cephalohematoma 1%, adrenal hematoma 0.7%) were documented. Notably, immigrant neonates (27%) had younger mothers, higher parity, and lower hemoglobin levels, resulting in a significantly higher requirement for exchange transfusion compared to Turkish citizens (p = 0.018) (Table 1). Patients with TB ≥ 20 mg/dL showed significantly delayed admission and higher weight loss. All patients received phototherapy, 22% required IVIG, and 4% underwent exchange transfusion.

Table 1. Comparison of Turkish and Other Nationalities

Parameters	**Turkish, N = 220**	**Other, N = 80**	**p-value**
Maternal Age (years)	28 (25-33)	26 (22-30)	**0.006[2]**

Parameters	Turkish, N = 220	Other, N = 80	p-value
Gravida	2.00 (1.00-4.00)	3.00 (2.00-4.00)	**0.006**[2]
Birth Weight (grams)	3,178 (2,801-3,476)	3,200 (2,872-3,330)	0.488[2]
Birth Length (cm)	50.00 (48.00-51.00)	50.00 (48.00-51.00)	0.323[2]
Head Circumference (cm)	35.00 (34.00-36.00)	35.00 (34.00-36.00)	0.722[2]
Gestational Age (days)	268 (260-277)	266 (259-280)	0.708[2]
Consanguineous Marriage	36 (16%)	17 (21%)	0.326[3]
Birth Weight by GA			0.751[4]
SGA	14 (6.4%)	3 (3.8%)	
AGA	186 (85%)	71 (89%)	
LGA	20 (9.1%)	6 (7.5%)	
Age at Admission (hours)	60 (20-120)	41 (10-96)	0.060[2]
Admission Hemoglobin (g/dL)	17.10 (15.10-19.12)	16.05 (14.10-18.12)	**0.016**[2]
Admission Hematocrit (%)	49 (42-54)	47 (41-51)	0.051[2]
Admission TB (mg/dL)	14.7 (9.1-20.2)	12.9 (8.3-18.2)	0.165[2]
Adm. Corrected Reticulocyte (%)	1.9 (0.0-5.4)	2.8 (0.6-6.2)	0.264[2]
Discharge Hemoglobin (g/dL)	15.40 (13.40-17.30)	14.05 (11.67-15.88)	**<0.001**[2]
Discharge Hematocrit (%)	44 (38-49)	40 (35-45)	**0.001**[2]

Parameters	**Turkish, N = 220**	**Other, N = 80**	**p-value**
Discharge TB (mg/dL)	9.2 (6.8-11.1)	8.8 (5.3-10.5)	0.052[2]
Hematological Etiology			0.251[3]
Absent	96 (44%)	29 (36%)	
Present	124 (56%)	51 (64%)	
Sepsis			0.431[3]
Absent	164 (75%)	56 (70%)	
Present	56 (25%)	24 (30%)	
Pathological Weight Loss			0.200[3]
No	151 (69%)	61 (76%)	
Yes	69 (31%)	19 (24%)	
Phototherapy Duration (days)	2.00 (2.00-3.00)	2.00 (2.00-3.00)	0.228[2]
IVIG			0.262[3]
Not Received	168 (76%)	56 (70%)	
Received	52 (24%)	24 (30%)	
Exchange Transfusion			**0.018[4]**
No	215 (98%)	73 (91%)	
Yes	5 (2.3%)	7 (8.8%)	
Length of Stay (days)	7.0 (4.0-10.0)	7.5 (5.0-10.0)	0.192[2]
Readmission			0.730[4]

Parameters	Turkish, N = 220	Other, N = 80	p-value
No	213 (97%)	77 (96%)	
Yes	7 (3.2%)	3 (3.8%)	

Notes: [1] Median (25th-75th percentiles); n(%) [2] Mann-Whitney U Test [3] Pearson Chi-square Test [4] Fisher's Exact Test Abbreviations: GA (Gestational Age), TB (Total Bilirubin), SGA (Small for Gestational Age), AGA (Appropriate for Gestational Age), LGA (Large for Gestational Age).

Conclusion: Severe hyperbilirubinemia remains a critical risk, emphasizing that kernicterus should be a "never-event." Current risk assessment models must adapt to global migration trends. Standardized follow-up within 48–72 hours post-discharge, prenatal breastfeeding education, and specialized screening for disadvantaged groups are essential to mitigate clinical vulnerability and intensive intervention requirements.

Keywords: Indirect hyperbilirubinemia, Neonatal Jaundice, Migration, Exchange Transfusion

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RELATIONSHIP OF HALP AND m-HALP SCORES WITH OXYGEN REQUIREMENT IN HOSPITALIZED INFANTS WITH ACUTE BRONCHIOLITIS

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Aim: The HALP and modified HALP (m-HALP) scores are indices of albumin, haemoglobin, platelets and lymphocytes, representing systemic inflammation and physiological status and providing prognosis information.This study aimed to evaluate the association of HALP and m-HALP scores with oxygen requirement in hospitalised infants aged 1–24 months with acute bronchiolitis.

Material & Method: This retrospective observational study included patients admitted with bronchiolitis between January 2024 and January 2026. (Figure 1) Participants were categorized based on their clinical requirement for oxygen supplementation. Data collected encompassed demographics, admission SpO2 levels, C-reactive protein, radiological findings, as well as HALP and m-HALP indices. Group comparisons were performed using non-parametric and categorical statistical tests. The discriminatory ability of the variables was evaluated through ROC curve analysis, and multivariable regression models were applied to adjust for potential confounding factors.

Results: Oxygen therapy was required in 163 of 315 patients. The patient selection and study flow are presented in Figure 1. Patients needing oxygen had significantly lower HALP scores (p = 0.020) (Figure 2). However, there was no significant difference in m-HALP score (p=0.124) (Table 1). Results of the ROC curve analysis showed that HALP had a statistically significant but weak discrimination ability (AUC=0.575; 95% CI: 0.512-0.638), and m-HALP had no significant predictive ability (AUC=0.550; 95% CI: 0.486-0.614) (Table 2). In multivariate studies, HALP was associated with the need for oxygen, but m-HALP was not superior to the original index (Table 3).

Figure 1. Study flow diagram

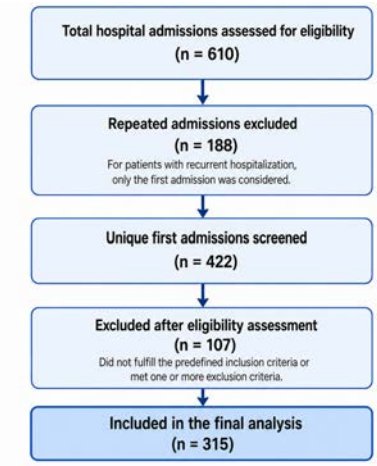


Figure 2. ROC Analysis of HALP and m-HALP Scores for Predicting Oxygen Requirement

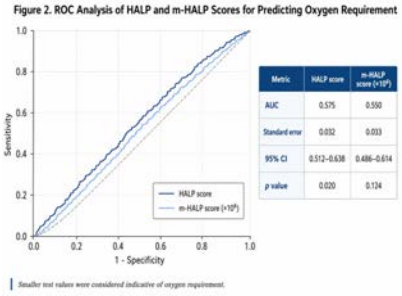


Table 1. Baseline clinical and laboratory characteristics according to oxygen requirement

Variable	No oxygen requirement n=152	Oxygen requirement n=163	p value
Age, months	6.0 (3.0–14.25)	7.0 (3.0–14.5)	0.458
Admission SpO_2, %	95.0 (93.0–96.0)	88.0 (84.0–91.0)	<0.001
CRP, mg/L	2.1 (0.57–9.25)	2.3 (0.70–10.75)	0.484
HALP score	56.63 (37.48–84.32)	50.33 (31.63–69.32)	0.021

Variable	No oxygen requirement n=152	Oxygen requirement n=163	p value
m-HALP score (×10⁶)	10.46 (6.03–15.02)	8.62 (5.26–13.87)	0.125
Male sex	88/152 (57.9%)	94/163 (57.7%)	0.968
Radiological finding present	105/152 (69.1%)	153/163 (93.9%)	<0.001

Data are presented as median (interquartile range) or n (%). CRP: C-reactive protein; HALP: hemoglobin, albumin, lymphocyte and platelet score; m-HALP: modified HALP; SpO_2: peripheral oxygen saturation.

Table 2. ROC analysis of HALP and m-HALP scores for predicting oxygen requirement

Test variable	AUC	Standard error	95% CI	p value
HALP score	0.575	0.032	0.512–0.638	0.020
m-HALP score	0.550	0.033	0.486–0.614	0.124

AUC: area under the ROC curve; CI: confidence interval; ROC: receiver operating characteristic. Smaller test values were considered indicative of oxygen requirement.

Table 3. Logistic regression models evaluating the association of HALP and m-HALP with oxygen requirement

Model	**Variable**	**OR / adjusted OR**	**95% CI**	**p value**
Univariable model	HALP score	0.991	0.984–0.997	0.007
Univariable model	m-HALP score×10^6	0.982	0.956–1.008	0.169
Adjusted model including SpO_2	HALP score	0.989	0.978–0.999	0.038
Adjusted model including SpO_2	m-HALP score×10^6	0.959	0.919–0.999	0.047
Adjusted model excluding SpO_2	HALP score	0.990	0.982–0.998	0.010
Adjusted model excluding SpO_2	m-HALP score×10^6	0.981	0.953–1.009	0.179

OR: odds ratio; CI: confidence interval; SpO_2: peripheral oxygen saturation. The adjusted model including SpO_2 was adjusted for age, sex, admission SpO_2, radiological findings and CRP. The adjusted model excluding SpO_2 was adjusted for age, sex, radiological findings and CRP.

Conclusion: The HALP score is a statistically significant additional biomarker for oxygen needs in infants with acute bronchiolitis. However, it lacks sufficient discriminative power to be used as a stand-alone tool for clinical decision-making.The m-HALP score did not provide predictive advantage in this cohort. The analysis of these hemato-immunological scores should be correlated with SpO2 at admission and clinical respiratory abnormalities .

Keywords: acute bronchiolitis, HALP score, m-HALP score, oxygen

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CHILDHOOD ANAPHYLAXIS AND ADRENALINE AUTO-INJECTOR USE: REAL-LIFE PRACTICE PROBLEMS

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Aim: Adrenaline auto-injectors (AAIs) are the first-line life-saving treatment for anaphylaxis in children. However, difficulties related to timely and correct administration continue in real-life practice. This study aimed to evaluate factors affecting anaphylaxis management and successful AAI use in pediatric patients prescribed an AAI.

Material & Method: Eighty-two patients aged 0–18 years who were followed with a diagnosis of anaphylaxis and prescribed an AAI were retrospectively evaluated. Demographic characteristics, etiologies, clinical features of anaphylactic episodes, recurrence rates, and AAI use patterns were analyzed.

Results: All patients had a history of anaphylaxis, and 60% of the cohort were aged 0–2 years (n=49). Thirteen patients were aged ≥12 years. In this group, etiologies included tree nuts (n=4), shellfish (n=2), idiopathic anaphylaxis (n=3), oral allergy syndrome (n=2), and bee venom allergy (n=2). During follow-up, 20 recurrent anaphylactic episodes occurred in 16 patients, corresponding to a recurrence rate of 19.5%. AAIs were administered correctly and promptly in 63.4% of episodes, whereas delayed administration, incorrect technique, or failure to use the device was observed in 36.6%. Common barriers included failure to carry the device, lack of practical experience, fear of needles, hesitation after incorrect administration, and delayed recognition of symptom severity. Inadequate education among caregivers and school personnel was also notable.

Conclusion: Prescription of an AAI alone does not provide adequate protection against recurrent anaphylaxis in children. Most problems were related to educational deficiencies and behavioral factors rather than device accessibility. Regular hands-on training, simulation-based education, and greater involvement of schools and caregivers may improve appropriate AAI use and clinical outcomes.

Keywords: Anaphylaxis, adrenaline auto-injector, pediatric allergy, emergency treatment, real-world data

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EVALUATION OF INFECTION RISK IN PEDIATRIC PATIENTS RECEIVING BIOLOGICAL RESPONSE-MODIFYING AGENTS

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Aim: Biological response modifiers (BRMs) are widely used in children with autoimmune and autoinflammatory diseases but may increase susceptibility to infections. This study aimed to evaluate infections, clinical course, and associated risk factors in pediatric patients receiving BRM therapy.

Material & Method: This single-center, retrospective observational study included patients aged 0–18 years who received BRM therapy and were followed at the Pediatric Infectious Diseases Outpatient Clinic of Marmara University Pendik Training and Research Hospital between July 2023 and February 2026 (n=70). Demographic and clinical data, BRM type, concomitant immunosuppressive therapy, vaccination status, tuberculosis (TB) screening results, and opportunistic infections were recorded. Fisher's exact test was used for pairwise comparisons.

Results: The median age of the patients was 12.9 years (IQR 10.1–15.3), and 48.6% were female. The most common underlying diseases were juvenile idiopathic arthritis (42.9%), inflammatory bowel disease (IBD, 20.0%), and uveitis (14.3%). The most frequently used BRMs were adalimumab (51.4%) and infliximab (17.1%), and 20.0% received concomitant immunosuppressive therapy. For latent tuberculosis screening, IGRA was used in 54.3%, TST in 27.1%, and both tests in 18.6%. Isoniazid prophylaxis was initiated in 17.1% of patients during BRM therapy, mostly due to increased PPD response (91%); no active tuberculosis was detected. Viral infections occurred in seven patients (10.0%) (CMV, n=3; herpes zoster, n=3; VZV, n=1), all requiring hospitalization. Median hospital stay was 14 days (IQR 10.5–15; range 9–35), and all patients recovered. Infection risk was significantly higher in patients with IBD (OR 41.25; p=0.00014), infliximab use (OR 20.00; p=0.00114), and concomitant immunosuppressive therapy (OR 7.07; p=0.0259).

Conclusion: Infection monitoring is clinically important in pediatric patients receiving BRMs. Standardized pre-treatment screening, updated immunization, and close symptom-based follow-up may improve patient safety.

Keywords: Biological response modifiers, Pediatric infections, Opportunistic infections

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EXPERIENCE OR PERCEPTION? FACTORS DETERMINING RSV IMMUNIZATION ACCEPTANCE AMONG CAREGIVERS

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Aim: Respiratory syncytial virus (RSV) is a leading cause of lower respiratory tract infections and hospitalization in infants. With the introduction of new RSV immunization strategies, understanding the factors influencing caregivers' acceptance has become increasingly important. This study aimed to evaluate factors associated with RSV immunization acceptance among caregivers, particularly prior RSV hospitalization experience, disease perception, and awareness.

Material & Method: In this cross-sectional study, 126 caregivers completed a structured questionnaire. Data regarding demographic characteristics, history of RSV hospitalization, RSV awareness, perceived disease severity (5-point Likert scale), and willingness to accept RSV immunization were collected. Perceived disease severity was categorized as low (scores 1–3) or high (scores 4–5). Data were analyzed using univariate analyses followed by multivariable logistic regression.

Results: The median age of the children was 150 days (IQR: 69–301). A history of RSV-related hospitalization was present in 63.5% of participants' children. The RSV immunization acceptance rate was 47.6%, while 4.8% of caregivers were undecided. Overall, 57.9% of caregivers had previously heard about RSV, and 80.2% perceived RSV infection as severe or very severe. The clinical and RSV-related characteristics of the participants are summarized in Table 1. In univariate analyses, prior RSV hospitalization, HFNC requirement, and prolonged hospital stay were not significantly associated with RSV immunization acceptance (all $p > 0.05$). In contrast, routine childhood vaccination adherence ($p=0.017$), RSV awareness ($p=0.050$), and high perceived disease severity ($p=0.019$) were associated with immunization acceptance (Table 2). In multivariable logistic regression analysis, high perceived disease severity independently predicted RSV immunization acceptance (OR: 3.31, 95% CI: 1.17–9.37, $p=0.024$). RSV awareness showed borderline significance (OR: 2.15, 95% CI: 0.99–4.67, $p=0.053$) (Table 3). Cost was the most common reason for refusal or indecision (50%).

Table 1. Clinical and RSV-Related Characteristics of the Participants

Variable	n(%)
History of RSV Hospitalization	

Yes	80(63.5%)
No	46(36.5%)
Routine Childhood Vaccination	
Yes	119(94.4%)
No	7(5.6%)
HFNC Requirement*	
Yes	28(35.0%)
No	52(65.0%)
Length of Hospital Stay*	
≥7 days	74(92.5%)
<7 days	6(7.5%)
Previous Awareness of RSV	
Yes	73(57.9%)
No	53(42.1%)
Perception of RSV Severity	
1-2-3	25(19.8%)
4-5	101(80.2%)
RSV Immunization Acceptance	
Accepted	60(47.6%)
Refused	60(47.6%)
Undecided	6(4.8%)

Reasons for Refusal or Indecision	
Cost	33(50.0%)
General Vaccine Distrust	16(24.2%)
Perception That It Is Unnecessary	13(19.7%)
Safety/Side Effect Concerns	13(19.7%)
Lack of Knowledge	10(15.2%)

*HFNC requirement and length of hospital stay were evaluated among previously hospitalized participants only. Multiple responses were permitted for reasons for refusal or indecision.

Table 2. Factors Associated with RSV Immunization Acceptance

Variable	RSV Immunization Accepted	RSV Immunization Refused	p
Respondent			
Mother	49(50.5%)	45(46.4%)	0.188
Father	11(37.9%)	15(51.7%)	
History of RSV Hospitalization			
Yes	36(45%)	38(47.5%)	0.152
No	24(52.2%)	22(47.8%)	
Routine Childhood Vaccination			
Yes	60(50.4%)	53(44.5%)	0.017
No	0(0.0%)	7(100.0%)	

HFNC Requirement*			
Yes	14(50.0%)	12(42.9%)	0.802
No	22(42.3%)	26(50.0%)	
Length of Hospital Stay*			
≥7 days	35(47.3%)	34 (45.9%)	0.628
<7 days	3 (50.0%)	2 (33.3%)	
Previous Awareness of RSV			
Yes	41(56.2%)	28(38.4%)	0.050
No	19(35.8%)	32(60.4%)	
Perceived RSV Severity			
Low (1–3)	7(28.0%)	18(72.0%)	0.019
High (4–5)	53(52.5%)	42(41.6%)	

*HFNC requirement and length of hospital stay were analyzed among hospitalized patients only.

Table 3. Multivariable Logistic Regression Analysis for RSV Immunization Acceptance

Variable	OR	95%CI	p
History of RSV Hospitalization	0.74	0.32-1.69	0.472
Previous Awareness of RSV	2.15	0.99-4.67	0.053
High Perceived RSV Severity	3.31	1.17-9.37	0.024

Conclusion: Neither prior RSV hospitalization experience nor objective indicators of disease severity determined caregivers' RSV immunization acceptance. Instead, perceiving RSV as a serious disease emerged as the primary determinant. Increasing awareness regarding disease severity and reducing financial barriers may improve RSV immunization acceptance.

Keywords: immunization acceptance, caregivers, respiratory syncytial virus; RSV

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PREVALENCE AND CLINICAL IMPACT OF MALNUTRITION IN CHILDREN HOSPITALIZED WITH PNEUMONIA: A RETROSPECTIVE STUDY

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Aim: Malnutrition at admission is an important comorbidity in pediatric respiratory infections, but its exact impact on pneumonia severity and hospital trajectories is still under investigation. To determine the prevalence of malnutrition in children admitted with pneumonia and its association with clinical severity and outcomes, mainly length of hospital stay (LOS) and inflammatory markers.

Material & Method: This retrospective study, conducted in a tertiary pediatric unit between January and December 2025, screened 303 children aged 1 month to 18 years hospitalized with pneumonia; 210 patients were ultimately included after excluding those with chronic conditions potentially affecting growth or nutritional status. Anthropometric measurements and nutritional status classifications were evaluated according to World Health Organization (WHO) growth standards. Given the non-normal data distribution, Mann-Whitney U tests were employed to compare length of hospital stay (LOS) and C-reactive protein (CRP) levels between undernourished patients (Body Mass Index [BMI] standard deviation score [SDS] ≤ -1) and adequately nourished children.

Results: The cohort (median age: 44 months; 63.2% male) had an overall prevalence of undernutrition of 26,6% (n=56) with 5,7% (n=12) severe undernutrition (BMI SDS ≤ -2). The median CRP on admission was higher in undernourished patients compared with adequately nourished children (10.0 vs. 5.6 mg/L, p=0.951). Interestingly, median LOS was significantly shorter in undernourished children (4.0 vs. 5.0 days, p=0.033). Serum albumin levels were similar in both groups (4.1 vs. 4.2 g/dL, p=0.779). The demographic and clinical characteristics of the study population are presented in Table 1.

Table 1. Demographic and Clinical Characteristics of the Study Population by Nutritional Status

Variable	Adequately Nourished (n=154)	Undernourished (n=56)	p-value
Age (months), median (IQR)	62.5 (7.8 – 97.5)	4.0 (3.0 – 80.0)	0.076
Height for Age SDS, median (IQR)	0.09 (-0.87 – 0.75)	-0.21 (-0.35 – 0.79)	0.979
Weight for Age SDS, median (IQR)	0.36 (-0.41 – 0.84)	-1.09 (-1.92 – -0.86)	<0.001**
Weight for Height SDS, median (IQR)	0.75 (0.13 – 1.63)	-1.95 (-2.23 – -1.03)	<0.001**
BMI SDS, median (IQR)	0.20 (-0.40 – 1.70)	-1.60 (-2.00 – -1.20)	<0.001**
Serum Albumin (g/dL), median (IQR)	4.2 (4.0 – 4.3)	4.1 (4.0 – 4.6)	0.779
Length of Stay (days), median (IQR)	5.0 (4.0 – 7.0)	4.0 (3.0 – 6.0)	0.033*

BMI SDS: Body Mass Index Standard Deviation Score; CRP: C-Reactive Protein; IQR: Interquartile Range. Continuous variables were compared using the Mann-Whitney U test, and categorical variables using the Chi-square test. $p < 0.05$ indicates statistical significance

Conclusion: Malnutrition is present in nearly one third of children admitted with pneumonia. While undernutrition was associated with a shorter hospital stay in this cohort, this unexpected association should be interpreted with caution in the context of the retrospective design and limited sample size. However, the high rate of undernutrition highlights the essential need for regular nutritional screening of pediatric inpatients.

Keywords: Malnutrition, pediatric pneumonia, nutritional assessment

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EXTRAPULMONARY MANIFESTATIONS OF MYCOPLASMA PNEUMONIAE INFECTION IN CHILDREN: CLINICAL SPECTRUM AND OUTCOMES

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Aim: Mycoplasma pneumoniae is a common respiratory pathogen that may also cause a wide range of immune-mediated extrapulmonary manifestations in children. This study aimed to evaluate the clinical features, spectrum of involvement, treatment approaches, and outcomes of pediatric patients with Mycoplasma pneumoniae-associated extrapulmonary disease.

Material & Method: This retrospective single-center study included pediatric patients with suspected Mycoplasma pneumoniae-associated extrapulmonary manifestations and positive IgM between 2020–2025. Of 685 screened patients, 57 were included. Demographic, clinical, laboratory, treatment, and outcome data were reviewed retrospectively.

Results: The cohort included 57 patients (42.1% female), with a median age of 10.8 years (IQR: 6.25–14.34). Most had no comorbidity (82.5%) and were immunocompetent (98.2%). Hospitalization was required in 54.4% of patients, with a median stay of 2 days (IQR: 0–6.5). Neurological involvement was most common (26.3%), including encephalitis, Guillain–Barré syndrome, transverse myelitis, optic neuritis, and multiple sclerosis-like demyelination. Hematological (24.6%), dermatological (21.1%), and gastrointestinal involvement (21.1%) followed, while musculoskeletal (5.3%) and cardiac involvement (1.8%) were rare. Underlying comorbidities and fever were not associated with hospitalization, whereas cough was significantly more frequent in non-hospitalized patients (3.2% vs 46.2%, $p < 0.001$), while pneumonia rates did not differ between groups (16.1% vs 15.4%, $p = 0.695$).Macrolides were used in 22.8% of patients, corticosteroids in 17.5%, and IVIG in 8.8%. No mortality or recurrence was observed. Clinical outcomes were favorable overall; however, four patients with multiple sclerosis-like demyelinating disease remain under neurological follow-up.

Conclusion: Mycoplasma pneumoniae infection in children is associated with a broad spectrum of extrapulmonary manifestations, mainly neurological and hematological. Outcomes are favorable with no mortality. Importantly, respiratory involvement does not predict extrapulmonary severity, supporting the concept of largely independent disease mechanisms. Early recognition and multidisciplinary management remain crucial.

Keywords: Mycoplasma pneumoniae, extrapulmonary manifestations, neurological complications, immune-mediated disease

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DIAGNOSTIC VALUE OF CSF MENINGITIS/ENCEPHALITIS PCR PANEL IN PEDIATRIC CNS INFECTIONS

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Aim: This study aimed to evaluate the contribution of CSF Meningitis/Encephalitis (ME) PCR Panel testing to rapid diagnosis, treatment and prophylaxis in pediatric patients with clinically suspected meningitis/encephalitis.

Material & Method: This retrospective cross- sectional study included pediatric inpatients aged 1 month-18 years who were prediagnosed with meningitis/encephalitis and followed in Pediatric Infectious Diseases Clinic of Başakşehir Çam and Sakura City Hospital. Patients with chronic diseases, COVID-19 positivity, have immune deficiency, diagnosed with Tuberculosis, diagnosed with Brucellosis, which have CSF drainage device, younger than 1 month excluded. Meningitis classification was performed according to 2024 CDC surveillance criteria and encephalitis classification was based on 2003 WHO surveillance definition. Bio-Speedy Meningitis/Encephalitis RT-qPCR MX-17 kit was used as CSF ME PCR panel. Patients were grouped as bacterial meningitis, viral meningitis and encephalitis.

Results: 72 of 123 inpatients were pre-diagnosed with meningitis/encephalitis in between these dates were included in the study. Pathogens were detected in 21 patients using the CSF ME PCR panel. Enterovirus was the most frequently identified pathogen, followed by Streptococcus pneumoniae. Positive CSF HSV PCR detected as HSV-1 in a patient, HSV-2 in a patient. Vancomycin, ceftriaxone and aciclovir combination was used as the most common treatment option. Spasticity developed as neurological sequela in 2 encephalitis patients. Mortality was not seen in patients. Prophylaxis was required in four patients. Leucocyte count and CRP level, CSF WBC and CSF PMN counts were significantly higher in bacterial meningitis patients. CSF protein levels were higher inpatients with pathogen detected in CSF ME PCR panel, no significant difference was observed in CSF glucose levels.

Conclusion: To our knowledge, no previous pediatric study has evaluated CSF ME PCR panel result using the Bio-Speedy Meningitis/Encephalitis RT-qPCR MX-17 kit. Our findings suggest that CSF ME PCR testing provides rapid and valuable diagnostic support in pediatric meningitis/encephalitis cases.

Keywords: Cerebrospinal fluid, Encephalitis, Meningitis

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EVALUATION OF THE EFFECTS OF THE MEDITERRANEAN DIET QUALITY INDEX (KIDMED) ON BODY MASS INDEX (BMI) IN CHILDREN AGED 12-17 YEARS

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Aim: Adolescence is a critical period in which metabolic risk factors and dyslipidemia can be triggered due to hormonal shifts and rapid growth. This study aims to evaluate the impact of Mediterranean diet quality index (KIDMED) on anthropometric measurements, lipid profiles, and insulin resistance in children aged 12–17, and to compare these parameters by sex.

Material & Method: A total of 151 adolescent cases (85 girls, 66 boys) aged 12–17 years were included. Cases' Body Mass Index (BMI), KIDMED scores, HOMA-IR (insulin resistance), and lipid panels (Total Cholesterol, LDL, HDL, Triglycerides) were recorded. Independent Samples t-test was used for intergroup comparisons, and Pearson correlation analysis was utilized to examine the relationships between parameters.

Results: The mean KIDMED score of the study population was 5.36 ± 2.22 (moderate adherence). No significant correlation was found between KIDMED scores and BMI across all subjects (r=-0.024, p=0.627); however, a significant negative correlation was observed between KIDMED scores and HOMA-IR (r=-0.138, p=0.031). In sex-based comparison, girls had significantly higher BMI (27.18 ± 4.32 vs 25.56 ± 4.69 kg/m2; p=0.031) and HOMA-IR values (4.01 ± 2.37 vs 3.03 ± 1.69; p=0.005) than boys. Furthermore, Total Cholesterol (172.45 ± 31.20 vs 161.12 ± 28.54 mg/dL; p=0.004) and LDL Cholesterol (104.38 ± 26.40 vs 93.75 ± 24.12 mg/dL; p=0.001) levels were significantly higher in girls. No significant difference was found in KIDMED scores between sexes (p=0.665).

Conclusion: Adolescent girls carry a heavier cardiometabolic burden, with higher rates of dyslipidemia, BMI, and insulin resistance compared to their male peers. Although dietary quality (KIDMED) does not directly alter weight status, it enhances insulin sensitivity at the cellular level and decreases HOMA-IR. The metabolic disadvantage observed in girls might be driven by early pubertal hormonal maturation and physical inactivity rather than dietary quality.

Keywords: Adolescent, KIDMED, HOMA-IR, BMI, Dyslipidemia

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VACCINATION PRACTICES AND SAFETY OF MEASLES–MUMPS–RUBELLA VACCINE IN CHILDREN WITH FOOD ALLERGY

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Aim: Concerns regarding allergic reactions frequently lead to delayed administration of the measles–mumps–rubella (MMR) vaccine in children with food allergy despite evidence supporting its safety. Limited data are available regarding vaccine-associated reactions and the role of vaccine testing in this population. This study aimed to evaluate clinical characteristics, vaccination practices, and vaccine-related reactions among children with food allergy undergoing MMR vaccination.

Material & Method: This retrospective study included children with food allergy who presented to Haseki Training and Research Hospital over the last two years and underwent MMR vaccination. Demographic characteristics, food allergy phenotypes, serum specific IgE levels, skin prick test findings, vaccination timing, vaccine formulations, and vaccine-associated reactions were evaluated.

Results: A total of 53 children were included. The median age of the study population was 2.0 years (IQR: 1.5–2.5). Egg allergy was the most common diagnosis (52.8%, n=28), followed by combined egg and cow's milk allergy (39.6%, n=21). Eczema was the most frequent presenting manifestation (45.3%, n=24), followed by urticaria (24.5%, n=13). The India-derived MMR formulation was administered in 77.4% (n=41) of patients and Priorix in 22.6% (n=12) (Table 1). Vaccine-associated reactions were reported in four patients (7.5%). Three patients developed erythema after the 9-month MMR vaccination; reactions occurred within the first 6 hours in two patients and after 24 hours in one patient. Among patients with early-onset reactions, one had negative vaccine skin tests and tolerated revaccination, whereas another had a positive intradermal test and subsequently received vaccination using a desensitization protocol. One additional patient developed erythema following administration of an α-lactalbumin–containing MMR vaccine (Table2).

Table 1. Baseline characteristics of children with food allergy undergoing MMR vaccination

Variable	Value
Total patients	53
Continuous variables	

Age, years	2.0 (1.5–2.5)
Delay duration, months	1.0 (0.25–2.0)
Age at vaccination, months	13.0 (11.0–14.0)
Egg-specific IgE (kU/L), n=45	0.65 (0–2.89)
Cow's milk-specific IgE (kU/L), n=23	0.77 (0–1.53)
Egg skin prick test (mm), n=41	0 (0–5.0)
Cow's milk skin prick test (mm), n=21	0 (0–2.5)
Food allergy phenotype	
Egg allergy	28 (52.8%)
Cow's milk allergy	3 (5.7%)
Egg + cow's milk allergy	21 (39.6%)
Previous MMR vaccine allergy	1 (1.9%)
Admission complaints	
Eczema	25 (47.1%)
Urticaria	21 (39.6%)
Vomiting	5 (9.4%)

Anaphylaxis	1 (1.9%)
Reaction with prior KKK	1 (1.9%)
Vaccination schedule	
9 months	13 (24.5%)
12 months	37 (69.8%)
4 years	3 (5.7%)
MMR vaccine type	
India-derived formulation	41 (77.4%)
Priorix	12 (22.6%)

Table 2. Vaccine-associated reactions, skin testing, and revaccination outcomes in children with food allergy

Patient	Allergy / history	Index vaccine	Reaction	Timing	Skin testing	Subsequent vaccination outcome
1	—	9-month MMR with α-lactalbumin–containing vaccine	Erythema	Within first 6 h	Prick and intradermal tests negative with (α-lactalbumin-free MMR vaccine).	Vaccinated without adverse reaction
2	Both egg and milk allergy	9-month MMR with α-lactalbumin–containing vaccine	Erythema	Within first 6 h	Intradermal test positive at 1:100 dilution with (α-lactalbumin-free MMR vaccine).	Vaccinated using with (α-lactalbumin-free MMR vaccine)desensitization protocol

3	Egg allergy	9-month MMR with α-lactalbumin–containing vaccine	Erythema	After 24 h	Not performed	Tolerated revaccination with α-lactalbumin–containing vaccine without adverse reaction
4	Egg allergy	12-month MMR with α-lactalbumin–containing vaccine	Erythema	Within first 6 h	Not specified	-

Conclusion: MMR vaccination was generally well tolerated in children with food allergy, with most reported reactions being mild and limited to cutaneous manifestations. These findings support current recommendations indicating that routine pre-vaccination testing is unnecessary in the absence of a history suggestive of immediate hypersensitivity.

Keywords: Cow's milk allergy, Egg allergy, Food allergy, Measles–mumps–rubella vaccine, Vaccine safety

OP - 200

KNOWLEDGE, ATTITUDES AND PRACTICES OF HEALTHCARE PROFESSIONALS REGARDING DONOR HUMAN MILK BANKING FOR PRETERM INFANTS IN TURKEY: A CROSS-SECTIONAL SURVEY

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Aim: Turkey lacks an established donor human milk (DHM) bank, partly due to religious, cultural and legislative barriers. Healthcare professionals (HCPs) play a pivotal role in facilitating or hindering uptake. We aimed to assess the knowledge, attitudes and practices (KAP) of HCPs regarding pasteurized DHM banking (PDHM) for preterm infants.

Material & Method: : A cross-sectional survey was conducted among 112 HCPs (paediatricians, nurses/midwives, non-paediatric physicians) at a single tertiary centre in Turkey. A structured questionnaire assessed knowledge (WHO feeding hierarchy, Holder pasteurisation, necrotising enterocolitis [NEC]), attitudes (7-item Likert scale, 1–5) and practices. Differences between professional groups were tested with the chi-square test and Mann-Whitney U test. Statistical significance was set at $p < 0.05$.

Results: The correct WHO feeding hierarchy was identified by 99% of respondents. However, only 28.6% correctly identified Holder pasteurisation as the standard method, and 69% correctly identified NEC as the primary complication prevented by DHM. Formal training on DHM banking had never been received by 64.3% of participants; only 25.0% had ever counselled families on DHM. Knowledge of NEC differed significantly by profession ($\chi^2=41.94$, $p < 0.001$): paediatricians scored highest (96.5%), followed by non-paediatric physicians (35.0%) and nurses/midwives (43%). On attitude scales, paediatricians scored significantly higher than nurses/midwives on all items except "religious/cultural barriers" (Kruskal-Wallis, all $p < 0.05$). Religious and cultural concerns were cited as the primary barrier to family acceptance by 55% of respondents. Obtaining a religious authority guideline/fatwa was ranked as the most important first step (34%).

Conclusion: Despite high awareness of WHO guidance, critical operational knowledge gaps and profound training deficits persist among HCPs in Turkey. A multidisciplinary approach integrating religious authority guidance, legislative reform and targeted education programmes is essential before PDHM banking can be operationalised in Turkey.

Keywords: donor human milk banking; knowledge attitudes practices; preterm infant; Turkey; religious barriers; necrotising enterocolitis; healthcare professionals

OP - 201

IMPACT OF CORTICOSTEROID TREATMENT STRATEGIES AND MEFV GENE VARIANTS ON DISEASE SEVERITY AND CLINICAL OUTCOMES IN HOSPITALIZED PATIENTS WITH IGA VASCULITIS DUE TO GASTROINTESTINAL SYSTEM INVOLVEMENT

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Aim: IgA Vasculitis is the most common childhood vasculitis, and gastrointestinal system (GIS) involvement is animportant cause of hospitalization and morbidity. Although corticosteroids are widely used in severe GIS involvement, theimpact of treatment timing, dose, and route on clinical outcomes remains unclear. In addition, the role of MEFV genevariants in disease severity has not been fully elucidated.

Material & Method: A total of 86 patients with IgA Vasculitis hospitalized due to GIS involvement were retrospectively evaluated.Demographic, clinical, laboratory, imaging and treatment data were obtained from medical records. Patients receivingsteroids within the first 24 hours were defined as the “early steroid” group. Associations between corticosteroid treatmentcharacteristics, clinical outcomes and MEFV mutations were analyzed.

Results: Among the included patients, 64% (n=54) were male. Severe GIS involvement, nephritis, and relapse wereobserved in 10% (n=9) of patients each. Intussusception occurred in 7% (n=6), perforation in 3.5% (n=3) and bothsurgical intervention requirement and intensive care unit admission in 5.8% (n=5). Overall, 92% (n=79) receivedcorticosteroid therapy, 80% (n=69) received steroids within the first 24 hours and 35% (n=30) required pulse steroidtherapy. Median hospital stay was 9 (6–14) days. Earlysteroid initiation was not significantly associated with clinical outcomes. Higher cumulative steroid dose was significantlyassociated with severe GIS involvement and nephritis ($p < 0.001$ and $p=0.0014$). Patients requiring pulsesteroid therapy had significantly higher rates of severe GIS involvement and nephritis ($p < 0.001$ and $p=0.0076$).

Conclusion: Corticosteroid treatment strategies were highly heterogeneous in hospitalized patients with IgA vasculitisand gastrointestinal involvement. Early steroid initiation did not significantly affect clinical outcomes. Higher cumulativesteroid dose and pulse steroid requirement were associated with more severe disease, particularly severe GISinvolvement and nephritis. Although MEFV gene variants were not significantly associated with clinical outcomes,mutation-positive patients showed a trend toward increased treatment burden. These findings suggest that intensivesteroid therapy may primarily reflect baseline disease severity.

Keywords: IgA vasculitis, gastrointestinal system (GIS) involvement, corticosteroid treatment strategies

OP - 202

PEDIATRIC BRUCELLOSIS: PATTERNS OF MISDIAGNOSIS AND DELAYED DIAGNOSIS

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Aim: Objective.To investigate cases of delayed diagnosis and diagnostic errors in children with brucellosis.

Material & Method: Materials and Methods. Fifty children aged 6 months to 17 years with brucellosis were examined. Medical history and anamnesis were collected. All patients underwent clinical and instrumental examination, as well as serological testing for brucellosis. Patients were divided into two groups based on symptom specificity and timing of diagnosis.

Results: Results. Fifteen (30%) children aged 3–17 years were included in Group I. The main clinical manifestations of brucellosis in these patients included persistent or prolonged fever, night sweats, and arthralgia. Along with clinical features, anamnesis and serological testing confirmed the diagnosis.Thirty-five (70%) patients were included in Group II and were initially misdiagnosed. Three patients were diagnosed with sepsis, six with acute rheumatic fever, ten with systemic diseases, two with tuberculosis, five with COVID-19, and four with fever of unknown origin. However, serological testing and detailed evaluation confirmed brucellosis in these cases. As shown, Group II (70%) was significantly larger than Group I (30%), indicating frequent diagnostic errors. Pediatric brucellosis often mimics multiple diseases, leading to misdiagnosis.

Conclusion: Conclusion.The non-specific clinical presentation of pediatric brucellosis complicates diagnosis and results in frequent misdiagnosis or delayed recognition. Physicians in endemic and sub-endemic regions should maintain a high index of suspicion and include brucellosis in the differential diagnosis of unexplained febrile illnesses.

Keywords: pediatric brucellosis; misdiagnosis; delayed diagnosis; infectious diseases; clinical variability

OP - 203

HEALTH EXPENDITURES AND INFANT MORTALITY RATE: A TÜRKIYE-EUROPE COMPARISON

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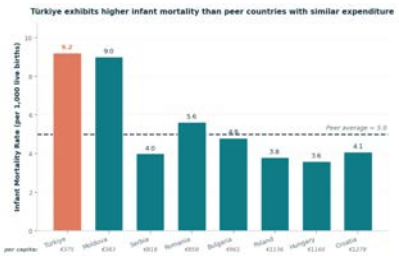
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Aim: This study aims to examine the relationship between health expenditures (HE) and infant mortality rate (IMR) in the context of Türkiye and the European Union (EU), and to determine Türkiye's comparative position with European countries at similar expenditure levels.

Material & Method: Infant mortality data were obtained from Eurostat (demo_minfind, 2015–2024); HE data from Eurostat (hlth_sha11_hf) and the World Bank/WHO. Analysis used cross-sectional data from 32 European countries (2022). Data normality was assessed using the Shapiro-Wilk test; both variables showed non-normal distribution ($p < 0.05$). Therefore, Spearman rank correlation—a robust, non-parametric method requiring no distributional assumptions—was employed to evaluate the relationship between HE and IMR. Türkiye's position was determined through direct peer group comparison with countries of similar HE level (per capita < €1,500).

Results: A statistically significant, negative, and moderate correlation was found between HE and IMR (Spearman rho=−0.44; p=0.013). The average IMR in the 32 EU countries is 3.3. In countries with similar HE to Türkiye (countries with per capita income < €1,500), this rate is 5.0; in Türkiye, however, this rate is approximately 1.8 times higher (9.2) (Figure 1). The gap between the EU average and Türkiye has not closed between 2015 and 2024. The median IMR is 3.35 in the group of countries with low HE and 3.05 in the group of countries with high HE. That difference indicates a distribution trend that supports the negative relationship found in the correlation analysis (Mann-Whitney U=169; p=0.063).

Figure 1. Analysis of Türkiye's infant mortality rate.



Conclusion: In European countries, IMR decreased as the level of HE increased. However, Türkiye has a higher IMR than countries with similar HE levels. This suggests that a high IMR cannot be explained solely by low HE, and that factors other than HE may also play a role. The findings indicate that the level of HE alone may not be sufficient for progress in child health.

Keywords: Infant mortality rate, health expenditures, health policy, Spearman correlation, health resource allocation

OP - 204

THE EFFECT OF HEALTH EDUCATION IMPLEMENTED IN VOCATIONAL TRAINING ON COMMUNICABLE DISEASE RISK AWARENESS AND PROTECTIVE BEHAVIORS

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Aim: This study aimed to evaluate the effect of a health education intervention on communicable disease risk awareness and protective behaviors among students enrolled in beauty and hair care services programs at vocational education centers.

Material & Method: A quasi-experimental pretest–posttest study with a control group was conducted among vocational education students from two different centers. A total of 86 students participated in the study. The intervention group received a presentation-supported health education program focusing on communicable diseases, hand hygiene, preventive measures, and personal protection, accompanied by soap distribution as a supportive hygiene material. The control group received only an educational brochure. Data were collected using a Descriptive Information Form and the Communicable Diseases Risk Awareness and Protection Scale before the intervention and one month after the education. This study is supported by the TÜBİTAK 2209-A University Students Research Projects Support Program (2025/1 Term, Project No: 1919B012500734).

Results: A total of 86 vocational training center students, including 48 in the control group and 38 in the intervention group, participated in the study. The mean age of the participants was 17.60±1.83 years, and 66.3% were male. It was determined that 75.6% of the students had received tetanus vaccination, 36% had previously received education on communicable diseases, and 97.7% considered hand hygiene important in preventing communicable diseases. No statistically significant difference was found between the groups in terms of communicable disease risk awareness and protective behaviors in the pre-test ($p > 0.05$). In the post-test, a significant increase was found in the intervention group compared to the control group in common living risk awareness ($p=0.03$), personal protection awareness ($p=0.02$), handwashing behaviors ($p=0.02$), personal contact awareness ($p < 0.001$), and total scores ($p < 0.001$).

Conclusion: Structured health education improved communicable disease awareness, hygiene behaviors, and preventive practices among students.

Keywords: Communicable Disease, Health Education, Hygiene, Risk Awareness, Vocational Training Students

OP - 205

RETROSPECTIVE ANALYSIS OF BCG VACCINE–RELATED COMPLICATIONS IN CHILDREN: A SINGLE-CENTER EXPERIENCE

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Aim: The Bacillus Calmette-Guérin (BCG) vaccine is widely used for protection against severe tuberculosis. Although generally considered safe, local and, rarely, disseminated complications may occur. This study aimed to evaluate the clinical characteristics, treatment approaches, and outcomes of children with BCG vaccine–related complications followed at our center.

Material & Method: This retrospective single-center study included children aged 0–6 years diagnosed with BCG vaccine–related complications at the Pediatric Infectious Diseases Clinic of Marmara University Hospital between January 2015 and September 2025. Demographic characteristics, clinical findings, immunological status, complication types, treatments, and outcomes were obtained from medical records.

Results: A total of 38 children with BCG vaccine–related complications were included in the study. The median age at diagnosis was 7 months (IQR, 5–10 months), and 21 patients (55.3%) were male. Immunodeficiency was identified in 5 patients (13.2%), including severe combined immunodeficiency (SCID) in 3 patients (7.8%), HIV infection in 1 patient (2.6%), and hypogammaglobulinemia in 1 patient (2.6%). The median time to symptom onset after BCG vaccination was 4 months (IQR, 2–5 months). The most common complication was local reaction (n=21, 55.3%), followed by lymphadenitis (n=12, 31.6%) and abscess formation (n=1, 2.6%). Localized disease was observed in 36 patients (94.7%), whereas disseminated BCG disease occurred in 2 patients (5.3%). Disseminated disease was significantly more frequent among patients with immunodeficiency than among those without immunodeficiency (40% vs. 0%, p=0.014). Children with immunodeficiency were older at presentation (p=0.045). Most patients were managed with observation alone, while the remainder received medical and/or surgical treatment. Complete clinical recovery was achieved in the majority of patients.

Conclusion: BCG vaccine–related complications are predominantly localized and usually resolve with conservative management. However, disseminated disease may occur in children with underlying immunodeficiency. Therefore, evaluation for primary immunodeficiency should be considered in patients presenting with severe or disseminated BCG complications.

Keywords: BCG vaccine, BCG complications, lymphadenitis, disseminated BCG infection, primary immunodeficiency

OP - 206

NAVIGATING ONLINE SOURCES: HOW RELIABLE IS CHILDHOOD NON-ROUTINE VACCINE INFORMATION?

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Aim: This cross-sectional and descriptive study aimed to evaluate the overall quality, medical accuracy, and readability of Turkish websites providing information to parents about non-routine childhood vaccines, specifically meningococcal, rotavirus, and human papillomavirus(HPV).

Material & Method: A Google search was conducted in incognito mode using the most frequent parental search terms identified via Google Trends: 'menenjit aşısı' (meningitis vaccine), 'rota aşısı' (rota vaccine), and 'HPV aşısı' (HPV vaccine). The first 10 websites meeting the inclusion criteria for each vaccine group were analyzed. Websites were evaluated using the Global Quality Scale (GQS, 1–5 points) for overall quality, a 6-item custom checklist (0–6 points) formed by researchers for medical accuracy, and the Ateşman Readability Index for linguistic accessibility.

Results: The rotavirus group demonstrated the highest overall quality with a mean GQS score of 3.7±0.8, while both rotavirus and HPV groups yielded the higher medical accuracy checklist scores (4.1±0.9 and 3.9±0.9, respectively). Notably, the overall quality scores were comparable between the HPV and meningococcal groups, with mean GQS scores of 3.2±1.1 and 3.1±0.7, respectively (Table-1). However, meningococcal websites exhibited a distinctively lower performance in their medical accuracy checklist score (2.80±0.92). Readability levels were consistently similar across all vaccine groups, falling within a 9th–10th grade reading level. In the HPV group, one website indicated a highly technical text comprehensible only at postgraduate level.

Table 1. Results of the analysis

	Avarage ± SD	Minimum	Maximum
Rotavirus (n=10)			
GQS Score (1-5)	3.70 ± 0.82	3	5
Checklist Score (0-6)	4.10 ± 0.99	3	6
Readability index	68.93 ±8.88	50.1	80.9
Meningococcal (n=10)			
GQS Score (1-5)	3.10 ± 0.74	2	4
Checklist Score (0-6)	2.80 ± 0.92	2	4
Readability index	62.88 ± 9.39	55.7	85.9
HPV (n=10)			
GQS Score (1-5)	3.20 ± 1.13	2	5
Checklist Score (0-6)	3.9 ± 0.99	2	5
Readability index	66.74 ± 18.68	18.0	80.4

GQS: Global Quality Score, SD: Standard deviation, *Readability index 60-69: Comprehensible by 9th-10th grade students

Conclusion: While online resources for rotavirus and HPV vaccines provide moderate quality and higher medical accuracy, websites regarding the meningococcal vaccine are substantially lacking in clinical accuracy. Notably, the readability of digital information across all groups demands a high school reading level, which may still pose an accessibility barrier for some populations. Health authorities and pediatric organizations must actively intervene to address these digital information gaps and technical complexities, ensuring that parents have access to highly accurate, comprehensive, and easily readable online guidance to support their immunization decisions.

Keywords: HPV vaccine, rotavirus vaccine, meningococcal vaccine, online health information, quality

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LONG-TERM NEURODEVELOPMENTAL EFFECTS OF IN-UTERO SARS-CoV-2 EXPOSURE

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Aim: Studies have shown COVID-19 during pregnancy to be detrimental to short-term infant neurodevelopment; however, long-term data is still inconclusive. We aimed to evaluate the effect of prenatal exposure to SARS-CoV-2 on long-term neurodevelopment in children.

Material & Method: In this multicenter case-control study, children whose mothers tested PCR-positive for SARS-CoV-2 during pregnancy were identified. Reasons for exclusion were any prenatal, natal, or postnatal medical conditions that could affect neurodevelopment, such as prematurity, a low APGAR score, preeclampsia, or epilepsy. In order to ensure long-term evaluation, only children of at least 12 months of age were included. The control group was selected from among mother-child pairs that fit these criteria without a history of COVID-19 during the pregnancy. The results are based on a clinically relevant difference of 7 points in composite cognitive, language, and motor scores on the Bayley Scales of Infant and Toddler Development (Bayley-III), which is considered the gold standard in assessing neurodevelopment in early childhood. The required sample size was determined to be 92 patients.

Results: Composite cognitive scores were found to be significantly lower in the study group compared to the control group (p=0.009). Additionally, composite language scores were observed to be significantly lower in the study group than in the control group (p=0.021). Composite motor scores were also significantly lower in the study group relative to the control group (p=0.023).

Conclusion: Statistically significant impairment in all neurodevelopmental categories was observed in children born to mothers with COVID-19 during pregnancy, despite ruling out other medical conditions known to independently affect neurodevelopment. These results illustrate the need for long-term follow-up on infants born to mothers with COVID-19 during pregnancy. They also further show the need for prevention of such infections. Recognition of neurodevelopmental impairment is critical for ensuring early referral to rehabilitative intervention.

Keywords: Children, COVID-19, In-utero, Long-Term, Neurodevelopment

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THE RELATIONSHIP BETWEEN VITAMIN D, HAEMOGLOBIN AND VITAMIN B12 LEVELS IN CHILDREN AND PAIN AND ANALGESIC REQUIREMENTS FOLLOWING ACUTE ABDOMINAL SURGERY: A RETROSPECTIVE OBSERVATIONAL STUDY

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Aim: Postoperative pain management is a key component of paediatric surgical care. Recent evidence suggests that pain perception is influenced not only by surgical trauma but also by the patient's biochemical and nutritional status. Vitamin D, vitamin B12, and haemoglobin levels play important roles in pain modulation through their effects on inflammation, neurological function, and tissue oxygenation (1–3). Vitamin D deficiency is associated with increased pain sensitivity, while vitamin B12 deficiency may enhance pain perception via neuroinflammatory mechanisms. Additionally, low haemoglobin levels may increase pain intensity due to impaired oxygen delivery and tissue hypoxia (4). This study aimed to evaluate the relationship between these parameters and postoperative pain and analgesic requirements in children.

Material & Method: This retrospective study included patients aged 3–18 years who underwent surgery for acute abdomen between 1 January 2025 and 1 June 2025. Preoperative haemoglobin, vitamin B12, and 25(OH)D levels were recorded. Pain intensity at 1 hour postoperatively was assessed using the Visual Analogue Scale (VAS) and Wong-Baker Faces Pain Scale (WBFPS). Total analgesic dose (mg/kg) on postoperative day one was recorded. Data distribution was analysed using the Shapiro-Wilk test, and correlations were evaluated with Spearman's test. A p-value < 0.05 was considered statistically significant.

Results: A total of 72 patients were analysed (median age: 12 years; 51.4% male). Vitamin D deficiency was present in 15.3% of patients. Median pain scores were 5 (VAS) and 6 (WBFPS). Haemoglobin and vitamin B12 levels showed significant negative correlations with both pain scores and analgesic requirement ($p < 0.001$). Patients with vitamin D deficiency had higher analgesic requirements ($p \approx 0.012$).

Conclusion: Haemoglobin and vitamin B12 levels were inversely associated with postoperative pain and analgesic requirement. Vitamin D deficiency was associated with increased analgesic need, although its independent effect appeared limited. Preoperative micronutrient and haematological assessment may contribute to optimising postoperative pain management.

Keywords: Postoperative pain, Analgesic requirement, Vitamin D, Vitamin B12, Anaemia

OP - 209

ARE MANAGEMENT STRATEGIES ASSOCIATED WITH TOLERANCE ACQUISITION IN INFANTS WITH COW'S MILK-INDUCED ALLERGIC PROCTOCOLITIS? A REAL-WORLD DATA

Melek Yorgun Altunbas[1], Asena Pinar Sefer[2]

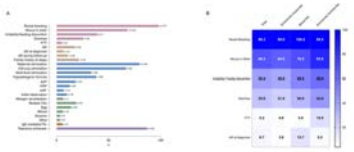
[1]Marmara University Pendik Training and Research Hospital, Department of Pediatrics, Division of Pediatric Allergy and Immunology, Istanbul, Türkiye
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Aim: Food protein-induced allergic proctocolitis (FPIAP) is generally considered a benign and self-limited condition; however, both its natural course and the impact of management strategies on prognosis remain controversial. Data on modifiable factors influencing tolerance acquisition are limited.

Material & Method: We conducted a retrospective cohort study including 180 infants with cow's milk-induced FPIAP. Clinical characteristics, management strategies, and outcomes were analysed. Logistic regression was used to identify factors associated with delayed tolerance, and Kaplan-Meier and Cox regression analyses were performed to evaluate time to tolerance.

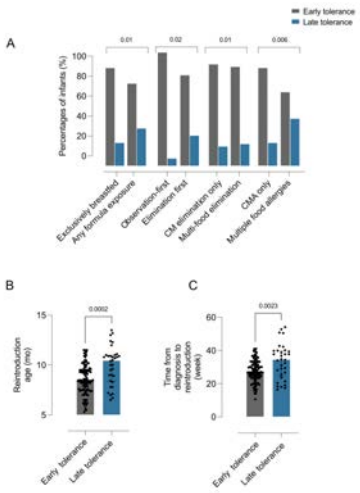
Results: Tolerance was achieved in 91.2% of infants (Table1), with a median time of 31.1 weeks from diagnosis. Rectal bleeding was the predominant presenting symptom (98.3%), followed by mucus in stool (68.3%) (Fig.1A). Although symptoms other than rectal bleeding were more frequent among exclusively formula-fed-infants, these between-group differences did not reach statistical significance (Fig.1B). Exclusive breastfeeding and observation-first-management were more frequent in early tolerance, whereas multi-food-elimination, concomitant multiple food allergies, older age at reintroduction, and a longer diagnosis-to-reintroduction interval were more frequent in late tolerance (Fig.2). In multivariable analysis, multi-food-elimination at presentation and a longer interval from diagnosis to reintroduction were independently associated with delayed tolerance (Table2). Time-to-event analysis showed earlier tolerance in infants managed with an observation-first approach, a lower probability of tolerance over time in those with multiple food allergies, and a more favorable tolerance trajectory in exclusively breastfed infants compared with formula-fed infants (Fig.3).

Figure 1. Clinical characteristics, management strategies, and outcomes in infants with cow's milk protein–induced allergic proctocolitis



(A) Overall frequency (%) of presenting symptoms, atopic and family history variables, initial management patterns, formula types, sensitization findings, and tolerance achievement in the total cohort. The numbers shown next to the bars indicate the sample sizes, and the italicized labels denote subgroups nested within the corresponding main category. (B) Heatmap showing the frequency (%) of selected clinical features at presentation according to feeding type (total, exclusively breast-fed, mixed-fed, and exclusively formula-fed). Color intensity reflects the proportion of patients in each category. (AAF, amino acid–based formula; AD, atopic dermatitis; CM, cow's milk; eHF, extensively hydrolyzed formula; FA, food allergy; FTT, failure to thrive; HRF, hydrolyzed rice formula; IgE, immunoglobulin E.)

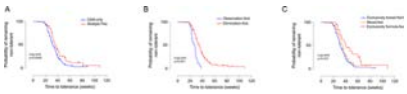
Figure 2. Clinical correlates of early versus late tolerance acquisition in infants with cow's milk protein–induced allergic proctocolitis.



(A) Distribution of clinical and management characteristics according to tolerance phenotype, including feeding exposure, initial management strategy, elimination pattern, and allergy phenotype. Data are presented as percentages, and categorical variables were compared using the χ^2 test or Fisher's exact test, as appropriate. (B) Age at reintroduction according to tolerance phenotype. (C) Time from diagnosis to reintroduction according to tolerance phenotype. In panels B and C, each dot represents an individual infant. Continuous variables are presented as median (IQR) and were compared using the Mann–Whitney U test. Exact p-values are shown above the corresponding comparisons, and a p-value < 0.05 was considered

statistically significant. (CM, cow's milk; CMA, cow's milk allergy; IQR, interquartile range; mo, months; wk, weeks.)

Figure 3. Kaplan–Meier analysis of time to tolerance in infants with cow's milk protein–induced allergic proctocolitis.



(A) Probability of remaining non-tolerant over time according to allergy phenotype (isolated cow's milk allergy vs multiple food allergies). (B) Probability of remaining non-tolerant over time according to initial management strategy (observation-first vs elimination-first). (C) Probability of remaining non-tolerant over time according to feeding modality at presentation (exclusively breast-fed, mixed-fed, and exclusively formula-fed). Time to tolerance is expressed in weeks. Group comparisons were performed using the log-rank test, and exact p-values are shown within each panel. A p-value < 0.05 was considered statistically significant. (CMA, cow's milk allergy; FA, food allergy; wk, weeks.)

Table 1. Initial management, follow-up interventions, and outcomes in infants with cow's milk protein–induced allergic proctocolitis.

Characteristic	**Value***
Initial management	
Initial approach, n (%)	180 (100)
The observation-first approach	18 (10.0)
An elimination diet-based approach	162 (90.0)
Maternal elimination diet	93 (51.7)
Maternal elimination diet with hypoallergenic formula	51 (28.3)
Hypoallergenic formula only	18 (10.0)
Maternal elimination, n/N (%)	144/180 (80.0)
Cow's milk elimination only	96/144 (66.7)
Multi-food elimination	48/144 (33.3)
Hypoallergenic formula type, n/N (%)	69/180 (38.3)

Amino acid formula (AAF)	33/69 (47.8)
Extensively hydrolysed formula (eHF)	13/69 (18.8)
Hydrolysed rice formula (HRF)	23 /69 (33.3)
Observation-first subgroup, n/N (%)	18/180 (10.0)
Complete resolution without dietary intervention	8/18 (44.4)
Switched to elimination after observation	10/18 (55.6)
Follow-up management and outcome	
Switched from AAF to HRF, n/N (%)	10/33 (30.3)
Switched from HRF to AAF, n/N (%)	6/23 (26)
Switched from breastfeeding to formula feeding, n/N (%)	6/110 (5.5)
Switched from breastfeeding to mixed feeding, n/N (%)	2/110 (1.8)
Switched from mixed feeding to formula feeding, n/N (%)	9/51 (17.6)
Breast feeding cessation, n/N (%)	17/161 (10.5)
†Lost to follow-up n/N (%)	10/180 (5.6)
Diet escalation, n/N (%)	50/162 (30.9)
Reintroduction attempted, n/N (%)	162/170 (93.3)
Age at reintroduction, months, median (IQR)	8.5 (7.0-10.5)
Time from diagnosis to reintroduction, weeks, median (IQR)	28.1 (23.8-33.4)
Relapse after reintroduction, n/N (%)	31/162 (18.5)
Tolerance achieved, n/N (%)	155/170 (91.2)
Time from diagnosis to tolerance, weeks, median (IQR)	31.1 (26.1-38.2)
Multiple concomitant FAs, n/N (%)	34/170 (19.4)
IgE-mediated FA during follow-up	11/170 (6.5)

FA, food allergy; IQR, interquartile range; n, subgroup count; N, total group count. Data are presented as n (%), n/N (%), or median (IQR), as appropriate. *Percentages are calculated within the relevant subgroup denominator. †All patients lost to follow-up were on the elimination diet.

Table 2: Univariate and multivariable logistic regression analyses of factors associated with late tolerance (≥12 months).

Variable	Univariate OR	95% CI	p	Multivariable OR	95% CI	p
Exclusive breastfeeding	0.48	0.24-0.98	**0.044**	0.92	0.36-2.34	0.921

Irritability/feeding discomfort	0.62	0.20-1.33	0.219			
Diarrhea	1.63	0.71-3.74	0.247			
Failure to thrive	1.66	0.36-8.9	0.559			
Atopic Dermatitis	1.94	0.79-4.78	0.147			
Observation-first management	0.18	0.02-1.38	0.098			
Multi-food elimination at presentation	2.97	1.25-7.02	**0.013**	**2.58**	1.02-6.54	**0.046**
Diet escalation	2.23	0.95-5.19	0.062			
Concomitant multiple food allergies	2.65	1.32-6.57	**0.008**	1.85	0.73-4.71	0.194
Time from diagnosis to reintroduction, weeks	1.10	1.04-1.16	**0.002**	**1.08**	1.02-1.14	**0.022**

CI, confidence interval; OR, odds ratio. Outcome was defined as delayed tolerance versus early tolerance. For continuous variables, odds ratios represent the change associated with a 1-week increase. Overall multivariable model: $\chi^2 = 15.0$, df = 4, p = 0.005; McFadden $R^2 = 0.111$. CI, confidence interval; OR, odds ratio.

Conclusion: The course of FPIAP appears to be influenced not only by clinical characteristics but also by management strategies. Delayed reintroduction and multi-food elimination were associated with later tolerance, while observation-first management was associated with earlier tolerance acquisition. These findings suggest that commonly used strategies such as prolonged elimination or delayed reintroduction may warrant reconsideration in selected infants and support a more individualized and less restrictive approach to management

Keywords: Cow's milk, Elimination, Food protein-induced allergic proctocolitis, infant, Oral tolerance

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THE EFFECT OF THE VOLUME AND SODIUM CONTENT OF MATERNAL INTRAVENOUS FLUIDS ADMINISTERED DURING LABOR ON PHYSIOLOGICAL WEIGHT LOSS IN EXCLUSIVELY BREASTFED NEWBORNS

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Aim: Intravenous (IV) fluid therapy administered during labor is commonly used to maintain maternal hemodynamic stability; however, it may also influence the fluid balance of the newborn in the early postnatal period. The aim of this study is to investigate the effect of the volume and sodium content of IV fluids administered during labor on neonatalweight loss.

Material & Method: This study followed up at the Health Sciences University Şişli Hamidiye Etfal Training and Research Hospital between October 1, 2024 and February 28, 2025, with no known disease and born between 37+0-41+6 weeks of gestation.

Results: The findings revealed that the presence of intrapartum fluid administration, as well as increases in both the volume of administered fluids and their sodium content, may lead to more pronounced neonatal weight loss within the first 72 hours postpartum. Our study demonstrated significant associations between the amount and composition of administered fluids and neonatal weight changes observed during the first 72 hours, on day 15, and on day 30. The risk of experiencing > 6% weight loss at 48 and 72 hours was found to be approximately three times higher in infants exposed to fluid administration. Furthermore, ROC analysis demonstrated that specific threshold values (4.76% and 4.23%) could be used to predict these weight losses with high sensitivity and specificity.

Conclusion: This study emphasize that intrapartum fluid therapy should be planned with careful attention to both volume and electrolyte composition. In neonatal follow-up, especially during breastfeeding assessments, clinicians should consider maternal fluid load as a potential confounding factor contributing to early postnatal weight fluctuations. Our study supports a more annouanced approach to the interpretation of neonatal weight loss, advocating for clinical decision-making that incorporates maternal intrapartum interventions in addition to feeding performance.

Keywords: Birth, Physiological weight loss, Intravenous fluid, sodium load.

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EVALUATION OF INFLAMMATORY AND NUTRITIONAL MARKERS IN PEDIATRIC ACUTE AND CHRONIC MALNUTRITION

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Aim: To assess the correlation of inflammatory and nutritional indices with acute/chronic malnutrition in children and to evaluate the effect of concomitant infection on these parameters. The primary objective was to assess how these indices change in malnourished children, with particular emphasis on determining whether observed changes are related to malnutrition severity or to concomitant infections.

Material & Method: This retrospective study involved 74 newly diagnosed pediatric patients aged 6 to 60 months with malnutrition, seen between January 2023 and January 2026. (Figure 1). Acute malnutrition was classified using the weight-for-height Z-score (WHZ), while chronic malnutrition was defined by the height-for-age Z-score (HAZ). Patients were divided into four groups: no wasting or stunting, acute malnutrition only, chronic malnutrition only, and combined acute-chronic malnutrition. Several inflammatory markers were calculated, including neutrophil-lymphocyte ratio (NLR), monocyte-lymphocyte ratio (MLR), platelet-lymphocyte ratio (PLR), and systemic inflammation response index (SIRI). Nutritional parameters such as the prognostic nutritional index (PNI) and C-reactive protein to albumin ratio (CAR) were also assessed. Infection was identified through clinical examination combined with elevated C-reactive protein (CRP) levels.

Results: Significant differences were observed in NLR (p=0.033), SIRI (p=0.015), and the RDW/albumin ratio (p=0.029) among the malnutrition groups (Table 1). However, when patients with concomitant infections were excluded, these differences were no longer significant. The analysis showed that inflammatory indices varied significantly across malnutrition categories only when infected patients were included.

Figur 1. Study flow diagram

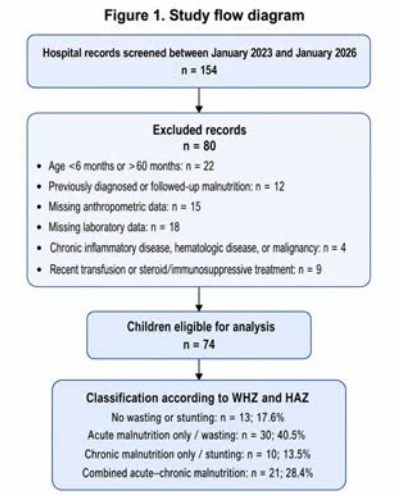


Table 1. Comparison of inflammatory and nutritional indices across anthropometric malnutrition groups before and after exclusion of patients with concomitant infection

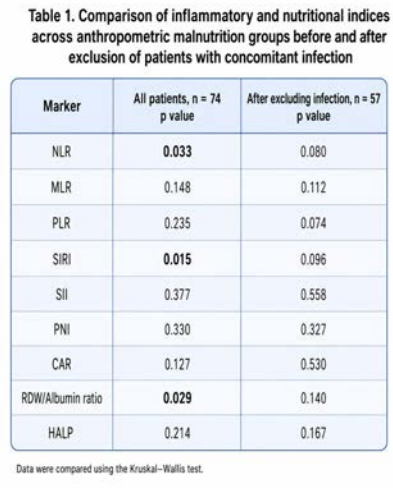


Table 1. Comparison of inflammatory and nutritional indices across anthropometric malnutrition groups before and after exclusion of patients with concomitant infection

Marker	All patients, n = 74 p value	After excluding infection, n = 57 p value
NLR	**0.033**	0.080
MLR	0.148	0.112
PLR	0.235	0.074
SIRI	**0.015**	0.096
SII	0.377	0.558
PNI	0.330	0.327
CAR	0.127	0.530
RDW/Albumin ratio	**0.029**	0.140
HALP	0.214	0.167

Data were compared using the Kruskal–Wallis test.

Conclusion: The alterations in inflammatory indices seen in malnourished children appear to be more closely linked to the presence of infection than to the severity of malnutrition itself. Therefore, inflammatory markers should not be used alone as indicators of malnutrition severity without considering infection status. These findings highlight the importance of evaluating infection as a key confounding factor when assessing malnourished pediatric patients.

Keywords: prognostic nutritional index, acute malnutrition, chronic malnutrition, systemic immune-inflammation index, neutrophil-to-lymphocyte ratio

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COMPLICATIONS OF PEDIATRIC SINUSITIS: A RETROSPECTIVE ANALYSIS OF A ONE-YEAR SINGLE-CENTER EXPERIENCE

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Aim: Pediatric rhinosinusitis is a common infectious condition that may lead to serious orbital and intracranial complications if not promptly recognized and treated. Owing to the anatomical proximity of the paranasal sinuses to the orbit and cranial cavity, infection can spread rapidly beyond the sinonasal region, particularly in children. Early diagnosis and appropriate management are crucial to prevent permanent morbidity and potentially life-threatening outcomes. This study aimed to evaluate the demographic, radiological, laboratory, and therapeutic characteristics of pediatric patients treated for rhinosinusitis-related complications at our institution.

Case: Patients hospitalized with rhinosinusitis-related complications between January and December 2025 were retrospectively reviewed. Demographic data, seasonal distribution, laboratory findings (WBC and CRP), radiological findings, treatment modalities, and clinical outcomes were analyzed. Sinus involvement was determined using paranasal CT and, when indicated, MRI. Complications were classified according to the Chandler staging system (Stages I–V). Medical treatment protocols, surgical interventions, and multidisciplinary management were evaluated. Clinical and radiological findings were compared with treatment outcomes.

Results: Pediatric rhinosinusitis complications may rapidly spread to the orbit and intracranial cavity due to weak anatomical barriers, particularly involving the maxillary and ethmoid sinuses. The Chandler classification remains useful for guiding treatment decisions. Although most patients respond to parenteral antibiotics, advanced orbital and intracranial complications often require surgical and multidisciplinary management. In accordance with EPOS 2020 and AAP recommendations, early imaging and interdisciplinary collaboration are essential for favorable outcomes.

Conclusion: Our findings were consistent with previous reports on pediatric rhinosinusitis complications. Orbital involvement was the most common complication, with 67.5% of cases classified as Chandler Stage I, while ethmoid disease predominated among patients with orbital complications. The rates of intracranial complications (7.5%) and surgical intervention (32.5%) were comparable to the literature. Early imaging and multidisciplinary management were crucial for favorable outcomes, with visual function preserved in all patients managed jointly by Otolaryngology and Ophthalmology teams.

Keywords: Pediatric rhinosinusitis, Orbital cellulitis, Chandler classification, Intracranial complications, Functional endoscopic sinus surgery (FESS)

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CLINICAL CHARACTERISTICS AND COMPLICATION PATTERNS OF PEDIATRIC ACUTE MASTOIDITIS: A SINGLE-CENTER RETROSPECTIVE STUDY

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Aim: Acute mastoiditis (AM) is the most common complication of acute otitis media and may progress to serious intratemporal and intracranial complications. This study evaluated the clinical characteristics, management, and outcomes of pediatric AM and factors associated with complicated disease.

Material & Method: Pediatric patients hospitalized with AM between 2020 and 2026 were retrospectively reviewed. Clinical findings, WBC, CRP, radiological findings, complications, treatment modalities, and hospital stay were analyzed. Patients were stratified as isolated or complicated AM and compared accordingly.

Results: A total of 41 patients were included. Mean age was 7.3 ± 4.3 years (0–17 years), and 27 patients (66.0%) were male. Sixteen patients (39.0%) had isolated AM, while 25 (61.0%) had complicated mastoiditis. No significant differences were found between groups regarding WBC and CRP levels (all $p > 0.05$), although surgical intervention was more frequent in complicated cases. Ventilation tube (VT) insertion was the most common surgical intervention (61.0%), followed by mastoidectomy (24.4%) and abscess drainage with VT insertion (14.6%). Mastoidectomy was more common in complicated mastoiditis (29.4% vs 12.5%). The most common complication was sigmoid sinus venous thrombosis (22.0%), followed by subperiosteal abscess (19.5%). Facial paralysis, meningitis, and temporal lobe abscess were each observed in two patients (4.9%), while Gradenigo syndrome and serous labyrinthitis were each detected in one patient (2.4%).

Conclusion: Complicated AM remains a clinically significant condition requiring early recognition and management. Unlike the literature, sigmoid sinus thrombosis was the most common complication in our series, possibly reflecting referral patterns and frequent use of advanced imaging in a tertiary center. Clinical and radiological findings may help identify disease severity and guide treatment.

Keywords: Acute mastoiditis, pediatric, complications, sigmoid sinus thrombosis

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SINONASAL INVASIVE FUNGAL INFECTIONS IN IMMUNOCOMPROMISED CHILDREN: A SINGLE-CENTER EXPERIENCE

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Aim: Invasive Fungal Infections (IFIs) are life-threatening infections associated with high morbidity and mortality in immunocompromised children. This study aimed to evaluate the clinical characteristics, diagnostic processes, and treatment outcomes of IFIs in immunocompromised pediatric patients, with particular emphasis on sinonasal involvement.

Material & Method: This retrospective case series included eight immunocompromised patients under 18 years of age who were diagnosed with IFIs and followed between 2020 and 2026. Diagnosis was established based on clinical findings, imaging studies, and histopathological and microbiological examination of biopsies obtained through endoscopic nasal evaluation. Demographic characteristics, underlying diseases, extent of infection, laboratory parameters, treatment modalities, and clinical outcomes were analyzed.

Results: The mean age of the eight patients was 13.0 ± 3.2 years, with an equal sex distribution [4/8 (50%) female]. Hematological malignancies were the most common underlying condition [7/8 (87.5%)]. Sinonasal involvement was identified in 6/8 patients (75%), while orbital involvement and intracranial extension were observed in 1/8 patients (12.5%) each. Deep neutropenia was present in 7/8 patients (87.5%). The median CRP level was 179.5 mg/L (range: 13–593), and the median albumin level was 29 g/L (range: 23–38). The most common genus cultured was Rhizopus (n = 6). All patients received systemic antifungal therapy, and surgical debridement was performed in 4/8 patients (50%). The overall survival at 6 months was 50%.

Conclusion: Our case series demonstrates that sinonasal IFIs in immunocompromised pediatric patients are associated with high mortality, with hematological malignancies and deep neutropenia emerging as the major risk factors. In the presence of sinonasal involvement, early ENT evaluation, histopathological confirmation, and multidisciplinary medical–surgical management play a critical role in improving survival outcomes.

Keywords: Sinonasal, Invasive Fungal Infections, Immunocompromised Children

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CLINICAL CHARACTERISTICS, SURGICAL APPROACH, AND TREATMENT OUTCOMES IN CHOANAL ATRESIA: A SINGLE-CENTER RETROSPECTIVE STUDY OF 14 PATIENTS

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Aim: Choanal atresia (CA) is a rare congenital anomaly causing obstruction of the posterior nasal apertures. This study aimed to evaluate clinical features, surgical outcomes, recurrence, and syndromic associations in pediatric patients with CA.

Material & Method: 14 pediatric patients diagnosed with CA between 2020 and 2026 at a tertiary referral center were retrospectively reviewed. Demographic characteristics, type and laterality of atresia, syndromic associations, surgical techniques, revision surgery, and outcomes were analyzed.

Results: Bilateral CA was present in 8/14 patients (57.1%), while 6/14 (42.9%) had unilateral disease. Neonatal diagnosis was established in 6/14 patients (42.9%), all presenting with respiratory distress. Median age at surgery was 11 years for unilateral cases and 25 days for bilateral cases. Mixed osseomembranous atresia was the predominant type (85.7%). Syndromic associations were identified in 6/14 patients (42.9%), most commonly CHARGE syndrome 3/14 (21.4%). Endoscopic repair with thoracostomy tube stenting was performed in 13 patients; one underwent dilatation alone. Single-procedure success was achieved in 8/14 (57,1%) of patients, whereas 6/14 (35,7%) required revision surgery because of restenosis. Complete resolution was observed in 13/14 (92.9%) of patients at final follow-up.

Conclusion: Endoscopic management of choanal atresia provided high treatment success in our cohort. Bilateral cases frequently presented with neonatal respiratory distress, highlighting the importance of early diagnosis. The predominance of osseomembranous atresia and frequent syndromic associations were consistent with previous reports. Multidisciplinary management and close follow-up remain essential for long-term surgical success.

Keywords: : Choanal atresia, congenital anomaly, neonatal respiratory distress, endoscopic surgery, CHARGE syndrome

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SPEECH THERAPY OUTCOMES AFTER FRENOTOMY IN CHILDREN WITH ANKYLOGLOSSIA

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Aim: This study aimed to retrospectively evaluate the postoperative speech therapy course, session requirements, and clinical factors affecting speech intelligibility outcomes in pediatric patients who underwent frenotomy for ankyloglossia at our clinic.

Material & Method: Records of 29 patients (24 boys, 5 girls) referred for speech therapy after frenulum incision were reviewed retrospectively. Variables analyzed included age at surgery and at initiation of speech therapy, the interval between the two interventions, the anatomical distribution of misarticulated sounds (anterior vs. postalveolar), presence of lisping, total number of therapy sessions, and adherence to home exercises. Functional outcome after therapy was assessed using a 5-point Likert-type speech intelligibility scale based on parental perception.

Results: The demographic and baseline clinical characteristics of the patients are presented in Table 1. The mean age at frenotomy was 5.5 years, while the mean age at the start of speech therapy was 6.3 years. The average interval between surgery and therapy was 12.5 months, and longer delays were associated with a greater number of corrective therapy sessions. Articulation errors were more prominent in anterior tongue sounds (mean 2.9 errors) than in postalveolar sounds (mean 1.0 error), with /r/ and /s/ being the last sounds to be fully rehabilitated. Lisping was identified in 48.2% of cases and was associated with a greater therapy burden. Patients with high adherence to home exercises required an average of 8.3 sessions, compared with 14.0 sessions in the non-adherent group. Parent-reported speech intelligibility scores were also highest in the regular exercise group (4.72/5.0).

Table 1. Demographic and Baseline Clinical Characteristics

Male / Female, n (%)	24 (82.7%) / 5 (17.3%)
Age at Frenotomy (years), Mean ± SD	5.5 ± 3.4
Age at Speech Therapy (years), Mean ± SD	6.3 ± 3.3

Delay Between Surgery and Therapy (months), Mean ± SD	12.5 ± 16.5
Feeding (Sucking) Problem History, n (%)	3 (10.3%)
Presence of Lisping, n (%)	14 (48.2%)
Mean Severity of Tongue Tie (1-5 scale)	3.2 ± 1.0

N=29. Data are presented as mean ± standard deviation and n (%)

This table summarizes the baseline demographics, surgical timing, and preoperative clinical features, including the presence of lisping and feeding (sucking) problems, of the pediatric ankyloglossia cohort (N=29).

Conclusion: In children with ankyloglossia, achievement of improved speech intelligibility after frenotomy appears to be associated with early initiation of speech therapy and strong adherence to home exercises. Delayed referral for therapy and poor exercise compliance were associated with increased treatment burden. These findings suggest that the functional benefits of improved tongue mobility after surgery are optimized when combined with timely, parent-supported rehabilitation.

Keywords: Ankyloglossia, Frenotomy, Speech Therapy, Speech Intelligibility, Articulation Disorders

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HISTOPATHOLOGICAL SPECTRUM AND CLINICAL DIAGNOSTIC CONCORDANCE OF PEDIATRIC NECK MASSES

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Aim: Pediatric neck masses comprise a heterogeneous spectrum ranging from congenital lesions to malignancies. This study aimed to evaluate the histopathological distribution, anatomical localization, malignancy rate, and clinical diagnostic concordance of surgically excised pediatric neck masses, and to compare the findings with relevant literature.

Material & Method: Children aged 0–17 years who underwent surgical excision for a neck mass between August 2020 and April 2026 were retrospectively reviewed. Demographic data, lesion localization, clinical preliminary diagnosis, and final histopathological diagnosis were recorded. Lesions were classified according to anatomical site and histopathological category. Clinical–histopathological diagnostic concordance was defined as complete concordance, partial concordance, or discordance. Descriptive statistics, chi-square/Fisher's exact test, and Mann–Whitney U test were used where appropriate.

Results: A total of 152 patients were included. The mean age was 9.07 ± 4.55 years, and 79 patients were male. The most common localization was the midline neck (42.1%), followed by the lateral neck (28.3%). Congenital/developmental lesions constituted the largest histopathological group (57.2%), followed by inflammatory/infectious lesions (19.7%) and malignant neoplasms (10.5%). The most frequent diagnoses were thyroglossal duct cyst, branchial cleft cyst, and epidermoid/epidermal cyst. Complete clinical–histopathological concordance was 61.6%, while complete or partial concordance reached 84.8%. (Table 1). Concordance was highest in malignant neoplastic lesions and lowest in inflammatory/infectious lesions. Malignancy was significantly associated with localization, particularly posterior triangle and supraclavicular masses (Figure 1), and was more frequent in male patients.

Figure 1. Malignancy Rate by Anatomical Localization

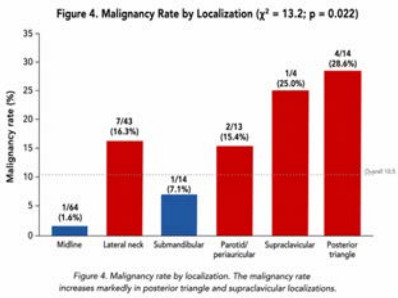


Table 1. Clinicopathological Characteristics of Pediatric Neck Masses

Parameter	n	%
Midline localization	64	42.1
Lateral neck localization	43	28.3
Congenital/developmental lesions	87	57.2
Inflammatory/infectious	30	19.7
Malignant neoplasms	16	10.5
Complete diagnostic concordance	93/151	61.6
Complete or partial concordance	128/151	84.8

Summary of anatomical localization, histopathological categories, and clinical–histopathological diagnostic concordance in surgically excised pediatric neck masses.

Conclusion: Although most surgically treated pediatric neck masses are congenital/developmental, malignancy is detected in approximately one-tenth of cases. Anatomical localization and sex may guide risk stratification. Histopathological confirmation remains essential, especially for posterior triangle, supraclavicular, and clinically suspicious lesions.

Keywords: Pediatric neck mass; histopathology; diagnostic concordance; thyroglossal duct cyst; malignancy.

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"LONG-TERM NEUROLOGICAL OUTCOMES IN PATIENTS WITH PERINATAL STROKE: A CASE SERIES"

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Aim: The aim of this study was to evaluate the clinical features, etiological factors, neuroimaging findings, treatment strategies, and follow-up outcomes of cerebrovascular events in the neonatal period.

Case: Patients who presented to the pediatric neurology outpatient clinic between April 2020 and April 2026 were retrospectively reviewed. A total of 9 patients (6 males, 3 females) were followed for 2–6 years.

Results: Cerebral sinovenous thrombosis was detected in three patients, two of whom had an underlying cardiac etiology. Six patients were diagnosed with arterial ischemic stroke; etiological factors included hypernatremia in two patients, central nervous system infection in one patient, and presumed lacunar infarction in one patient, while no cause was identified in two patients. All patients were term-born, and except for one case, there was no history of significant hypoxia or sepsis. The most common presenting symptom was seizures in six patients, followed by focal neurological deficits in two patients and apnea in one patient. Imaging findings predominantly involved the middle cerebral artery and parietal region, whereas in cases of sinovenous thrombosis, involvement of the sigmoid, jugular, and transverse sinuses was observed. Anticoagulant therapy was administered to three patients, and antiepileptic treatment to six patients. During follow-up, three patients developed neurodevelopmental delay and two had residual hemiparesis. Two patients were followed with refractory epilepsy, and one patient died during follow-up.

Conclusion: Perinatal cerebrovascular events typically present with non-specific symptoms and most commonly manifest as seizures. Consistent with the literature, our study demonstrates that most infarctions are ischemic in origin and highlights the importance of secondary causes such as hypernatremia and infection in etiology. Early diagnosis and appropriate treatment are crucial in reducing long-term neurological sequelae.

Keywords: Perinatal stroke, seizure, sinovenous thrombosis, neurological sequelae

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URGENT GROSS TOTAL RESECTION OF A HIGH-GRADE PEDIATRIC BRAIN TUMOR PRESENTING WITH RAPID NEUROLOGICAL DETERIORATION

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Aim: High-grade central nervous system tumors in childhood are rare intracranial lesions associated with substantial mortality and morbidity.Treatment of high-grade pediatric CNS tumors is particularly challenging and time-sensitive. Early surgical resection, accurate histopathological characterization, and the rapid initiation of multidisciplinary oncological management, including chemotherapy and radiotherapy when appropriate, are essential for optimizing clinical outcomes.

Case: We present the case of a 2.5-year-old girl who was admitted with gait disturbance and neurological deficits. Radiological evaluation initially demonstrated a predominantly cystic intracranial lesion, and the pathological findings raised suspicion for ependymoma. Due to the presence of significant neurological deficits, the patient underwent urgent gross total resection with neuronavigation guidance (Figure 1). In the postoperative period, a marked improvement in her neurological deficits was observed. Despite extensive histopathological and immunohistochemical evaluation, a definitive distinction from atypical teratoid/rhabdoid tumor (AT/RT) could not be established. Following external expert pathological review, the lesion was ultimately classified as a WHO Grade 4 central nervous system tumor.Genetic testing was performed for further diagnostic clarification, and the results are currently pending.

Figure 1

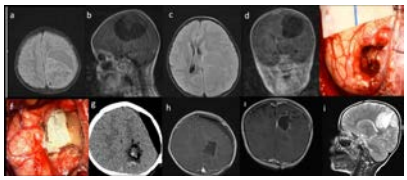


Figure 1. (a) Preoperative contrast-enhanced axial cranial MRI. (b) Preoperative contrast-enhanced sagittal cranial MRI. (c) Preoperative axial T1-weighted cranial MRI. (d) Preoperative contrast-enhanced coronal cranial MRI. (e) Intraoperative photograph demonstrating the tumor prior to surgical resection.(f) Intraoperative photograph following gross total tumor resection. (g) Early postoperative cranial CT scan. (h) Postoperative contrast-enhanced axial cranial MRI. (ı) Postoperative contrast-enhanced coronal cranial MRI. (i) Postoperative sagittal T2-weighted cranial MRI.

Results: This case highlights the diagnostic challenges encountered in pediatric high-grade CNS tumors and underscores the importance of a multidisciplinary approach, comprehensive immunohistochemical assessment, and early surgical intervention in achieving optimal clinical outcomes.

Conclusion: This case highlights the diagnostic challenges associated with pediatric high-grade CNS tumors that may radiologically and histopathologically mimic other entities. Early surgical intervention, comprehensive histopathological evaluation, and a multidisciplinary treatment approach are essential for achieving accurate diagnosis and timely initiation of adjuvant therapy.

Keywords: Pediatric brain tumor, WHO Grade 4 CNS tumor, Ependymoma, Atypical teratoid/rhabdoid tumor (AT/RT), Gross total resection

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INFLAMMATORY AND NUTRITIONAL MARKERS IN PEDIATRIC FEBRILE SEIZURES

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Aim: Febrile seizures (FS) are the most common type of seizure encountered in childhood. Growing evidence suggests that inflammatory processes may contribute to their pathogenesis. Recently, easily accessible biomarkers derived from routine blood tests, such as the neutrophil-to-lymphocyte ratio (NLR), prognostic nutritional index (PNI), and C-reactive protein-to-albumin ratio (CAR), have attracted interest as potential indicators of disease risk. This study aimed to evaluate the relationship between these biomarkers and febrile seizures in children.

Material & Method: We retrospectively reviewed the medical records of 401 children, including 200 patients with FS and 201 controls without a history of febrile seizures (Table 1). Demographic characteristics and laboratory findings were collected, and NLR, PNI, and CAR values were calculated from routine laboratory measurements (Table 1). Differences between groups were analyzed using appropriate statistical methods (Table 2). Multivariable logistic regression was performed to identify factors independently associated with FS, while receiver operating characteristic (ROC) analysis was used to assess the diagnostic performance of the investigated biomarkers .

Results: Children with FS showed significantly higher neutrophil counts, NLR, and CAR values, together with lower lymphocyte counts and PNI values compared with controls (all $p < 0.05$) (Table 1) . The proportion of males was also significantly higher in the FS group (62.5% vs. 47.8%, p=0.004). After adjustment for potential confounders, younger age, male sex, and higher NLR remained independently associated with FS (Table 3) . In contrast, CAR and PNI were no longer statistically significant in the multivariable model. Among the evaluated biomarkers, NLR demonstrated the best discriminative performance, although its overall predictive ability remained modest (AUC = 0.647) (Figure 1).

Figure 1. ROC curves of NLR, PNI, and CAR for predicting febrile seizures. NLR showed the highest area under the curve (AUC=0.647), followed by PNI (AUC=0.589) and CAR (AUC=0.560). The diagonal dashed line indicates random classification performance.

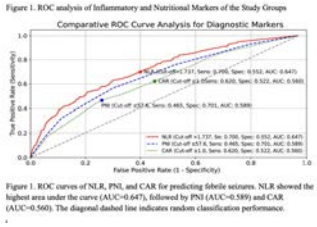


Figure 1. ROC analysis of Inflammatory and Nutritional Markers of the Study Groups

Figure 1. ROC curves of NLR, PNI, and CAR for predicting febrile seizures. NLR showed the highest area under the curve (AUC=0.647), followed by PNI (AUC=0.589) and CAR (AUC=0.560). The diagonal dashed line indicates random classification performance.

Table 1. Demographic and Clinical Characteristics of Patients vs Controls

Parameters	Patients	Controls	p
Gender (n, %) Female Male	 75 (37.5%) 125 (62.5%)	 105 (52.2%) 96 (47.8%)	0.004
Age (months), Mean±SD	27.48 ± 18.88	29.97 ± 18.55	0.167
Weight (kg), Mean±SD	14.37 ± 6.34	14.02 ± 5.12	0.878
CAR, Median (IQR)	1.98 (0.47–5.48)	0.95 (0.22–5.26)	0.037
PNI, Median (IQR)	58.72 (53.45–67.55)	62.60 (56.20–72.20)	0.002
NLR, Median (IQR)	2.73 (1.33–4.92)	1.46 (0.73–3.00)	<0.001

*Mann Whitney U test, statistical significance p<0.05

Table 2. Inflammatory and Nutritional Indices of Study Groups

Variable	NonDrug-user	User	p
FS episode number	1 (1–2)	2 (2–3)	<0.001
CAR	1.98 (0.40–4.11)	2.16 (0.51–5.96)	0.241
PNI	57.20 (53.45–66.10)	60.35 (53.90–69.35)	0.384
NLR	2.92 (1.33–5.97)	2.65 (1.41–4.16)	0.101

*Chi-square test, statistical significance p<0.05

Table 3. Multivariable Logistic Regression Analysis Identifying Independent Predictors of the Outcome

Predictor	OR	95% CI	p	Interpretation
Age	0.806	0.696–0.932	0.004	Independent
Male sex	1.752	1.162–2.641	0.007	Independent
CAR	1.001	0.980–1.022	0.947	NS
PNI	0.987	0.967–1.007	0.196	NS
NLR	1.118	1.029–1.215	0.009	Independent

Conclusion: Our findings suggest that NLR is more closely associated with febrile seizures than CAR or PNI and may serve as a useful adjunctive marker in clinical practice. Nevertheless, its limited diagnostic accuracy indicates that it should be interpreted alongside clinical findings rather than used as an independent diagnostic tool.

Keywords: Febrile seizure, Prognostic nutritional index (PNI), Children, Inflammation, Neutrophil

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COMPLEMENTARY FEEDING COUNSELING AMONG FAMILY PHYSICIANS: CURRENT PRACTICES, CHALLENGES, AND EDUCATIONAL NEEDS

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Aim: Complementary feeding is a critical period affecting infant growth, nutritional status, and future eating behaviors. Family physicians are among the primary healthcare professionals guiding parents during this transition. This study aimed to evaluate family physicians' recommendations, attitudes, and counseling practices related to complementary feeding.

Material & Method: A cross-sectional survey was conducted using an online questionnaire distributed through Google Forms. The survey was shared among family physicians via professional social media networks, including Facebook, WhatsApp, and Instagram, using a snowball sampling approach. Data on demographic characteristics, complementary feeding recommendations, counseling practices, and perceived parental challenges were collected.

Results: Seventy-six family physicians participated in the study. Half of the participants worked in family health centers (50.0%). Most physicians routinely provided complementary feeding counseling, with 76.3% reporting that they informed families "always" or "most of the time". The majority (81.6%) recommended introducing complementary foods at six months of age. Vegetable puree (52.6%) and yogurt (30.3%) were the most commonly recommended first foods. Regarding Baby-Led Weaning (BLW), 51.3% believed the approach should be determined by family preference, 23.7% expressed reservations, and 13.2% actively recommended it. Most physicians (71.1%) continued to advise introducing foods individually using the traditional "3-day rule." Misinformation regarding infant feeding was considered common by 60.5% of participants. The most frequently reported parental mistakes were using packaged foods (76.3%), offering inappropriate foods (64.5%), and adding salt or sugar to meals (64.5%). Additionally, 63.2% reported limited access to written or visual educational materials for counseling.

Conclusion: Family physicians generally provide advice consistent with current recommendations regarding the timing of complementary feeding. Nevertheless, variation persists in counseling practices related to BLW and food introduction strategies. Standardized, evidence-based educational resources may improve the quality and consistency of complementary feeding counseling in primary care.

Keywords: Complementary Feeding, Infant Nutrition, Baby-Led Weaning, Nutrition Counseling

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A RARE CASE: NEONATAL DISTAL FEMUR FRACTURE DUE TO BIRTH TRAUMA

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Aim: Long bone fractures in the neonatal period are rare, and distal femur fractures are particularly uncommon. Breech presentation, prematurity, and difficult delivery maneuvers are important risk factors. We aimed to present the clinical findings, diagnostic process, and treatment of a neonatal distal femur fracture caused by birth trauma.

Case: A female newborn delivered at 34 weeks and 3 days of gestation by cesarean section due to breech presentation was evaluated for swelling and bruising of the right lower extremity after birth. The mother was 23 years old, gravida 4, para 0. Delivery was performed under spinal anesthesia because of labor onset, the presence of a twin sibling, and regression in fetal heart rate. APGAR scores were 8 at the 1st minute and 9 at the 5th minute. Physical examination revealed ecchymosis in the right popliteal region, tenderness on palpation, and edema around the distal femur. No temperature difference or circulatory impairment was detected between the lower extremities. Initially, compartment syndrome was suspected, and orthopedic consultation with radiological imaging was requested.

Results: Plain radiographs demonstrated a fracture line in the lateral aspect of the distal femur (Figure 1). The patient was treated conservatively with immobilization using a transport splint (Figure 2). During follow-up, no circulatory compromise or additional complications developed. Control radiographs obtained two weeks later showed callus formation and fracture healing. As clinical tenderness regressed, splint treatment was discontinued (Figure 3).

Figure 1. A fracture line in the lateral aspect of the distal femur

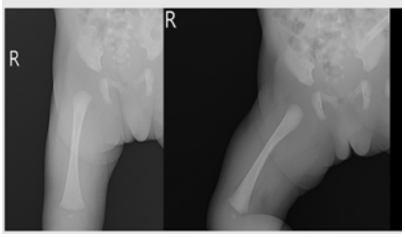


Figure 2. Immobilization using a transport splint

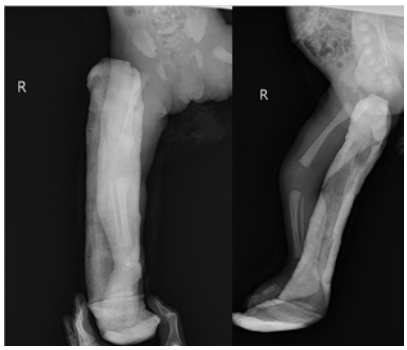


Figure 3. Two weeks later showed callus formation and fracture healing. As clinical tenderness regressed, splint treatment was discontinued



Conclusion: Although distal femur fractures are rare in newborns, they should be considered in cases with breech presentation and prematurity. Careful physical examination and radiological evaluation are essential in newborns presenting with swelling, ecchymosis, and limited extremity movement. Early diagnosis and conservative treatment can provide rapid and successful healing.

Keywords: Neonatal fracture, distal femur fracture, prematurity, cesarean delivery, newborn orthopedic injury

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HYPERSELECTIVE NEURECTOMY IN CHILDREN WITH CEREBRAL PALSY

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Aim: Upper extremity spasticity in cerebral palsy (CP) severely limits hand use. Hyperselective neurectomy (HSN) is a novel microsurgical approach aimed at reducing muscle tone by selectively decreasing motor nerve branches contributing to spasticity, while preserving voluntary motor control (Fig. 1). This study investigated hand-use experience, activity performance, and satisfaction in pediatric CP cases who underwent this advanced procedure.

Fig. 1

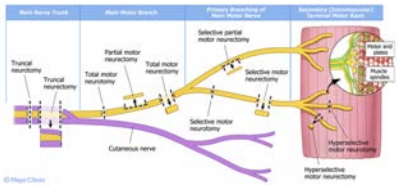


Fig. 1: Terminology of nerve-based procedures to address spasticity based on the level of nerve branching. (Reprinted from "Fig. 1" in Wu et al., 2024, PRS Global Open, under the CC-BY 4.0 license. © Mayo Clinic).

Case: Nine children with CP, aged 6–18 years, who underwent HSN were included. All procedures were performed using a microsurgical technique by two experienced hand surgeons. The technique involved dissecting the main nerve trunk distally to its terminal branches at the neuromuscular junction level, followed by the selective resection of two-thirds (2/3) to three-quarters (3/4) of these motor branches (Fig. 2). Participants were assessed preoperatively and at 6 months postoperatively. Participants were assessed preoperatively and 6 months postoperatively using the Children's Hand-use Experience Questionnaire (CHEQ) and the Canadian Occupational Performance Measure (COPM). Postoperative rehabilitation was continued at the centers where the patients were followed.

Fig. 2



Fig. 2: HSN of Flexor Carpi Ulnaris muscle (Ulnar nerve)

Results: The mean age was 12.66±2.50 years, and all were operated on the non-dominant extremity. No significant postoperative change was observed in one-handed use (p=0.397). Significant improvements were observed in bimanual use, level of assistance, parent-reported hand-use status, time use, and discomfort parameters ($p < 0.05$). COPM performance increased from 3.2 to 7.2 and satisfaction from 2.4 to 7.6 (individual patient data are presented in Fig. 3); both changes were significant and showed a large effect size (p=0.008; r=0.89).

Fig. 3

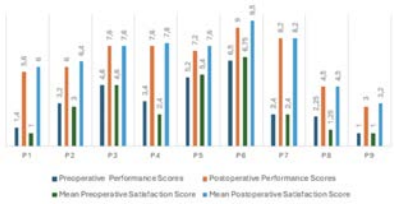


Fig. 3: Preoperative and postoperative COPM scores of the patients (P: Patient)

Conclusion: The findings suggest that HSN technique and postoperative therapy was associated with improvements in bimanual activities, activity performance, and satisfaction. The marked increase in COPM scores demonstrates clinically meaningful gains in daily life, highlighting HSN as a valuable, highly effective modern intervention in upper extremity CP management.

Keywords: Cerebral palsy, Hyperselective neurectomy, Hand-use experience, Occupational performance

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PREDICTING BOTULINUM TOXIN EFFECTS ON GAIT IN HEMIPARETIC CEREBRAL PALSY

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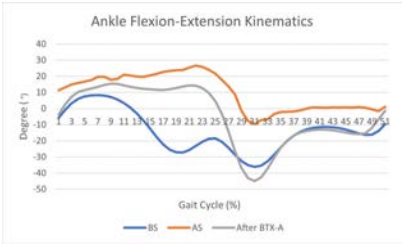
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Aim: Botulinum toxin-A (BTX-A) injections are commonly used to reduce plantar flexor (PF) spasticity in children with hemiparetic cerebral palsy (HCP). However, reduced muscle activity may increase existing muscle weakness, alter muscle architecture and gait mechanics. This case report aimed to investigate whether the effects of BTX-A injections on gait in a child with HCP can be predicted.

Case: A seven-year-old girl with right-sided HCP (GMFCS Level I, 116 cm, 18.5 kg) underwent a gait assessment using a 3D gait analysis system (VICON, 6xVantage 5 + 2xAMTI force plates). A previously described strict stretching protocol was applied to the right PF muscle-tendon unit to temporarily reduce maximum isometric voluntary muscle contraction force (MIVMCF). The protocol consisted of 13 repetitions of 135-second stretches separated by 5-second rest intervals. Gait analysis was performed before (BS) and after (AS) the stretching protocol. In the same week, the child received BTX-A injection therapy on the right side of the PF muscles. After one month from the injection, another gait analysis was conducted to assess the effects of the BTX-A. Passive ankle dorsiflexion range of motion (ROM) was assessed using a goniometer. Comparative analysis of Goldberg's stiff knee parameters (P1, P2, P3, P4) and other relevant gait parameters was performed without utilizing statistical calculations (Table 1).

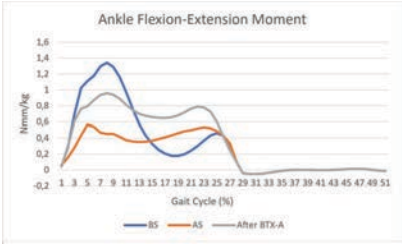
Results: MIVMCF of the PF muscle decreased by 52.81% (from 95.17N to 44.9N), and ankle dorsiflexion ROM was increased (from 0° to 7°) on the right side in the AS condition. Also, ROM of ankle dorsiflexion was increased after BTX-injection (from 0° to 10°). The interested gait parameters were given in Table 1 and Figures 1, 2 and 3.

Figure 1. Comparison of Ankle Flexion–Extension Kinematics



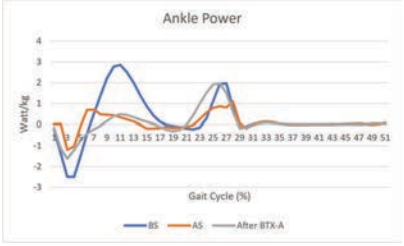
BS: before stretching, AS: after stretching, BTX-A: botulinum toxin-A

Figure 2. Comparison of Ankle Flexion–Extension Moments



BS: before stretching, AS: after stretching, BTX-A: botulinum toxin-A, N: Newton, mm: millimeter, kg: kilogram

Figure 3. Comparison of Ankle Powers



BS: before stretching, AS: after stretching, BTX-A: botulinum toxin-A, kg: kilogram

Table 1. Comparison of Interested Gait Parameters

Parameters	**BS**	**AS**	**After BTX-A**
Peak Ankle Dorsiflexion (°)	8.29	26.67	15.51
Peak Ankle Plantar Flexion (°)	-36.07	-9.69	-44.89
*P1 Peak Knee Flexion (°)	63.74	57.14	55.26
*P2 Knee Range from Toe-off to Peak (°)	46.16	45.36	44.58
*P3 Knee Flexion-Extension Range	56.13	49.15	44.98
*P4 Time Difference from Toe-off to Peak (%gait cycle)	0.29	0.27	0.25
Peak Knee Extension (°)	7.61	7.99	10.28
Peak Hip Extension (°)	-0.34	5.53	7.91
Peak Anterior Pelvic Tilt (°)	26.36	26.39	30.24
Peak Posterior Pelvic Tilt (°)	14.18	16.04	14.31
Velocity (m/sec)	1.20	1.00	0.81

BS: before stretching, AS: after stretching, BTX-A: botulinum toxin-A, m: meter, sec: second

Conclusion: The stretching methodology had similar gait alterations as BTX-A injection, especially in the sagittal plane. This approach may provide a safe and practical clinical method for predicting possible gait alterations before BTX-A treatment in children with HCP.

Keywords: cerebral palsy, gait analysis, botulinum toxin-A, stretching

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BEYOND EXTRA DIGITS: CLINICAL CHARACTERISTICS AND SURGICAL MANAGEMENT OF POLYDACTYLY

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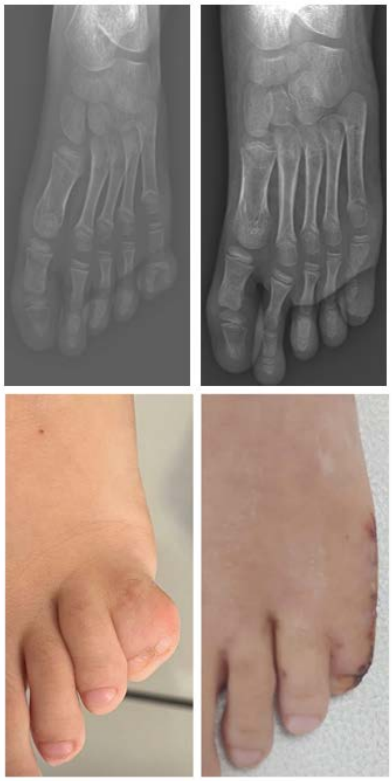
Aim: Polydactyly is one of the most common congenital limb anomalies in childhood. This study aimed to evaluate the demographic characteristics, anatomical distribution, surgical treatment methods, and associated anomalies of surgically treated polydactyly cases at a single center.

Case: This retrospective study included 11 patients and 18 polydactyly cases who underwent surgical treatment between 2020 and 2025. Patient age, sex, extremity involvement, affected digit, type of polydactyly, Wassel classification, surgical technique, resection level, follow-up duration, and associated anomalies were analyzed.

Figure 1. Thumb polydactyly before and after surgery.



Figure 2. Foot polydactyly before and after surgery.



Results: Seven patients were male (63.6%) and four were female (36.4%), with a mean age of 3.1 years (range: 1–11 years). Ten cases (55.6%) involved the foot and eight cases (44.4%) involved the hand. Representative thumb and foot polydactyly cases are shown in Figures 1 and 2. Right-sided involvement was observed in 10 cases (55.6%), while left-sided involvement was detected in 8 cases (44.4%). Postaxial polydactyly was the most common subtype (n=11, 61.1%), followed by preaxial (n=5, 27.8%) and central polydactyly (n=2, 11.1%). The fifth digit was the most frequently affected digit, accounting for 13 cases (72.2%).According to the Wassel classification, Type V deformity was the most common subtype (n=7, 38.9%). The most frequently performed surgical procedure was bony excision (n=11, 61.1%). Metatarsal plus phalangeal level excision was performed in 50% of cases.The mean follow-up duration was 29 months (range: 12–60 months). Associated anomalies were identified in six patients (54.5%).

Conclusion: Postaxial polydactyly and fifth digit involvement were the most common findings in this series. Associated anomalies were present in a considerable proportion of patients. Surgical treatment strategies and resection levels varied according to the anatomical characteristics and complexity of the deformity.

Keywords: Polydactyly, Digit duplication, Pediatric orthopedic surgery, Surgical excision

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HIGH-RISK INJURY PATTERNS SUGGESTIVE OF NON-ACCIDENTAL TRAUMA IN INFANTS: EVIDENCE OF A RECOGNITION GAP

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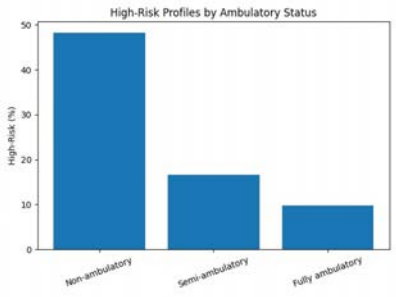
[1]Başakşehir Çam and Sakura City Hospital

Aim: Early recognition of non-accidental trauma (NAT) in infants presenting with fractures is critical to prevent recurrent injury. However, potential under-recognition of high-risk injury patterns remains a concern.

Material & Method: This retrospective single-center study included 183 children aged 0–24 months presenting with fractures. After excluding metabolic bone disease, birth-related trauma, syndromic conditions, and high-energy mechanisms, 167 patients comprised the final cohort. A high-risk injury profile was defined as the presence of ≥2 red flag criteria, including long bone fracture in a non-ambulatory child, femoral fracture, multiple fractures, associated head or abdominal injury, and inconsistent trauma history. Forensic referral was determined from medical records.

Results: Forty-two of 167 children (25.1%) met criteria for a high-risk injury profile. Formal forensic notification was documented in only 4 cases (2.4%). Among high-risk cases, 92.9% had no documented forensic referral. Non-ambulatory infants had significantly higher odds of exhibiting high-risk patterns compared to ambulatory children (OR 6.33, 95% CI 2.96–13.56, p < 0.001) (Figure 1).

High-Risk Profiles by Ambulatory Status



Distribution of high-risk injury profiles according to ambulatory status. Non-ambulatory infants demonstrated a substantially higher prevalence of high-risk patterns (48.3%) compared with semi-ambulatory (16.7%) and fully ambulatory children (9.8%). Ambulatory status was derived from documented developmental history at presentation.

Conclusion: High-risk injury patterns suggestive of NAT were substantially more frequent than formal forensic referral in infants presenting with fractures. These findings indicate a potential recognition gap and underscore the need for systematic risk assessment in this vulnerable population.

Keywords: Non-accidental trauma, Infant fractures, High-risk injury patterns, Forensic referral, Child abuse

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COMPARISON OF SUPRACONDYLAR HUMERUS FRACTURES TREATED WITH OPEN OR CLOSED SURGICAL REDUCTION

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Aim: To compare the clinical and radiological outcomes of open and closed reduction techniques used in the surgical treatment of pediatric supracondylar humerus fractures.

Material & Method: A total of 319 pediatric patients with Gartland type III and IV supracondylar humerus fractures who underwent surgical treatment were retrospectively evaluated. Patients were divided into open reduction (n=75) and closed reduction (n=244) groups according to the surgical technique performed. The study cohort also included patients presenting with a brachial sign (Figure 1). Fracture types, operative time, fluoroscopy count, and total radiation dose were compared between the groups. Functional and cosmetic outcomes were evaluated using Flynn criteria, including goniometric assessment of elbow flexion, extension, and carrying angle (Figure 2). In addition, cases requiring conversion from closed to open reduction were separately evaluated in terms of fluoroscopy use and radiation exposure before and after conversion.

Figure 1. Brachial Sign



Figure 2. Goniometric Assessment of Elbow Flexion, Extension, and Carrying Angle



Results: Operative time, fluoroscopy count, and radiation dose were statistically significantly lower in the closed reduction group compared to the open reduction group. In cases initially managed with closed reduction but subsequently converted to open reduction, fluoroscopy use and radiation exposure decreased significantly after conversion to open reduction. No statistically significant difference was found between the groups regarding functional and cosmetic outcomes according to Flynn criteria.

Conclusion: Closed reduction provided shorter operative time and lower intraoperative radiation exposure in appropriately selected cases. The higher radiation exposure observed in the open reduction group was associated with greater fracture instability and initial attempts at closed reduction in these patients. In cases converted from closed to open reduction, the significant decrease in fluoroscopy use after conversion suggests that prolonged closed reduction attempts should be avoided in unstable fractures. Both techniques yielded successful functional and cosmetic outcomes when performed with appropriate indication and surgical technique.

Keywords: Pediatric supracondylar humerus fracture, Open reduction, Closed reduction, Radiation dose, Flynn criteria

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MALIGNANCY PREDICTORS IN 815 PEDIATRIC MUSCULOSKELETAL TUMOR REFERRALS

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Aim: To describe the epidemiology and identify independent predictors of malignancy in 815 pediatric patients presenting with musculoskeletal tumors to a tertiary orthopedic oncology center.

Material & Method: This retrospective study included 815 patients aged < 18 years treated at a single institution between January 2022 and January 2025. Data regarding anatomic location, tissue of origin, histologic subtype, and WHO 2020 diagnostic class were extracted. Five pre-specified predictors (age < 10 years, female sex, axial location, bone origin, and lesion length > 50 mm) were evaluated using multivariable logistic regression.

Results: The cohort comprised 490 males (60.1%) with a median age of 12 years (IQR: 8–15). Diagnoses were benign in 677 (83.1%), intermediate in 15 (1.8%), and malignant in 123 (15.1%) patients (Table 1). The most common benign entities were osteochondroma (n=144, 17.7%), non-ossifying fibroma (n=126, 15.5%), and ganglion cyst (n=88, 10.8%). Osteosarcoma (n=32) and Ewing sarcoma (n=21) were the most frequent malignancies. Independent predictors of malignancy included age < 10 years (aOR 1.49, 95% CI 1.00–2.21; p=0.048) and axial location (aOR 1.96, 95% CI 1.04–3.68; p=0.036) (Table 2). In patients with available size data (n=517), lesion length > 50 mm also predicted malignancy (aOR 1.69, 95% CI 1.02–2.79; p=0.041). Malignancy rates varied significantly by anatomic region (upper extremity 11.7%, lower extremity 15.6%, spine 22.7%, pelvis 33.3%; χ^2=8.35, p=0.039) (Table 2, Figure 1).

Figure 1.

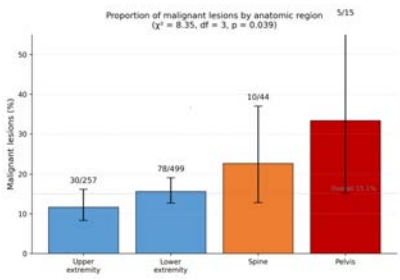


Figure 1. Proportion of malignant lesions by anatomic region (upper extremity, lower extremity, spine, pelvis). Bars show percentages with 95% Wilson confidence intervals; numbers above each bar are malignant/total. The difference across regions was statistically significant ($\chi^2 = 8.35$, df = 3, p = 0.039).

Table 1. Diagnostic distribution of 815 pediatric patients with a musculoskeletal tumor or tumor-like lesion, classified per WHO 2020.

Diagnostic Entity	**n**	**%**	**Sex (M/F)**	**Median age (IQR)**	**Location (Bone/ST)**
Benign (n = 677, 83.1%)					
Osteochondroma	144	17.7%	88 / 56	13 (10–15)	144 / 0
Non-ossifying fibroma	126	15.5%	74 / 52	12 (9–15)	126 / 0
Ganglion cyst	88	10.8%	42 / 46	13 (10–15)	0 / 88
Unicameral bone cyst	82	10.1%	56 / 26	10 (7–13)	82 / 0
Enchondroma	69	8.5%	36 / 33	13 (10–15)	69 / 0
Other benign	168	20.6%	-	-	-
Intermediate (n = 15, 1.8%)					
Giant cell tumour of bone	8	1.0%	3 / 5	15 (14–17)	8 / 0
Desmoid fibromatosis	4	0.5%	2 / 2	14 (12–16)	0 / 4
Other intermediate	3	0.4%	-	-	-
Malignant (n = 123, 15.1%)					
Osteosarcoma	32	3.9%	19 / 13	14 (12–16)	32 / 0
Ewing sarcoma	21	2.6%	13 / 8	12 (9–15)	18 / 3
Lymphoma (bone/soft tissue)	14	1.7%	8 / 6	13 (10–16)	10 / 4
Rhabdomyosarcoma	11	1.4%	6 / 5	8 (5–12)	0 / 11

Other malignant	45	5.5%	-	-	-
Total (benign-to-malignant ratio 5.5:1)	**815**	**100%**	**490 / 325**	**12 (8–15)**	**597 / 218**

ST = soft tissue. Sex and age data shown for the five most frequent benign entities and all malignant subtypes. 'Other' categories aggregate remaining WHO 2020 entities each comprising <1% of the cohort.

Table 2. Univariate and multivariable predictors of malignancy in 815 pediatric patients with a musculoskeletal tumor.

Variable	**n**	**%**	**Univariate OR (95% CI; p)**	**Adjusted OR (95% CI; p)**
Primary model (N = 815)				
Age <10 years	277	34.0%	1.52 (1.03–2.25); p = 0.039	1.49 (1.00–2.21); p = 0.048*
Axial location (pelvis/spine)	59	7.2%	2.05 (1.10–3.80); p = 0.035	1.96 (1.04–3.68); p = 0.036*
Female sex	325	39.9%	1.37 (0.93–2.01); p = 0.134	1.34 (0.91–1.98); p = 0.142
Bone origin (vs. soft tissue)	597	73.2%	1.28 (0.82–2.02); p = 0.320	1.35 (0.86–2.14); p = 0.195
Secondary model — lesion size subset (n = 517)				
Lesion length >50 mm	-	-	1.66 (1.01–2.72); p = 0.045	1.69 (1.02–2.79); p = 0.041*
Malignancy rate by anatomic region (N = 815; χ^2 = 8.35, p = 0.039)				
Upper extremity	-	11.7%	-	-
Lower extremity	-	15.6%	-	-
Spine	-	22.7%	-	-
Pelvis	-	33.3%	-	-

OR = odds ratio; CI = confidence interval. Primary model: multivariable logistic regression including age <10 years, female sex, axial location (pelvis/spine), and bone origin (N = 815). Secondary model: primary predictors plus lesion length >50 mm in patients with available cross-sectional imaging (n = 517). * $p < 0.05$ (statistically significant). Malignancy rates by anatomic region were compared using Pearson chi-square test.

Conclusion: One in six pediatric musculoskeletal lesions in this referral cohort was malignant. Age under 10 years, axial location, and lesion size above 50 mm independently predicted malignancy. The presence of these features warrants prompt referral without delay to a specialized orthopedic oncology surgeon for advanced imaging and biopsy.∑

Keywords: Bone Neoplasms, Musculoskeletal Neoplasms, Pediatric Orthopedics, Neoplasm Malignancy Grading, Logistic Models

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COMPARISON OF FOOT-SPECIFIC AND LOWER EXTREMITY EXERCISES IN ADOLESCENT PES PLANOVALGUS

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Aim: This study aimed to compare the effects of foot-specific and lower extremity strengthening on foot posture, kinematics, and functional outcomes in adolescents with Pes Planovalgus(PPV).

Material & Method: Thirty-two adolescents (12–18 years) with flexible PPV (navicular drop > 10 mm) were randomized into three groups: the Foot Exercise Group (FEG,n=11;13.6±2.4 years), the Lower Extremity Exercise Group (LEEG,n=11;14.0±2.2 years), and a Control Group (CG,n=10;12.5±1.9 years). The intervention groups completed an 8-week supervised program (one in-person and two remote sessions weekly). The FEG focused on short foot exercises, while the LEEG emphasized integrated foot-core activation through functional movements, including squats, lunges, heel rises, and unilateral stances. Static foot posture and dynamic balance were assessed with navicular drop and the Star Excursion Balance tests, respectively. Biomechanical outcomes were captured using 3D gait analysis (VICON, UK) with the Oxford Foot Model. Within-group pre-post comparisons were performed using paired-samples SPM{t} tests across the gait cycle, while between-group differences were analyzed using one-way ANOVA with Tukey's post-hoc tests ($p < 0.05$).

Results: Exercise groups showed significant improvements in navicular drop and hindfoot eversion versus CG. Regarding kinematics, FEG reduced heel eversion specifically during push-off, whereas LEEG showed significant reductions across the entire stance phase and decreased forefoot supination. In dynamic balance, FEG showed superior gains in the posteromedial direction, while LEEG achieved better results in posterior and posterolateral directions. (Figure 1, Table 1)

Figure I. Comparison of Foot Kinematics and Dynamic Balance

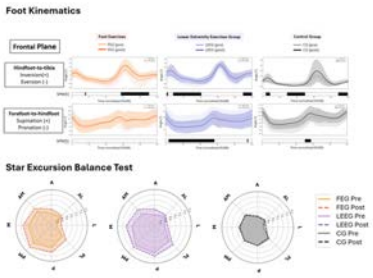


Table-1. Statistical Comparison of Navicular Drop Test

Navicular Drop	**Pre-intervention mean ± std**	**Post-intervention mean ± std**	**Mean difference mean ± std**
Foot Exercise Group	15.4 ± 2.4	10.45 ± 2.5	4.9 ± 0.9
Lower Extremity Exercise Group	15.3 ± 1.9	10.6 ± 2.1	4.64 ± 0.9
Control Group	14.8 ± 0.8	14.14 ± 1.1	0.4 ± 0.8
p value	0.76	<0.001*	<0.001*

Conclusion: Both exercise programs contribute significantly to improving foot posture, biomechanics, and dynamic balance in adolescents with PPV. However, the high demands of foot-specific exercises in terms of selective muscle activation and motor control may limit their clinical feasibility and patient compliance. In contrast, a closed kinetic chain lower extremity protocol offers a more holistic and practical alternative by addressing the entire kinetic chain. This approach provides broader biomechanical correction, suggesting that it may be an effective intervention for the adolescent population.

Keywords: Pes planovalgus, Adolescents, Gait analysis, Kinetic chain, Intrinsic foot muscles

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CLINICAL AND RADIOLOGICAL OUTCOMES OF OPERATED POLYDACTYLY PATIENTS

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Aim: Polydactyly is one of the most common congenital upper extremity anomalies and is classified as preaxial, central, or postaxial according to the location of the duplicated digit. Although various surgical techniques and classification systems have been described, treatment strategies are still largely based on surgeon preference and anatomical characteristics. This study aimed to evaluate the clinical and radiological outcomes of surgically treated polydactyly patients.

Material & Method: Patients who underwent surgical treatment for preaxial, central, or postaxial polydactyly between 2017 and 2024 and had at least one year of follow-up were retrospectively evaluated. Fifteen patients met the inclusion criteria. Preaxial cases were classified using the Wassel-Flat classification, while postaxial cases were classified according to the Temtamy-McKusick classification. Clinical outcomes, postoperative complications, radiological findings, and functional results were assessed. Modified TADA scoring was used for postoperative evaluation of preaxial polydactyly patients. Statistical analyses were performed using Pearson correlation analysis, chi-square test, Fisher's exact test, and independent samples t-test. Statistical significance was accepted as $p < 0.05$.

Results: Six patients were classified as preaxial, eight as postaxial, and one as central polydactyly. Ablation was performed in all postaxial cases, whereas four preaxial patients underwent thumb reconstruction in addition to ablation. Surgical treatment before completion of ossification and maturation was associated with better clinical outcomes. In preaxial polydactyly, patients with more distal duplication demonstrated superior postoperative functional outcomes compared to proximal duplication types. No significant differences were observed regarding postoperative complications between groups.

Conclusion: Early surgical intervention may improve clinical outcomes in polydactyly patients. Distal duplication types in preaxial polydactyly appear to have more favorable postoperative results. Further studies with larger patient populations and more homogeneous subgroups are required to establish standardized treatment algorithms.

Keywords: Polydactyly, Preaxial, Postaxial, Wassel Classification, Surgical Outcomes

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INFLUENCE OF MYOFASCIAL MOBILIZATION ON UPPER EXTREMITY REACHING IN CHILDREN WITH CEREBRAL PALSY

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Aim: The aim of the study is to investigate the effects of myofascial mobilization on reaching kinematics in children with cerebral palsy (CP).

Material & Method: Five children with CP (5 hemiplegic; 3 boys, 2 girls; mean age: 8.4 ± 2.9 years) participated in the study. A myofascial mobilization protocol was applied to the front arm by following the superficial and deep fascial lines. The intervention consisted of soft tissue mobilizations directed along the relevant myofascial tracks and bone mobilizations targeting the corresponding bony stations, complemented by gentle stretching techniques incorporated between mobilization sequences to enhance fascial and muscular extensibility. A 3D motion analysis system (VICON, UK) utilized for analyzing upper extremity kinematics during the reaching task for pre- and post-intervention. Statistical comparison conducted with paired t-test.

Results: Individual analyses revealed an increase in maximum shoulder flexion angle, a decrease in minimum elbow flexion angle, and a reduction in maximum thorax anterior tilt after the intervention, while the kinematic curves concurrently indicated improvements in the smoothness and organization of the reaching movement pattern. No statistically significant changes were observed in kinematic parameters following myofascial mobilization, and the affected extremity did not show convergence toward the non-affected side ($p > 0.05$), despite minimal post-intervention changes.

Conclusion: This study indicates that myofascial mobilization may produce subtle improvements in upper extremity reaching kinematics in children with CP at the individual level. However, no statistically significant changes were observed, and no convergence between affected and non-affected extremities was found. Overall, although group-level effects were not demonstrated, the observed kinematic trends suggest a potential benefit of myofascial mobilization, highlighting the need for further studies with larger samples and repeated interventions.

Keywords: cerebral palsy, myofascial mobilization, upper extremity, motion analysis

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THE EFFECT OF SOCIOECONOMIC STATUS ON CLINICAL OUTCOMES IN PEDIATRIC SUPRACONDYLAR HUMERUS FRACTURES

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Aim: This study aimed to evaluate the effect of family socioeconomic status on postoperative follow-up compliance, pin-site infection, elbow range of motion recovery, and functional outcomes in children surgically treated for supracondylar humerus fractures.

Material & Method: Thirty-three pediatric patients who underwent closed reduction and percutaneous pinning for supracondylar humerus fractures between 2023 and 2025 were retrospectively evaluated. Demographic data, Gartland classification, time from admission to surgery, pin configuration, follow-up duration, and radiographic outcomes were recorded. Family socioeconomic status was assessed using a Family Affluence Scale–based score, parental education level, household income category, household crowding, and access-to-care parameters. Patients were divided into low socioeconomic status and middle-to-high socioeconomic status groups. Clinical outcomes were compared according to missed follow-up visits, delayed pin removal, pin-site infection, final elbow range of motion, time to regain full range of motion, and Flynn functional and cosmetic criteria.

Results: The study included 17 boys and 16 girls, with a mean age of 6.8±2.3 years. Fourteen patients were classified as low socioeconomic status and 19 as middle-to-high socioeconomic status. The groups were comparable regarding age, sex, Gartland type, time to surgery, reduction quality, and radiographic alignment. Missed follow-up visits were more frequent in the low socioeconomic status group, although the difference did not reach statistical significance (35.7% vs. 10.5%; p=0.092). Pin-site infection was also more common in this group (21.4% vs. 5.3%; p=0.279). Time to regain full elbow range of motion was significantly longer in the low socioeconomic status group (9.1±2.4 vs. 6.8±1.9 weeks; p=0.006). Good-to-excellent Flynn outcomes were less frequent in the low socioeconomic status group, without statistical significance (71.4% vs. 94.7%; p=0.106).

Conclusion: Family socioeconomic status may affect postoperative recovery mainly through follow-up compliance, pin care, and delayed functional recovery rather than radiographic outcomes. These findings highlight the need for structured discharge education and closer postoperative surveillance in socioeconomically disadvantaged families.

Keywords: Elbow range of motion, Family affluence, Flynn criteria, Socioeconomic status, Supracondylar humerus fracture

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FACTORS AFFECTING SURGICAL OUTCOMES OF SUPRACONDYLAR HUMERUS FRACTURES: PIN, REDUCTION, TIME

Murat Yüncü[1], Emre Mücahit Kartal[2], Mehmet Barış Ertan[3]

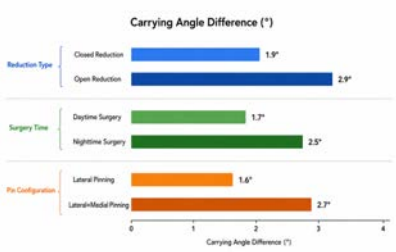
[1]Elmalı State Hospital
[2]Antalya City Hospital
[3]Kaş State Hospital

Aim: The aim of this study was to evaluate the effects of different pinning configurations applied in pediatric supracondylar humerus fractures on clinical and radiological outcomes; and also to investigate the effects of surgical timing and open-closed reduction methods on the outcomes.

Material & Method: This single-center study included 98 pediatric patients aged 3–12 years who underwent surgery for supracondylar humerus fractures between 2024 and 2026. Demographic data, fracture type, surgery time (night/day), reduction method (open/closed), surgical approach, and pin configuration (lateral vs. lateral+medial) were evaluated. Clinical assessment included range of motion and carrying angle difference; radiological evaluation included Baumann angle difference, anterior humeral line congruence, and carrying angle measurements. Statistical significance was set at $p < 0.05$.

Results: Of 98 patients (64.3% male, mean age 80.7±25.3 months), 83.7% had Gartland type 3 fractures. Mean follow-up was 33.8 months. Surgeries were 69.4% nocturnal. Closed reduction was performed in 69.4%, open reduction in 30.6%. Open reduction group had higher carrying angle difference (2.9° vs. 1.9°) and Baumann angle difference (6.4° vs. 5.4°), and lower full range of motion rate (83.3% vs. 91.2%). Daytime surgery yielded better outcomes than nocturnal surgery (carrying angle difference: 1.7° vs. 2.5°; Baumann angle difference: 4.3° vs. 6.4°; full ROM: 93.3% vs. 86.8%). Lateral pinning (n=27, 27.6%) showed better results than lateral+medial pinning (n=71, 72.4%) for all parameters (1.6° vs. 2.7°, 4.8° vs. 6.5°, 92.6% vs. 85.9%, respectively), as shown in Figure 1. No comparisons reached statistical significance ($p > 0.05$).

Figure 1. Comparison of carrying angle difference between study groups



Comparison of differences in transport angles depending on reduction type, surgical timing, and pin configuration.

Conclusion: In pediatric supracondylar humerus fractures, no significant clinical or radiological superiority was observed between lateral pinning and lateral+medial pinning. However, patients requiring open reduction and those operated on during nighttime hours demonstrated relatively higher carrying angle and Baumann angle differences. Both pinning methods appear to be safe and effective treatment options when used in appropriate indications.

Keywords: Humerus supracondylar fracture, Pin configuration, Pediatric elbow fracture, Baumann angle

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AN OVERLOOKED CAUSE OF ADOLESCENT FOOT AND ANKLE PAIN: IMAGING FINDINGS OF PEDIATRIC TARSAL COALITION

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Aim: Tarsal coalition is a congenital union between tarsal bones and an often-overlooked cause of recurrent foot and ankle pain in children. Symptoms usually emerge during adolescence with progressive ossification and increased physical activity. This study aimed to review the multimodality imaging spectrum of pediatric tarsal coalition and correlate radiographic, magnetic resonance imaging (MRI), and computed tomography (CT) findings.

Material & Method: Twenty-three patients with suspected tarsal coalition were retrospectively reviewed. Two patients without CT confirmation were excluded, leaving 21 patients for analysis. Demographic data, clinical presentation, coalition type and location, and imaging findings were evaluated using radiography, MRI, and CT.

Results: The mean age at diagnosis was 13.8 ± 2.4 years (range: 10–17), and the mean age at symptom onset was 12.71 ± 2.3years (range: 10–17). The cohort showed male predominance (81%), and most patients were symptomatic (95.2%). Bilateral involvement was observed in 71.4% of cases. MRI was performed in 85.7% of patients, CT in 47.6%, and radiography in 85.7%. The most common coalition sites were talocalcaneal (42.9%) (Figure 1) and calcaneonavicular (38.1%) (Figure 2). Non-osseous coalitions were more frequent than osseous types (81% vs 19%). Bone marrow edema was present in 81% (Figure 3), and joint effusion/synovitis in 42.9%. No statistically significant association was found between coalition site and any evaluated clinical or imaging parameter (Table 1). Radiographic findings varied: in talocalcaneal coalitions, C-sign was observed in four, direct osseous fusion in two and talar beaking in one case. In calcaneonavicular coalitions, the anteater nose sign was seen in 7 cases.

Figure 1



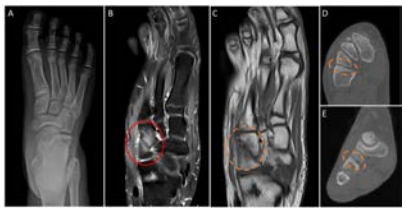
A 17-year-old boy with psoriatic arthritis presenting with foot pain. (A) Lateral radiograph demonstrates the C-sign associated with a non-osseous talocalcaneal coalition (dashed arc). Sagittal (B) and coronal (C) reformatted CT images, along with the coronal proton density-weighted MRI image (D), demonstrate non-osseous fusion (dashed circle). Associated bone marrow edema is visible on MRI.

Figure 2



A 16-year-old girl presenting with ulcerated and hemorrhagic skin lesions. (A) Lateral radiograph demonstrates the anteater nose sign associated with a non-osseous calcaneonavicular coalition (dashed lines). Axial CT angiography image (B), obtained because of hemorrhage, as well as sagittal fat-saturated T1-weighted (C) and axial T1-weighted MRI images (D), demonstrate non-osseous fusion (dashed circle). The coalition was detected incidentally. An anteater photograph was added to the upper left corner for comparison (courtesy of Miller Park Zoo, IL, USA)

Figure 3



A 15-year-old boy presenting with lateral foot pain and swelling for one month. (A) Anteroposterior radiograph is unremarkable. Axial proton density-weighted (B) and T1-weighted MRI images (C), as well as axial (D) and coronal reformatted CT images (E), reveal a non-osseous cuneocuboid coalition (dashed circle). Associated bone marrow edema is evident on MRI (red circle).

Table 1 - Demographic data and imaging findings of patients according to tarsal coalition site

Coalition Site	**Total**	**Talocalcaneal**	**Calcaneonavicular**	**Other**	**P value*** **
Number of patients; n (F/M)	21 (4/17)	9 (2/7)	8 (2/6)	4 (0/4)	0.893
Age at onset (years) (mean ± SD)	12.71 ± 2.31	13.11 ± 2.57	12.25 ± 2.49	12.75 ± 1.50	0.495
Age at diagnosis (years)(mean ± SD)	13.81 ± 2.38	14.44 ± 2.60	13.00 ± 2.39	14 ± 1.83	0.254
Laterality righ/left/bilateral	3/3/15	3/1/5	0/1/7	0/1/3	0.109
Bone marrow edema, n (%)*	17 (94.4%)	7 (100%)	7 (100%)	3 (75%)	N/A
Joint effusion or synovitis	9 (42.9%)	4 (44.4%)	3 (37.5%)	2 (50%)	0.772
Referred Clinic Ort / Ped Rhe / PTR / other	11/4/3/3	4/2/1/2	6/0/1/1	1/2/1/0	
Complaint pain/swelling/deformity/incidental	10/5/3/3	3/4/1/1	4/0/2/2	3/1/0/0	
Osseous Coalition	6 (28.6 %)	3 (33.3 %)	2 (25%)	1 (25%)	0.707
Positive X-ray**	14 (77.8%)	7 (87.5%)	7 (87.5%)	0	

* Bone marrow edema was evaluated in a total of 18 patients having MRI ** X-ray was performed in 17 patients
*** Statistical analyses were performed to compare the patients with talocalcaneal and calcaneonavicular coalitions group

Conclusion: Tarsal coalition is an important anatomical abnormality presenting during adolescence with nonspecific foot and ankle symptoms. Vast majority of cases can be detected on plain radiographs when characteristic findings are recognized. Increased awareness of radiographic signs among pediatricians may facilitate earlier diagnosis and help prevent unnecessary referrals, extensive imaging and laboratory investigations.

Keywords: tarsal coalition, bone marrow edema, congenital, foot pain, ankle pain

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THE EFFECT OF SURGICAL TIMING AND DAY/NIGHT SURGERY ON FUNCTIONAL OUTCOMES IN PEDIATRIC SUPRACONDYLAR HUMERUS FRACTURES

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Aim: To evaluate the effect of time to surgery (first, second, or third 8-hour period) and day vs. night surgery on functional outcomes in children with supracondylar humerus fractures

Material & Method: A total of 100 children (age 3–8 years) operated for supracondylar humerus fractures were analyzed. Time to surgery was coded as 0 (first 8h), 1 (second 8h), and 2 (third 8h). Surgery time was coded as 0 (night, 00:00–08:00) or 1 (day, 08:00–16:00). Flynn scores (4=excellent to 1=poor) were recorded and a total Flynn score (2–8) was calculated. Kruskal-Wallis, Mann-Whitney U, Dunn's test, and ordinal logistic regression were used.

Results: Mean age was 5.8±1.9 years. The best outcomes were in the first 8h + day group (total Flynn: 7.08±1.44). The worst were in the third 8h + night group (4.08±1.68). A significant difference was found between timing groups (p=0.015). The first 8h group had better outcomes than the third 8h group (p=0.012). Daytime surgery gave better results than night surgery (p=0.011). Surgery in the third 8h period reduced good outcome odds by 69% (OR=0.31, p=0.014). Daytime surgery increased good outcome odds 3.12 times (OR=3.12, p=0.010).

Conclusion: Early surgery (first 8 hours) and daytime surgery are associated with better functional outcomes. Delay and night surgery are independent risk factors for poor results.

Keywords: Supracondylar humerus fracture, surgical timing, night surgery, Flynn criteria, pediatric orthopedics

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SEASONAL ANALYSIS OF CHILDHOOD SCOLIOSIS AWARENESS AND INTERVENTIONAL SEARCHES

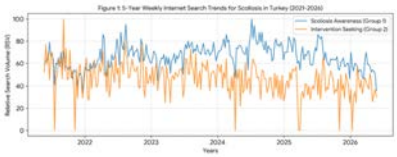
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Aim: Childhood scoliosis can lead to progressive deformities if not diagnosed early. This study aims to analyze the seasonal periods of scoliosis awareness and treatment-seeking behaviors among families in Turkey using internet search trends, providing an optimized timing projection for school-based screening programs conducted by pediatricians.

Material & Method: Weekly search data for Turkey between May 2021 and May 2026 were retrieved from Google Trends. Queries were categorized into Group 1 (Core Awareness: "skolyoz") and Group 2 (Intervention Seeking: "skolyoz korsesi + skolyoz egzersizleri"). In total, 262 weeks of data were analyzed (Figure 1). Monthly fluctuations were evaluated using the Kruskal-Wallis test, and the summer/school-opening period (June–September) was compared with other months using the Mann-Whitney U test.

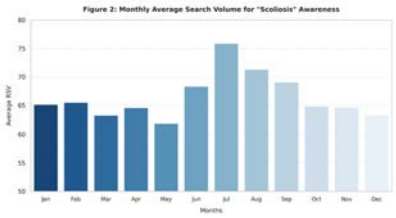
Figure 1: 5-Year Weekly Internet Search Trends for Scoliosis in Turkey



This timeline chart displays the 262-week relative search volume (RSV) data from May 2021 to May 2026. It compares the continuous baseline of core scoliosis awareness (Group 1) with active intervention-seeking behaviors such as bracing and exercises (Group 2), showing distinct cyclical patterns over the years.

Results: Search volumes demonstrated a significant seasonality (Kruskal-Wallis; p=0.0014 for Group 1, p=0.0148 for Group 2) (Table 1). Core awareness peaked in July (Mean RSV: 75.8) and August (71.3) (Figure 2). Conversely, intervention-seeking searches reached their zenith during school-opening periods in September (53.6) and August (53.0) (Figure 3). The absolute peak (100 points) occurred during the first week of September, just before school openings. Search volumes during June–September were significantly higher than the rest of the year (Mann-Whitney U; $p < 0.00001$ for both groups).

Figure 2: Monthly Average Search Volume for Core Scoliosis Awareness



This bar chart illustrates the monthly average search volume for the core term "Scoliosis" (Group 1). A statistically significant seasonality is demonstrated (p=0.0014), showing a distinct peak during the summer months of July and August, when families predominantly notice postural asymmetries.

Table 1: Seasonal Distribution and Statistical Comparison of Scoliosis-Related Internet Search Volumes in Turkey

Month / Statistic	***Group 1: Scoliosis Awareness (Mean RSV)***	***Group 2: Bracing & Exercises (Mean RSV)***
January	65.1	43.2
February	65.5	47.8
March	63.3	40.3
April	64.5	43.1
May	61.9	41.8
June	68.3	49.3
July	75.9	50.0
August	71.3	53.0
September	69.0	53.7
October	64.8	47.2
November	64.6	41.4
December	63.4	43.7
Kruskal-Wallis Test	H = 30.34, p = 0.0014 (Significant)	H = 23.53, p = 0.0148 (Significant)

High Season (Jun-Sep) Mean	71.2	51.5
Low Season (Oct-May) Mean	64.1	43.5
Mann-Whitney U Test	$p < 0.00001$ (Highly Significant)	$p = 0.00002$ (Highly Significant)

This table summarizes the monthly average Relative Search Volume (RSV) for core scoliosis awareness (Group 1) and intervention-seeking behavior (Group 2) over a 5-year period, including statistical significance tests.

Conclusion: Families in Turkey mostly notice scoliosis asymmetry during summer due to thinner clothing and prolonged interaction. Active interventions peak in early September, triggered by posture checks and school bag usage. From a public health perspective, September and October—when digital awareness and treatment compliance are highest—represent the most ideal timeframe for pediatricians to conduct school-based scoliosis screening programs.

Figure 3: Monthly Average Search Volume for Bracing and Exercises



This bar chart details the monthly distribution of intervention-seeking searches (Group 2). The data shows a significant increase ($p=0.0148$) that peaks sharply in September, coinciding with the school-opening season. This provides the empirical baseline for optimizing the timing of school screening programs.

Keywords: Childhood Scoliosis, School Screenings, Google Trends, Seasonality, Early Diagnosis

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SHOULDER RECONSTRUCTION IN PEDIATRIC BRACHIAL PLEXUS SEQUELAE

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Aim: Brachial plexus birth palsy sequelae may lead to persistent shoulder internal rotation contracture, limitation in external rotation, and functional impairment of the upper extremity. Surgical reconstruction combined with structured rehabilitation aims to improve shoulder position, active use, and overall function. This study evaluated functional outcomes after shoulder reconstruction in pediatric patients with brachial plexus birth palsy sequelae.

Material & Method: Five pediatric patients who underwent shoulder reconstruction for brachial plexus birth palsy sequelae were retrospectively reviewed. All patients had shoulder internal rotation contracture; one patient also had right forearm pronation contracture. Age at surgery, surgical procedures, follow-up duration, preoperative and postoperative Likert scores, and modified Mallet scores were analyzed. Surgical procedures included pectoralis major release, pectoralis minor tenotomy, coracohumeral ligament release, biceps long head tenotomy, subscapularis release, and, in selected cases, latissimus dorsi and teres major tendon transfer.

Results: The mean age at surgery was 5.4 years, ranging from 2 to 8 years. The mean follow-up duration was 17.4 months. The mean Likert score improved from 2.2 preoperatively to 4.4 postoperatively. The mean modified Mallet score increased from 12.2 to 20.0 (see Table 1 for individual patient data). Functional improvement was observed in most patients, particularly in shoulder positioning and active upper extremity use. The greatest gains were seen in patients with lower preoperative functional scores.

Table 1



Patient Number (Cagitalic)	Diagnosis	Age at Surgery (years)	Date of Surgery and Procedures	Follow-up (months)	Preop Likert Scale	Postop Likert Scale	Preop Mallet Score	Postop Mallet Score
1 (MÖ)	Internal rotation contracture of the shoulder	8	09 Jan 2025: Pectoralis major release + Pectoralis minor tenotomy + Coracohumeral ligament release + Biceps long head tenotomy + Subscapularis release	15	1	5	16	25
2 (ÖSD)	Internal rotation contracture of the shoulder + Pronation contracture of the right forearm	6	06 May 2024: Pectoralis major release + Pectoralis minor tenotomy + Coracohumeral ligament release + Biceps long head tenotomy + Subscapularis release 20 Jan 2026: Pronator teres rerouting	23	3	5	10	16
3 (ZNÖ)	Internal rotation contracture of the shoulder	4	10 Jan 2025: Pectoralis major release + Pectoralis minor tenotomy + Coracohumeral ligament release + Biceps long head tenotomy + Subscapularis release + Latissimus dorsi and teres major tendon transfer	17	3	4	10	20
4 (YEB)	Internal rotation contracture of the shoulder	7	19 Aug 2025: Pectoralis major release + Pectoralis minor tenotomy + Coracohumeral ligament release + Biceps long head tenotomy + Subscapularis release + Latissimus dorsi and teres major tendon transfer	26	3	3	14	17
5 (MA)	Internal rotation contracture of the shoulder	2	14 Oct 2025: Pectoralis major release + Pectoralis minor tenotomy + Coracohumeral ligament release + Biceps long head tenotomy	6	1	5	11	22

Table 1: Shoulder reconstruction in brachial plexus birth palsy sequelae: procedures and functional outcomes

Conclusion: Shoulder reconstruction in pediatric brachial plexus birth palsy sequelae provided meaningful improvement in functional use and modified Mallet scores. Soft tissue releases, combined with tendon transfers when indicated, may improve shoulder function when supported by postoperative rehabilitation. These findings suggest that individualized surgical planning and therapist-guided rehabilitation are essential for optimizing outcomes in pediatric patients.

Keywords: Brachial plexus neuropathies, Birth injuries, Shoulder joint, Tendon transfer, Rehabilitation

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THORACOSCOPIC COMBINED PERCUTANEOUS AND INTRACOROPOREAL Y-CLOSURE CDH REPAIR

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Aim: To report two neonatal cases of congenital diaphragmatic hernia repaired using a thoracoscopic combined percutaneous and intracorporeal Y-closure technique and to highlight its potential advantages in achieving secure defect closure

Case: Two neonates with CDH underwent thoracoscopic repair using this technique. The first patient was a term male neonate (38+1 weeks, 3400 g) presenting with respiratory distress shortly after birth. Thoracoscopy revealed a type B defect with herniation of bowel loops, colon, and spleen. The second patient was a 37-week female neonate (2100 g) with intrauterine growth restriction and significant associated cardiac anomalies, including aortic arch hypoplasia, large patent ductus arteriosus, and pulmonary hypertension. Intraoperatively, a type C defect was identified with herniation of bowel and liver (> 50%).In both cases, herniated organs were reduced, and the diaphragmatic defect was repaired thoracoscopically using a combination of intracorporeal sutures and percutaneous supporting stitches (Y-closure configuration). In the second case, additional rib-anchored sutures were required due to absence of the anterior rim.

Results: Complete defect closure was achieved in both patients without intraoperative complications. Chest drains were placed, and partial lung expansion was observed following repair. Both patients were managed postoperatively in the neonatal intensive care unit.

Conclusion: The combined percutaneous and intracorporeal Y-closure technique appears to be a feasible and effective option for thoracoscopic CDH repair, particularly in type A, B, and C diaphragmatic defects.

Keywords: diaphragmatic hernia, neonate, CDH, Thoracoscopic, Laparoscopic

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FEASIBILITY AND SAFETY OF THE LAPAROSCOPIC PROLAPSE TECHNIQUE IN PATIENTS WITH HIRSCHSPRUNG DISEASE

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Aim: Hirschsprung disease (HD) is a congenital disorder characterized by the absence of ganglion cells in the distal bowel. Recently, minimally invasive surgical techniques have become increasingly preferred because of lower morbidity and better cosmetic outcomes. Although minimally invasive surgery for HD has long been performed using conventional techniques, studies regarding the laparoscopic prolapse technique remain limited. This study aimed to present our outcomes in patients with HD treated using the laparoscopic prolapse technique.

Case: A total of 4 patients who underwent surgery using the laparoscopic prolapse technique with a diagnosis of Hirschsprung disease between 2024 and 2025 were included in the study. Demographic characteristics, clinical findings, operative times, and postoperative outcomes of the patients were retrospectively evaluated. In the surgical technique, following laparoscopic mobilization of the colon, the bowel was prolapsed transanally, and resection of the aganglionic segment along with coloanal anastomosis was performed. In all patients, the dissection plane was established using a Swenson-type dissection, and the anastomosis was created 2 cm proximal to the dentate line.

Results: Three patients were male and one was female, with a median age of 12 months. The mean operative time was 180 minutes. No intraoperative complications or conversion to open surgery occurred. Median time to oral intake was 1 day, and mean hospital stay was 4.25 days. No postoperative wound infection, wound dehiscence, anastomotic leakage, or stricture was observed. Dermatitis developed in one patient. Bowel function was satisfactory in all patients.

Conclusion: The laparoscopic prolapse technique may be considered a safe and feasible method in the surgical treatment of Hirschsprung disease. While providing the advantages of a minimally invasive approach, it preserves the effectiveness of the transanal technique. However, further studies including larger patient series and long-term outcomes are required.

Keywords: Hirschsprung disease, prolapse technique, minimally invasive

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THORACOSCOPIC COMBINED PERCUTANEOUS AND INTRACOROPOREAL Y-CLOSURE CDH REPAIR

Betül Beyza Özbal[1], İbrahim Baytar[1], Emir Zhanybekov[1], Ömer Şair[1], Şerife Özalp[1], Mustafa Azizoğlu[1]

[1]Başakşehir Çam and Sakura City Hospital

Aim: To report two neonatal cases of congenital diaphragmatic hernia repaired using a thoracoscopic combined percutaneous and intracorporeal Y-closure technique and to highlight its potential advantages in achieving secure defect closure

Case: Two neonates with CDH underwent thoracoscopic repair using this technique. The first patient was a term male neonate (38+1 weeks, 3400 g) presenting with respiratory distress shortly after birth. Thoracoscopy revealed a type B defect with herniation of bowel loops, colon, and spleen. The second patient was a 37-week female neonate (2100 g) with intrauterine growth restriction and significant associated cardiac anomalies, including aortic arch hypoplasia, large patent ductus arteriosus, and pulmonary hypertension. Intraoperatively, a type C defect was identified with herniation of bowel and liver (> 50%).In both cases, herniated organs were reduced, and the diaphragmatic defect was repaired thoracoscopically using a combination of intracorporeal sutures and percutaneous supporting stitches (Y-closure configuration). In the second case, additional rib-anchored sutures were required due to absence of the anterior rim.

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Conclusion: The combined percutaneous and intracorporeal Y-closure technique appears to be a feasible and effective option for thoracoscopic CDH repair, particularly in type A, B, and C diaphragmatic defects.

Keywords: CDH, diaphragmatic hernia, Laparoscopic, neonate, Thoracoscopic

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UNUSUAL PRESENTATION OF MORGAGNI HERNIA: INCARCERATION OF THE GREATER OMENTUM

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Aim: To present a rare pediatric case of Morgagni-Larrey hernia associated with incarcerated greater omentum and to demonstrate the effectiveness and safety of laparoscopic repair using the percutaneous loop technique.

Case: An 11-year-old boy (65 kg) was admitted to our clinic with a preliminary diagnosis of a diaphragmatic hernia. Laparoscopic exploration under general anesthesia revealed a 4–5 cm defect in the left anteromedial portion of the diaphragm, consistent with a Morgagni-Larrey hernia. Intraoperative findings demonstrated incarceration of the greater omentum within the hernia sac. The omentum was carefully dissected and reduced into the abdominal cavity. The diaphragmatic defect was repaired using a percutaneous loop technique; five 2/0 polypropylene sutures were placed 1 cm below the xiphoid process, incorporating the hernia sac into the plication and reinforced with 2/0 Ethibond sutures to ensure secure full-thickness closure. The postoperative course was uneventful. This case highlights the risk of omental incarceration in even asymptomatic Morgagni-Larrey hernias and demonstrates the safety and efficacy of minimally invasive laparoscopic repair.

Results: Laparoscopic reduction of the incarcerated greater omentum and repair of the diaphragmatic defect were successfully performed without intraoperative complications. The percutaneous loop technique ensured secure, full-thickness closure of the defect. The patient had an uneventful postoperative recovery; oral feeding was initiated within 24 hours. The patient was discharged on postoperative day 2.

Conclusion: Morgagni-Larrey hernias may remain clinically silent in childhood but can present with incarceration requiring surgical intervention. Greater omentum incarceration is a rare presentation that should be considered even in minimally symptomatic patients. Laparoscopic repair using the percutaneous loop technique is a safe and effective minimally invasive approach, providing excellent visualization, rapid recovery, and favorable postoperative outcomes.

Keywords: Morgagni hernia, Laparoscopic, Larrey Hernia, incarceration

OP - 243

LAPAROSCOPIC MANAGEMENT OF A GIANT OVARIAN MASS WITH PREOPERATIVELY INDETERMINATE ORIGIN IN A PEDIATRIC PATIENT: A CASE REPORT

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Aim: Large ovarian masses in pediatric patients pose significant diagnostic and surgical challenges, particularly when the origin and tissue viability cannot be clearly determined preoperatively. This report aims to present the laparoscopic management of a giant ovarian mass in a pediatric patient.

Case: A 9-year-old, 34-kg girl underwent laparoscopic surgery for a large intra-abdominal cystic mass. Following general anesthesia, bladder catheterization, and sterile preparation, laparoscopic access was achieved via a 10-mm umbilical trocar. Intra-abdominal exploration revealed a giant cystic mass measuring approximately 17 cm, occupying almost the entire abdominal cavity, with an indeterminate origin (Figure 1, Figure 2). To achieve adequate exposure, approximately 350 mL of cyst fluid was initially aspirated percutaneously. The cyst apex was then suspended to the anterior abdominal wall using two 2/0 Vicryl sutures, allowing controlled aspiration of an additional 850 mL of serous fluid without intraperitoneal spillage (Figure 3). Following decompression, the mass was identified as originating from the left ovary, with both solid and cystic components, raising suspicion for ovarian teratoma. As no viable ovarian tissue was identified, left oophorectomy was performed (tuba was preserved). The contralateral ovary appeared normal. After achieving hemostasis, the umbilical incision was extended vertically, and the specimen was extracted safely via umbilical enlarged incision (4 cm) (Figure 4). Procedure was concluded without complications.

Figure 1. Mass measurements confirm a vertical span exceeding 15.6 cm. Figure 2. Transverse diameter confirms a width exceeding 15.4 cm.

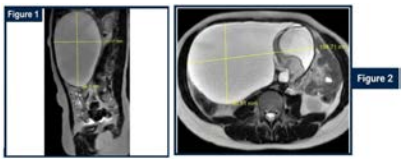


Figure 3. Following the safe evacuation of 1200 mL of fluid, adequate exposure was successfully achieved.
Figure 4. Specimen Extraction The deflated cystic and solid mass post-resection (Figure 4).

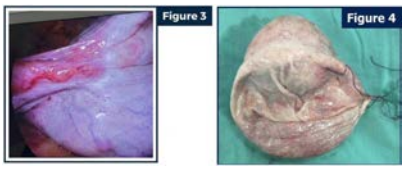


Figure 5. Surgical Incision Final umbilical incision measured exactly 4 cm, validating the minimally invasive approach despite the initial -17 cm mass size.



Results: Laparoscopic exploration and controlled aspiration of 1200 mL of serous fluid allowed safe decompression. The 17 cm mass originated from the left ovary. A left oophorectomy was performed due to lack of viable tissue, and the specimen was extracted via a 4 cm umbilical incision without complications (Figure 5).

Conclusion: Laparoscopic management of giant ovarian masses in children is feasible and safe when meticulous decompression and suspension techniques are employed. This approach allows adequate exposure, prevents fluid spillage, and supports sound intraoperative decision-making.

Keywords: Laparoscopic ovarian masses

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MULTIFOCAL INTRA-ABDOMINAL HEMANGIOMA: AN UNEXPECTED INCIDENTAL FINDING DURING LAPAROSCOPIC APPENDECTOMY

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Aim: Isolated vascular anomalies of the intestinal mesentery and colonic serosa are extremely rare in the pediatric population. This report aims to discuss the diagnostic and therapeutic management of a rare case of intra-abdominal hemangiomatosis discovered during surgery for suspected acute appendicitis.

Case: A 13-year-old female presented with abdominal pain and nausea. Preoperative imaging revealed an appendix diameter of 10 mm with wall edema and inflammation. During laparoscopic exploration, an inflamed and edematous appendix was confirmed. Additionally, multiple vascular "blackberry-like" lesions were identified, extending from the base of the appendix to the ileocecal valve, the antimesenteric border of the cecum and ascending colon, the omentum, and segments 5-6 of the liver. Laparoscopic appendectomy and partial omentectomy were performed.

Intra-abdominal Hemangioma



Results: Postoperatively, the patient was evaluated by a multidisciplinary team including pediatric hematology and oncology. Contrast-enhanced CT, MRI, and histopathological analysis ruled out malignancy, confirming the vascular nature of the lesions. Pediatric cardiology consultation identified mitral regurgitation and a patent foramen ovale, though no cardiac hemangiomas were present. Given the benign nature of the findings, a conservative management plan was initiated, with follow-up scheduled at 6-month intervals.

Conclusion: The presentation of intra-abdominal hemangiomas as an acute abdomen is highly unusual. Because these lesions can macroscopically mimic malignancy during surgical exploration, a multidisciplinary approach involving advanced imaging and pathology is essential to ensure an accurate diagnosis and to avoid unnecessary radical surgical interventions.

Keywords: intra-abdominal hemangioma, acute appendicitis, liver hemangioma

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SUBURETERIC INJECTION IN PEDIATRIC VESICOURETERAL REFLUX: A RETROSPECTIVE RADIOLOGICAL EVALUATION

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Aim: Vesicoureteral reflux (VUR) is a common pediatric condition, diagnosed and graded using voiding cystourethrography (VCUG). Renal ultrasonography (US) helps evaluate anatomy and treatment response. Subureteric injection therapy is a minimally invasive treatment, even for high-grade cases. This study retrospectively investigates its radiological effects on VCUG and US parameters in children under 8 years.

Material & Method: We reviewed patients with multiple VCUGs at our hospital between 2020 and 2025. Inclusion required a VUR diagnosis and same-day US. Patients with other interventions or missing/inconclusive US data were excluded. Data collected included age, sex, VUR grade (pre/post-treatment), kidney length, parenchymal thickness, and renal pelvis anteroposterior (AP) diameter. Kidney size was classified via national nomograms, and dilation via the UTD system. Statistical tests used were Mann-Whitney U, Wilcoxon Signed-Rank, and Kendall's Tau in SPSS 29.1.

Results: Among 109 patients (215 kidneys, 3 with unilateral renal agenesis), 23 had no injection, 62 had one, and 24 had two. Median follow-up was 1.4 years (IQR 1.05). VUR grades and renal pelvis diameter were higher, and parenchymal thickness lower, on the left side ($p=0.022$, 0.010, 0.027). Males, though fewer, had higher VUR grades and AP diameters ($p=0.009$, < 0.001). Kidney size weakly correlated with VUR grade ($\rho=-0.135$), parenchymal thickness had a stronger correlation ($\rho=-0.252$), and renal pelvis AP diameter the strongest ($\rho=0.352$). Treatment response according to VUR severity (high-grade [grades 4–5] vs low-grade [grades 1–3]) is presented in Table 1. Injection success declined after ages 4–5 (Figures 1 and 2).

Figure 1. Imaging follow-up of a 19-month-old girl with left-sided grade 3 VUR treated with subureteric injection therapy



At initial presentation, ultrasound images of the right (A) and left (B) kidneys and VCUG (C) of a 19-month-old girl demonstrated grade 3 VUR on the left side (arrow). On follow-up imaging performed at 2.5 years of age after left-sided injection therapy, grade 1 VUR was observed on the left side (D, arrow). On subsequent follow-up imaging obtained at 4.5 years of age after a second injection, persistent grade 1 VUR was noted (E, arrow).

Figure 2. Imaging follow-up of a 3-month-old girl with bilateral grade 5 VUR with partial regression



At initial presentation, ultrasound images of the right (A) and left (B) kidneys and VCUG (C) of a 3-month-old girl demonstrated bilateral grade 5 VUR (arrow). At follow-up at 20 months of age (D), bilateral grade 5 VUR persisted under medical management. On subsequent follow-up imaging performed at 2.5 years of age (E), VUR in the right collecting system had regressed to grade 3, while no change was observed on the left side.

Table 1. Comparison of treatment response in high-grade (4 and 5) and low-grade (1-3) VUR cases in the study



Conclusion: Subureteric injection is a viable minimally invasive treatment for VUR; however, sonographic parameters correlate only weakly with VUR grade overall. Parenchymal thickness and renal pelvis AP diameter are more informative than kidney length alone. Early diagnosis and timely intervention remain essential for optimal outcomes. Prospective studies incorporating scintigraphic data are needed to validate these findings.

Keywords: Fluoroscopy, Ultrasound, Vesicoureteral Reflux, Subureteric Injection

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EVALUATION OF PEDIATRIC SURGERY CONSULTATIONS FROM A PEDIATRIC EMERGENCY DEPARTMENT: A PEDIATRIC SURGEON'S PERSPECTIVE

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Aim: Increasing patient volume in pediatric emergency departments has led to a growing number of specialty consultations, particularly in pediatric surgery. This study aimed to determine the consultation indication rate between the pediatric emergency department (PED) and pediatric surgery (PS), and to evaluate the appropriateness of pediatric surgery consultations requested from a PED.

Material & Method: This retrospective single-center study included pediatric patients for whom PS consultation was requested from the PED between February and April 2026. Demographic characteristics, consultation indications, consultation timing, hospitalization status, surgical intervention, and consultation appropriateness were evaluated. Consultations were categorized according to working hours and on-call conditions. Statistical analyses were performed using SPSS version 25.0, with statistical significance set at $P < 0.05$.

Results: During the study period, 39,226 PED visits were recorded, and PS consultation was requested for 411 patients, corresponding to a consultation rate of 1.05%. The mean age was 105.9 months (range: 0–216 months), and 61.1% of patients were male. Of all consultations, 339 (82.5%) were considered appropriate. Surgical intervention was performed in 89 patients (21.7%), and hospitalization was required in 122 patients (29.7%). The most common consultation indications were abdominal pain (53.0%), foreign body ingestion (10.7%), and scrotal pain (7.1%). Appropriate consultation rates were significantly higher during working hours compared with on-call conditions (87.9% vs. 74.8%, P=0.008).

Conclusion: Pediatric surgery consultations requested from the PED, particularly those performed during working hours, demonstrated a high appropriateness rate, with considerable hospitalization and surgical intervention rates. Given the limited number of pediatric surgeons and specialized centers, selecting appropriate consultations is crucial for the efficient utilization of pediatric surgical resources.

Keywords: Pediatric Surgery, Pediatric Emergency Medicine, Consultation

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PEDIATRIC TIVAD IMPLANTATION BY AN ADULT THORACIC SURGEON: SINGLE-SURGEON EARLY EXPERIENCE

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Aim: To evaluate the technical feasibility and perioperative outcomes of TIVAD implantation in pediatric patients by a single adult thoracic surgeon, including learning curve analysis.

Material & Method: A retrospective review of 44 consecutive totally implantable venous access device (TIVAD) procedures in 40 pediatric patients at Başakşehir Çam ve Sakura City Hospital (October 2025–April 2026) was conducted. Ports were implanted in 38 patients and Hickman catheters in 6. Subclavian vein access via Seldinger technique under fluoroscopy was primary; jugular access served as rescue. Topical vancomycin irrigation was applied in all cases. Anesthesia was LMA in 37 patients; revisions received local anesthesia with sedation. Spearman correlation, Mann-Whitney U, and CUSUM analyses were performed.

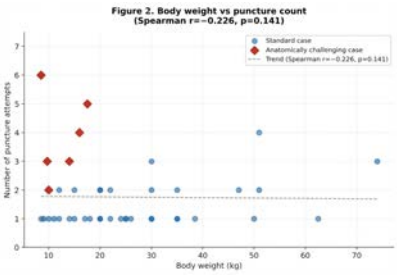
Results: Median age was 74 months (IQR: 51–135; range: 10–214); sex distribution was equal (22M/22F). Leading indications were ALL and osteosarcoma (n=8 each). Subclavian access was primary in 77.3%; jugular in 18.2%; side conversion required in 4.5%. Median operative time was 30 minutes (IQR: 25–40); puncture count was 1 (IQR: 1–2); single-puncture success 59.1%. No wound infections occurred (0%). Four revisions (9.1%) were required, all mechanical (Figure 1). No significant correlation was identified between age or weight and operative time or puncture count (Spearman r=−0.226, p=0.141) (Figure 2). Operative time was comparable across vascular approaches (p=0.285) and anesthesia types (p=0.426). Port procedures showed borderline longer operative time versus Hickman (30 vs. 25 min, p=0.050). CUSUM revealed a learning peak within the first 18 cases followed by stabilization. Late CUSUM spikes were attributable to anatomically challenging patients (weight ≤10 kg, vascular shunt, infected access site), not surgeon deterioration (Figure 3).

Figure 1. Port Chamber Defect : Mechanical Revision Cause



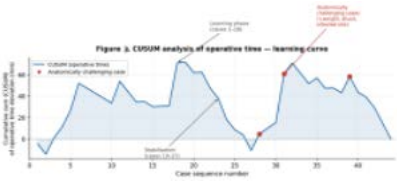
Intraoperative photograph demonstrating a manufacturing defect at the junction of the metal and silicone components of the port chamber (red circle). The defect was identified upon removal of the protective cap and was responsible for subcutaneous fluid extravasation during infusion, necessitating device revision.

Figure 2. Body Weight vs Puncture Count - Scatter Plot



Scatter plot of body weight versus puncture attempts. No significant correlation was found (Spearman r=−0.226, p=0.141). Anatomically challenging cases (red diamonds) cluster at lower body weights, suggesting patient anatomy as the primary driver of technical difficulty

Figure 3. CUSUM Analysis of Operative Time- Learning Curve



A learning peak is observed within the first 18 cases followed by stabilization. Late spikes (red circles) reflect anatomically challenging cases, not surgeon performance deterioration.

Conclusion: TIVAD implantation by a thoracic surgeon in pediatric patients is technically feasible with acceptable outcomes. The subclavian-first fluoroscopic approach achieved consistent results across age and weight groups. CUSUM confirmed a favorable learning curve; late difficulty reflected patient anatomy rather than surgical inexperience. Vancomycin irrigation was associated with zero infectious complications.

Keywords: totally implantable venous access device, pediatric thoracic surgery, learning curve, CUSUM, subclavian vein

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THE EFFECT OF CYBERCHONDRIA SEVERITY ON PREOPERATIVE ANXIETY LEVELS IN ADOLESCENTS

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Aim: Aim: The purpose of this study is to examine the effect of Cyberchondria Severity on preoperative anxiety levels in adolescents undergoing surgery.

Material & Method: This cross-sectional study was conducted with 70 adolescents aged 13-18 years who underwent surgery at a hospital in Mersin/Türkiye and met the inclusion criteria. Data were collected by having patients complete a personal information form, the Amsterdam Preoperative Anxiety Scale (APAIS) and the Cyberchondria Severity Scale (CSS) while they are waiting in service room for surgery. Statistical analyses were performed using SPSS (IBM SPSS Statistics 27). Frequency tables and descriptive statistics were used to interpret the findings.

Results: As the CSS score increased, both the total APAIS score and the scores on the subdimensions of the scale increased significantly ($p < 0.05$) (Table 1). Among adolescents, those undergoing major surgery, those experiencing anxiety related to surgery, and those experiencing anxiety about anesthesia had significantly higher CSS scores ($p < 0.05$) (Table 2). Those who stayed in the hospital for less than 1 day and 1-3 days before surgery had significantly higher APAIS scores compared to those who stayed for 4 days or more; those who did not have any changes made to their surgery date had significantly higher scores compared to others; and those experiencing anxiety about anesthesia had significantly higher scores compared to those who did not ($p < 0.05$) (Table 2). Responses to the CSS (α:0.953) and the APAIS (α:0.950) were found to have high reliability (Table 3).

Table 1. The Relationship Between APAIS and CSS Scale Scores

Correlation* (N=70)	***APAIS***	***Anesthesia anxiety*** **(Subdimension)**	***Surgical anxiety*** **(Subdimension)**	***Desire for information about anesthesia and surgery*** ***(Subdimension)***

Cyberchondria Severity Scale	*r*	0,596	0,573	0,500	0,575
	p	**<0,001**	**<0,001**	**<0,001**	**<0,001**
Compulsive checking	*r*	0,444	0,451	0,347	0,435
	p	**<0,001**	**<0,001**	**0,003**	**<0,001**
Distress	*r*	0,669	0,646	0,589	0,630
	p	**<0,001**	**<0,001**	**<0,001**	**<0,001**
Excessive checking/excessive reassurance seeking	*r*	0,588	0,547	0,502	0,570
	p	**<0,001**	**<0,001**	**<0,001**	**<0,001**
Relationship to health anxiety/reassurance seeking	*r*	0,544	0,494	0,469	0,541
	p	**<0,001**	**<0,001**	**<0,001**	**<0,001**
Increase in health anxiety	*r*	0,450	0,356	0,428	0,440
	p	**<0,001**	**<0,001**	**<0,001**	**<0,001**

*The Spearman correlation coefficient was used to examine the relationship between two quantitative variables that do not follow a normal distribution.

Table 2. Comparison of total scale scores based on the findings

		Cyberchondria Severity		**APAIS**	
Variable	**n**		**Median [IQR]**		**Median [IQR]**
Change in surgery day					
Yes	19	88,00±27,69	90,0 [39,0]	17,42±6,62	17,0 [9,0]
No	51	95,68±23,98	98,0 [29,0]	20,52±5,99	21,0 [6,0]

Statistical analysis*					
p-value		Z=-1,387 p=0,165		Z=-2,107 **p=0,035**	
Number of surgeries					
1. [1]	58	94,22±25,89	97,0 [37,5]	20,31±5,83	20,5 [6,3]
2. [2]	7	99,42±19,35	96,0 [32,0]	20,14±6,98	23,0 [14,0]
3 or more [3]	5	78,20±19,12	81,0 [29,0]	11,80±6,22	13,0 [11,0]
Statistical analysis*		χ^2=3,054		F=4,704	
Probability		p=0,217		**p=0,012**	
Difference				**[1,2-3]**	
Type of surgery					
Majör	49	97,34±24,65	99,5 [29,8]	20,58±5,01	21,0 [6,0]
Minör	21	86,56±28,17	87,5 [37,5]	18,06±8,25	17,5 [15,0]
Statistical analysis*					
Probability		Z=-1,979 **p=0,048**		t=1,498 p=0,139	
History of anesthesia					
Yes	20	96,15±16,55	96,5 [26,0]	19,55±6,23	18,5 [8,3]
No	50	92,58±27,84	95,5 [50,0]	19,74±6,35	20,5 [7,0]
Statistical analysis		t=0,661		Z=-0,176	
Probability		p=0,512		p=0,860	

Hospital stay					
Less than 1 day [1]	26	91,84±23,28	95,0 [42,5]	18,38±5,20	18,0 [4,5]
1-3 day [2]	32	98,53±27,35	99,0 [33,5]	21,56±6,53	23,0 [7,8]
4 day-more than 4 day [3]	12	84,25±20,72	86,5 [41,3]	17,50±6,78	17,0 [12,5]
Statistical analysis*					
Probability		χ^2=0,837		χ^2=4,985	
Difference		p=0,360		**p=0,026**	
				[1,2-3]	

*For normally distributed data, the "Independent Samples t-test" (t-table value) was used to compare measurement values between two independent groups, while the "ANOVA" test (F-table value) was used to compare three or more independent groups. For data not following a normal distribution, the "Mann-Whitney U" test (Z-table value) was used to compare measurement values between two independent groups, and the "Kruskal-Wallis H" test (χ^2-table value) was used to compare three or more independent groups.

Table 3. Distribution of reliability coefficients for scales

Scale (N=70)	Number of items	Cronbach's alpha coefficient
Cyberchondria severity	33	0,953
Coercive control	8	0,930
Distress	8	0,931
Excessive control/excessive reassurance seeking	8	0,914
Association with health anxiety/reassurance seeking	6	0,877
Increased health anxiety	3	0,888
Amsterdam pre-operative anxiety and information	6	0,950
Anesthesia anxiety	2	0,916
Surgery anxiety	2	0,934
Desire to obtain information about anesthesia and surgery	2	0,855

Conclusion: Interventions to alleviate anxiety related to surgery and anesthesia should be more intensively planned, especially for adolescent patients who are anxious about anesthesia, those undergoing surgery for the first time, and those undergoing major surgery. Plans should be made to ensure that adolescents with high CSS scores can obtain health-related information from healthcare professionals rather than from internet and social media sources.

Keywords: Adolescents, Anxiety, Cyberchondria, Cyberchondria Severity, Preoperative anxiety.

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A COMPARATIVE EVALUATION OF ARTIFICIAL INTELLIGENCE MODELS FOR ADOLESCENT-CENTERED SCOLIOSIS QUESTIONS

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Aim: This study aimed to comparatively evaluate the performance of artificial intelligence models in generating responses to adolescent-centered scoliosis questions, addressing both clinical and psychosocial aspects.

Material & Method: A total of 24 standardized scoliosis-related questions, derived from commonly asked questions by adolescents on online platforms, were presented to ChatGPT, Gemini, and Claude. The questions were categorized into five predefined domains: symptoms, diagnosis, treatment, psychosocial aspects, and prognosis. Responses were independently evaluated by two physiatrists using the modified DISCERN (mDISCERN), Global Quality Score, and accuracy criteria. Readability was assessed using the Flesch Reading Ease Score. Interrater reliability was assessed using intraclass correlation coefficients. Nonparametric statistical analyses, including Kruskal–Wallis tests followed by Bonferroni-adjusted post-hoc comparisons, were conducted.

Results: Significant differences were observed among models in terms of readability and overall quality ($p < 0.05$), while no significant differences were found for accuracy or mDISCERN scores. Post-hoc analyses indicated that Claude demonstrated significantly lower readability compared to both ChatGPT and Gemini, while achieving significantly higher quality scores than Gemini (all $p < 0.05$), suggesting a trade-off between response quality and readability. Domain-level analyses showed no statistically significant differences between models after Bonferroni correction (all $p > 0.05$), except for the treatment domain. In the treatment domain, a statistically significant difference was observed for GQS scores ($H = 10.011$, $p = 0.007$), with post-hoc pairwise comparisons indicating that Claude scored significantly higher than Gemini.

Conclusion: Artificial intelligence models vary in generating adolescent-centered scoliosis responses, particularly in terms of readability and overall quality. Differences in readability and quality may impact accessibility and understanding for patients and families, and responses may also reflect adolescents' expressed concerns related to scoliosis, underscoring the importance of clear and balanced communication.

Keywords: Adolescent Scoliosis, Artificial Intelligence, Health Information Quality, Digital Health, Patient Education

OP - 250

SHORT TERM OUTCOMES OF ROBOTIC GAIT TRAINING IN CEREBRAL PALSY

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Aim: For children with cerebral palsy (CP) and very limited ambulation, high repetition stepping practice is difficult to provide consistently. We aimed to evaluate the feasibility of mobile robot assisted gait training and to describe the early session based changes observed over the first four sessions.

Material & Method: This retrospective observational analysis included 28 children with CP who underwent the first four consecutive sessions of mobile robot assisted gait training. Recorded variables were age, sex, and Gross Motor Function Classification System (GMFCS) level. Outcomes of interest were step count, session duration, device recorded mean speed, pause number, session quality, pain/irritability, and early termination. Changes over time were examined with the Friedman test, and the predefined comparison between sessions 1 and 4 was performed with the Wilcoxon signed-rank test plus Holm correction.

Results: The mean age was 5.86±2.16 years, and 20 participants were boys. GMFCS distribution was III in 3, IV in 16, and V in 9 children. A total of 110 of 112 sessions (98.2%) were completed without early termination. Mean step count increased from 725.4±225.2 to 847.5±340.8 (mean change +122.2 steps; 95% CI 62.6-181.8; adjusted $p < 0.001$). Session duration increased from 29.36±2.38 to 30.62±2.63 minutes ($p < 0.001$), and mean speed rose from 3.61±0.55 to 3.83±0.79 ($p=0.013$). The reduction in pauses did not reach statistical significance ($p=0.083$). Sessions rated as good increased from 12/28 to 21/28, while pain/irritability decreased from 8/28 to 2/28.

Conclusion: Mobile robot assisted gait training appears feasible and well tolerated in children with CP and severe walking limitation. Even across four sessions, gains were seen in step count, mean speed, and overall session tolerance. Our findings may serve as useful preliminary data for controlled prospective studies.

Keywords: Cerebral palsy, robotic rehabilitation, mobile gait robot, GMFCS

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ASSOCIATION BETWEEN TECHNOLOGY EXPOSURE AND SLEEP AND BEHAVIORAL EFFECTS IN INFANCY

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Aim: The integration of digital technologies into infant care routines has made screen and sound stimulus exposure an important pediatric concern. This study evaluated the association between technology exposure and mother-reported sleep, behavioral, and developmental findings in infants aged 0–24 months.

Material & Method: This study included 91 infants hospitalized in our infant ward, whose mothers voluntarily agreed to participate. Technology exposure and mother-reported possible effects were assessed using a structured questionnaire.

Results: The mean maternal age was 31.45±5.15 years, and the mean infant age was 8.98±7.17 months. Of the infants, 50.5% were male. The most commonly reported daily screen time was 1–30 minutes (40.7%); 22.0% had no screen exposure, while 15.4% had more than two hours of daily screen time. Combined active and background screen exposure was the most frequent exposure type (42.9%). At least one possible effect was reported in 32 infants (35.2%). The most common finding was the need for an external stimulus to fall asleep. Inability to sleep quietly and restlessness when the screen was turned off were each reported in 13.2%, while reduced eye contact and delayed response to name were each reported in 4.4%. Daily screen time, exposure type, screen use during meals, video use during meals, “pışpış” sounds for sleep, video use for soothing, exposure to video or “pışpış” sounds during sleep, and maternal phone use while holding the infant were significantly associated with possible effects. Screen use during meals was associated with external stimulus dependency, restlessness when the screen was turned off, and delayed response to name. “Pışpış” sound use for sleep was associated with external stimulus dependency and inability to sleep quietly.

Conclusion: Screen- and sound-based technology exposure in infancy was associated with mother-reported sleep and behavioral effects. Digital stimulus use during sleep, feeding, and soothing routines should be addressed in pediatric evaluations.

Keywords: Infancy, screen exposure, technology, sound stimulus, behavioral effects

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THE ROLE OF ARTIFICIAL INTELLIGENCE IN THE DAILY PRACTICE OF PEDIATRICIANS AND THEIR APPROACHES TO INHERITED METABOLIC DISEASES

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Aim: This study aimed to evaluate the level of artificial intelligence (AI) use in the daily clinical and academic practice of pediatricians, their perspectives on these technologies, and, in particular, their use of AI in the approach to inherited metabolic diseases (IMDs), which represent a diagnostically challenging group of disorders.

Material & Method: This was a descriptive, cross-sectional online survey conducted among pediatric physicians. Participants were questioned regarding their demographic and professional characteristics, frequency and areas of AI use, attitudes toward AI applications, and opinions about the potential role of AI in the approach to IMDs. The obtained data were analyzed using appropriate statistical methods.

Results: A total of 145 pediatric physicians participated in the study. Of the participants, 79.3% were female, and the most common age group was 31–40 years (57.9%). Professional experience was ≥5 years in 60.7% of participants, and the majority were general pediatricians (72.4%). Most participants reported being familiar with and actively using AI tools. The best-known tool was ChatGPT (97.2%). AI was most commonly used for translation (75.9%), literature review (68.3%), and presentation preparation (57.9%), whereas clinical use was less common. Only 4.8% of participants considered their knowledge of IMDs sufficient. While 25.5% reported previously consulting AI tools for a patient with an IMD, 74.5% stated they would consider using them in the future. Regarding attitudes toward AI recommendations, 70.3% indicated they would interpret AI-generated suggestions alongside their own clinical judgment. From an ethical perspective, 25.5% of participants believed that AI use could raise ethical concerns.

Conclusion: This study is expected to contribute to understanding current AI usage habits and attitudes among pediatric physicians and to evaluating the potential contribution of AI in diagnostically challenging fields such as IMDs.

Keywords: artificial intelligence, inherited metabolic diseases, pediatrics, digital health

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ARTIFICIAL INTELLIGENCE IN PEDIATRIC EARLY WARNING SYSTEMS: A BIBLIOMETRIC ANALYSIS

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Aim: The aim of this study is to examine the scientific literature on artificial intelligence applications in pediatric early warning systems using bibliometric methods, and to reveal the development process of the field, research trends, thematic structure, and the transformation towards AI-supported clinical deterioration prediction systems.

Material & Method: The study was conducted using a bibliometric analysis design. Data were obtained from the Web of Science Core Collection database. Literature searches were conducted between February 2026 and May 2026; keywords related to pediatric early warning systems, artificial intelligence, machine learning, and clinical decision support systems were used. Original research articles in English that met the inclusion criteria were included in the analysis. VOSviewer software was used for bibliometric analyses. Publication trends, country distributions, thematic structures, keyword networks, and research focuses were evaluated.

Results: The analysis identified a total of 37 publications. A significant increase in the number of publications was observed, particularly after 2018. The United States produced the most publications, followed by South Korea and the United Kingdom. The literature focused on four main thematic areas: traditional pediatric early warning systems, artificial intelligence and machine learning-based clinical deterioration prediction, and electronic health record integration and application. Systems such as pDEWS, pCART, and AutoPEWS were found to be particularly useful in predicting unplanned intensive care unit transfers and clinical deterioration.

Conclusion: Pediatric early warning systems have evolved over time from traditional rule-based scoring systems to AI-powered, data-driven, and multidisciplinary clinical decision support systems. Electronic health records, deep learning algorithms, and real-time prediction systems have become increasingly central to the literature.

Keywords: artificial intelligence, machine learning, pediatric early warning system, clinical decision support system, bibliometric analysis

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COMPARİSON OF THE DİAGNOSTİC PERFORMANCE OF CLİNİCAL EVALUATORS AND ARTİFİCİAL INTELLİGENCE İN NEONATAL ANTERİOR POSTERİOR RADİOGRAPHS

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Aim: Neonatal chest radiographs pose interpretive challenges due to low contrast, supine positioning, and prematurity-related morphological variability. This study compared the diagnostic performance of a ChatGPT 5.2-based clinical decision support system, fed with structured clinical–radiological input, with that of pediatric residents at different experience levels on neonatal anteroposterior (AP) chest radiographs for the evaluation of parenchymal lung pathologies.

Material & Method: In this retrospective, single-center diagnostic accuracy reader study, 130 anonymized AP chest radiographs from a PACS archive (2020–2024) were evaluated. Cases were independently and blindly classified by one senior pediatric resident, one junior pediatric resident, and ChatGPT 5.2 into seven diagnostic categories (TTN, acute bronchiolitis, pneumonia, pneumothorax, RDS, BPD, normal). ChatGPT 5.2 received a structured clinical history and an Image Descriptor Checklist completed by an independent observer. The reference standard was established by consensus of two neonatologists and one radiologist. Performance was analyzed using sensitivity, specificity, accuracy, weighted Kappa (κw), and chi-square testing, with a difficulty-stratified subgroup analysis.

Results: ChatGPT 5.2 achieved 95.38% (124/130) final-diagnosis accuracy with almost perfect agreement (κw=0.946; $p < 0.001$). ChatGPT 5.2 was significantly more accurate than both residents ($p \leq 0.033$). In the difficulty-stratified analysis, the model largely maintained its performance (~3-point drop), while the senior and junior residents showed accuracy drops of 16.74 and 28.68 percentage points, respectively. The model performed homogeneously across all seven categories (sensitivity 88.89–100%), whereas residents showed marked misclassification, particularly between BPD and RDS.

Conclusion: When supplied with a structured clinical history and a standardized radiological description, the ChatGPT 5.2-based decision support system demonstrated diagnostic performance markedly superior to pediatric residents and was largely robust to case difficulty in evaluating parenchymal lung pathologies on neonatal AP chest radiographs. LLM-based systems integrating clinical and radiological information may serve as valuable second-opinion tools under expert supervision in neonatal intensive care. Multicenter prospective studies are needed.

Keywords: Newborn, chest radiography, artificial intelligence

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ChatGPT's POTENTIAL IN PEDIATRIC EMERGENCY CLINICAL DECISION-MAKING: A RETROSPECTIVE, SINGLE-BLIND EVALUATION USING REAL-WORLD PATIENT DATA

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Aim: To compare the clinical decision-making performance of ChatGPT with that of pediatric residents in a pediatric emergency department using structured clinical scenarios derived from real-world patient encounters.

Material & Method: This retrospective, comparative, single-blind evaluation study included patients aged 0–18 years who presented to the Pediatric Emergency Department of Koç University Hospital between 1 January 2024 and 1 January 2025. The year 2024 was selected to ensure that residents' original clinical decisions were made independently of ChatGPT or similar large language model-based tools. To reduce selection bias and seasonal imbalance, cases were systematically sampled from the first week and even-numbered days of each month. A total of 2600 anonymized clinical scenarios were generated. For each scenario, two separate coded decision sets were created: the original pediatric resident decision and the ChatGPT-generated recommendation. These datasets were independently evaluated by two experienced pediatric intensive care specialists blinded to response source. Outcomes included diagnostic concordance, diagnostic agreement, unnecessary investigations, missed necessary investigations, clinical relevance of missed investigations, and follow-up/disposition appropriateness. Categorical variables were compared using Pearson's chi-square or Fisher's exact test.

Results: Comparative results across clinical decision-making domains are summarized in Table 1. Residents showed higher diagnostic concordance with the final diagnosis than ChatGPT (93.3% vs 90.0%, p=0.002). Complete diagnostic agreement was also higher among residents (70.5% vs 67.7%), whereas incorrect assessments were more frequent with ChatGPT (8.4% vs 4.3%, $p < 0.001$). ChatGPT requested fewer unnecessary investigations (9.9% vs 19.6%, $p < 0.001$), but missed necessary investigations more often (26.4% vs 20.4%, p=0.001), including clinically critical omissions (4.5% vs 2.5%, p=0.001). Inappropriate follow-up/disposition plans were slightly more frequent with ChatGPT (6.7%) than among residents (5.4%; p=0.028). Kappa values indicated moderate agreement, likely reflecting expert judgement variability in complex emergency scenarios.

Table 1. Comparative evaluation of pediatric residents and ChatGPT across clinical decision-making domains

Evaluation domain	Pediatric residents	ChatGPT	p value	Interpretation
Diagnostic concordance with the final diagnosis	93.3%	90.0%	p=0.002	Pediatric **residents** demonstrated **higher** concordance with the final diagnosis.
Diagnostic discordance	5.9%	9.5%	p=0.002	Diagnostic **discordance** was more frequent with **ChatGPT**.
Incorrect clinical assessment	4.3%	8.4%	p<0.001	The rate of **incorrect** assessment was approximately **twice as high** with **ChatGPT**.
Unnecessary investigation requests	19.6%	9.9%	p<0.001	**ChatGPT** was associated with a significantly **lower** rate of **unnecessary** investigation requests.
Requesting multiple unnecessary investigations	8.6%	3.5%	—	Multiple unnecessary investigation requests were less frequent with ChatGPT.
More than half of requested investigations being unnecessary	2.9%	0.9%	—	Excessive **unnecessary** investigation burden was **lower** with **ChatGPT**.
Missed necessary investigations	20.4%	26.4%	p=0.001	**ChatGPT missed** necessary

				investigations more frequently.
Clinically critical missed investigations	2.5%	4.5%	p=0.001	Clinically **critical omissions** with potential implications for patient safety were more frequent with **ChatGPT**.
Inappropriate follow-up or disposition plan	5.4%	6.7%	p=0.028	Inappropriate follow-up or disposition planning was slightly more frequent with ChatGPT.

Conclusion: ChatGPT may reduce unnecessary testing but miss necessary investigations; it should not be used independently in pediatric emergency care, but may serve as adjunctive support under clinician supervision.

Keywords: ChatGPT, artificial intelligence, pediatric emergency medicine, clinical decision-making, diagnostic accuracy

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PP - 001

MANAGEMENT OF SUPERIOR VENA CAVA SYNDROME IN A NEONATE: A CASE REPORT

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Aim: While Superior Vena Cava Syndrome (SVCS) is frequently associated with mediastinal masses in adults, it is rare in neonates and typically results from iatrogenic thrombosis related to central venous catheterization. Due to its rarity, diagnosis is often delayed, potentially leading to significant morbidity. This case report aims to emphasize the critical importance of early intervention in neonates presenting with signs of vascular occlusion.

before



before treatment SVCS

Case: A male infant, born at 26 weeks' gestation and weighing 850 grams, was monitored in the neonatal intensive care unit (NICU) for congenital pneumonia, intracranial hemorrhage, and bronchopulmonary dysplasia. On the 35th day of life, a central venous catheter was placed. Following the removal of the catheter, on the 65th day of hospitalization, the patient developed edema of the face, head, and neck, increased head circumference, and minimal collateral vein formation on the chest. Figure 1 is shown these findings before treatment.

after



after treatment SVCS

Results: Venous Doppler ultrasound showed non-visualization of the right jugular vein, while echocardiography revealed a hyperechoic mass consistent with a thrombus at the junction of the vena cava superior and the right atrium. A CT scan of the thorax and neck further demonstrated bilateral pleural effusions and extensive soft tissue edema. A diagnosis of SVCS secondary to catheter-induced thrombosis was confirmed.Following a multidisciplinary consultation with pediatric hematology and cardiovascular surgery, medical treatment was initiated. Thrombophilia screening yielded no pathological findings. The patient was treated with low-molecular-weight heparin (enoxaparin). Although a minor intraocular hemorrhage was detected during follow-up, the clinical signs of SVCS improved, and enoxaparin was discontinued after five weeks. Subsequent imaging confirmed the complete resolution of the thrombus and normalized SVC flow. Figure 2 is shown change of after treatment.

Conclusion: SVCS must be considered in neonates with unexplained facial and neck edema, particularly those with a history of invasive procedures in the NICU. This case underscores that early diagnosis and a multidisciplinary approach are vital for achieving successful clinical outcomes.

Keywords: neonate, head and neck edema, venous thrombosis, superior vena cava

PP - 002

RIGHT MIDDLE CEREBRAL ARTERY INFARCTION IN AN ADOLESCENT PRESENTING WITH DIABETIC KETOACIDOSIS

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Aim: Diabetic ketoacidosis (DKA) is a life-threatening metabolic emergency in children. Although cerebral edema is the most common neurological complication, rare but severe cerebrovascular events such as ischemic stroke may occur.

Case: A previously healthy 15-year-old female with no history of chronic illness, medication use, or allergies initially presented with nausea and abdominal pain and was discharged. She was born at term (3500 g, cesarean section) with no history of neonatal intensive care unit admission. Two days later, she was readmitted due to altered consciousness. Her blood glucose level was 385 mg/dL, and a one-week history of polyuria and polydipsia was noted.Further history revealed bilateral ankle pain for two weeks and hair loss with alopecia, without accompanying rash, oral ulcers, fever, or photosensitivity. Family history was significant for type 2 diabetes mellitus in both parents, with no known rheumatologic or renal diseases.DKA treatment with intravenous fluids and insulin infusion was initiated. During follow-up, the patient developed left-sided hemiparesis and hypoesthesia. Brain CT and MRI imaging showed the findings of acute MCA infarct (Figure 1) and brain MR angiography (Figure 2) confirmed the diagnosis. No intracranial hemorrhage was detected at the time of diagnosis. Echocardiography and thrombophilia screening were unremarkable.Neurointerventional treatment was not performed due to the absence of a salvageable penumbra, and anticoagulation therapy was initiated. Following metabolic stabilization, the patient's neurological findings remained stable. Follow-up MRI at 24 days later shows the findings consistent with subacute ischemia and reperfusion injury (Figure 3).

Figure 1

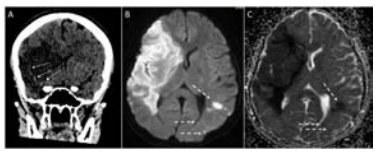


Figure 1 – (A) Coronal reformatted CT image of a 15-year-old girl with acute left-sided hemiparesis shows hypodense edematous white matter in the right cerebral hemisphere

and sulcal effacement. Right MCA is seen as a hyperdense linear structure (arrows) indicating MCA thrombosis. Diffusion weighted imaging (B) and corresponding ADC map (C) confirm the acute ischemia at the MCA territory along with small ischemic foci at the left parietal lobe (dashed arrows).

Figure 2

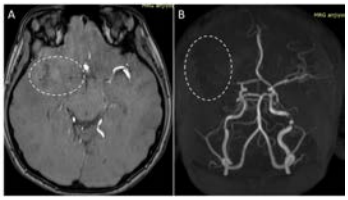


Figure 2 – MR angiography (A) and 3D volume rendering image (B) of the same patient reveals absent right MCA signal (dashed circles) at the expected area and normal left MCA for comparison.

Figure 3

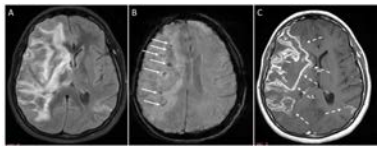


Figure 3 – On 24-day follow-up MRI; axial FLAIR (A), susceptibility weighted image (SWI) (B) and contrast enhanced T1-weighted image (C) represent persisting edema, gliosis multiple small hemorrhagic foci (arrows) and extensive gyriform enhancement (dashed arrows) due to reperfusion injury which are peculiar for subacute ischemia.

Results: Coronal CT of a 15-year-old girl with acute left hemiparesis shows hypodense edematous white matter in the right hemisphere with sulcal effacement. The right MCA appears hyperdense, suggesting thrombosis.

Conclusion: Although rare, ischemic stroke should be considered in pediatric patients with DKA. Early neuroimaging and a multidisciplinary approach are crucial in the presence of altered consciousness or focal neurological deficits.

Keywords: diabetic ketoacidosis, ischemic stroke, Right MCA thrombosis, MCA infarct, hemiparesis and hypoesthesia

PP - 003

BEYOND CT: THE DYNAMIC ROLE OF ULTRASOUND IN TRACHEAL STENOSIS

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Aim: Tracheal injuries are most commonly iatrogenic, often related to endotracheal intubation, and are typically evaluated using computed tomography (CT). However, in pediatric patients, detection can be challenging due to the small airway dimensions. We present a rare cause of tracheal injury following hanging, complicated by progressive stridor after intubation. This case highlights the role of dynamic ultrasound with high-frequency linear transducer in diagnosis and follow-up.

Case: A 16-year-old male presented with progressive inspiratory stridor. He had a history of prolonged intubation following a suicide attempt by hanging. CT demonstrated tracheal stenosis at C7–T1 level, causing 50% luminal narrowing, with soft tissue thickening (Figure 1).Ultrasound examination revealed an anterior tracheal cartilage defect and a hypoechoic intraluminal lesion consistent with granulation tissue (Figure 2A). Dynamic assessment demonstrated inspiratory anterior wall collapse and subtle air leakage with flowing echogenicity and dirty shadow. These findings enabled differentiation between fixed stenosis. Dynamic ultrasound revealed inspiratory collapse and micro–air leakage not clearly visualized on CT. At one-month postoperative follow-up after tracheal resection, ultrasound demonstrated partial restoration of normal tracheal contour with no evidence of air leakage or recurrent stenosis (Figure 2B).

Figure 1

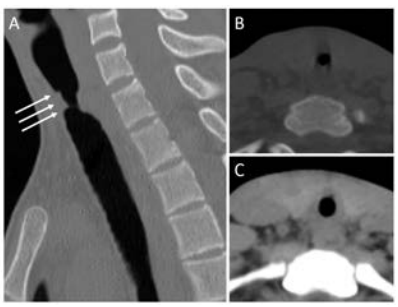


Figure 1. A 16-year-old male with inspiratory stridor following prolonged intubation after suicide attempt by hanging. Sagittal reformatted (A), and axial (B and C) CT images demonstrate a 1.5-cm segmental tracheal stenosis (arrows) at the C7–T1 level, causing approximately 50% luminal narrowing. Narrow segment (B) and normal segment (C) for comparison are represented.

Figure 2

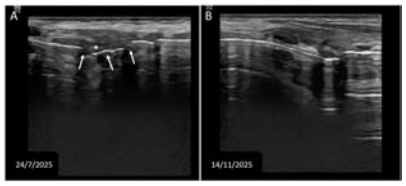


Figure 2. Ultrasound images of the same patient before (A) tracheal resection, reveal anterior tracheal cartilage defects (arrows) and surrounding hypoechoic granulation tissue (asterisk). Following surgery (B), partial restoration of normal tracheal contour with reduced stenosis and granulation tissue is shown on ultrasound.

Results: Tracheal injuries may arise from strangulation, blunt trauma, prolonged intubation, or a combination of mechanisms, and determining the dominant etiology can be challenging in delayed presentations. CT remains the most widely used modality for anatomic evaluation of the trachea. Nevertheless, CT is intrinsically static and may underestimate dynamic components such as inspiratory wall malacia or transient micro–air leakages. In addition, younger patients may require repeated imaging during follow-up.

Conclusion: Point-of-care US (POCUS) has emerged as an important adjunct to CT and bronchoscopy for assessing airway pathology. Dynamic ultrasound allows more accurate functional evaluation of tracheal movement, cartilage displacement, luminal deformity, and air leakage. Its diagnostic and postoperative utility may enhance management in pediatric airway injuries.

Keywords: POCUS, tracheal injury, hanging, intubation, ultrasound

PP - 004

CONSERVATIVE MANAGEMENT OF NEONATAL ESOPHAGEAL PERFORATION IN AN EXTREMELY PRETERM INFANT

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Aim: Neonatal esophageal perforation is a rare but potentially life-threatening complication, particularly in extremely preterm and very low birth weight infants. Most cases are iatrogenic and associated with endotracheal intubation or nasogastric/orogastric tube placement. Clinical findings are nonspecific and may include respiratory distress and pneumothorax.

Case: A female infant born at 24 weeks' gestation with a birth weight of 425 g required mechanical ventilation in the neonatal intensive care unit. On postnatal day (PND) 4, the endotracheal tube was replaced because of desaturation. Chest radiography performed after tube replacement confirmed appropriate positioning and demonstrated a left-sided pneumothorax (Figure 1), necessitating emergent needle thoracentesis. Because of persistent pneumothorax, a left tube thoracostomy was performed on PND 6. On PND 9, the infant developed increasing oxygen requirement and decreased breath sounds on the left side. Milky drainage from the thoracic tube and synchronous movement of the orogastric tube with respiration raised suspicion for esophageal perforation. Chest radiography demonstrated the orogastric tube extending into the left hemithorax (Figure 2). Contrast administration through the tube resulted in opacification of the thoracic cavity without gastric filling, confirming the diagnosis. Under fluoroscopic guidance, a 4-Fr orogastric tube was successfully repositioned into the stomach (Figure 3). Enteral feeding was temporarily discontinued, and the pleural cavity was irrigated with methylene blue through the thoracic drain for four days. Follow-up contrast imaging performed on PND 19 demonstrated complete resolution of the leakage. Enteral feeding with breast milk was then resumed, and the thoracic drain was successfully removed after clamping without recurrence.

Figure 1. Development of left pneumothorax

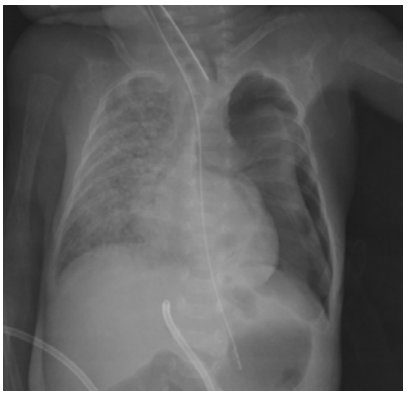


Figure 2. Chest radiography showed the orogastric tube extending into the left hemithorax. Contrast administration demonstrated thoracic opacification without gastric filling, confirming intrathoracic placement.

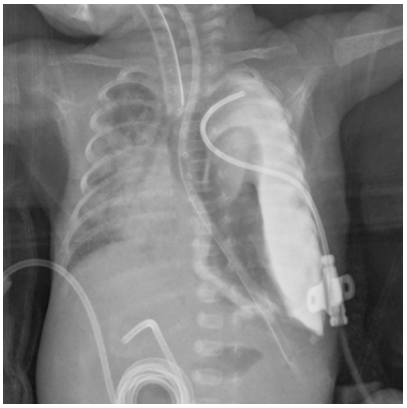


Figure 3. A 4-Fr orogastric tube was advanced into the stomach under fluoroscopic guidance, and correct gastric positioning was confirmed by contrast administration.



Results: Neonatal esophageal perforation should be considered in preterm infants with persistent pneumothorax and abnormal thoracic drain output.

Conclusion: Conservative management may provide favorable outcomes in clinically stable patients. Careful reintroduction of enteral feeding after radiologic resolution of leakage may help reduce prolonged parenteral nutrition exposure.

Keywords: Esophageal Perforation, Pneumothorax, Infant, Methylene Blue

PP - 005

SAME STORM, DIFFERENT SPARKS: PEDIATRIC HYPERINFLAMMATION WITH DISTINCT UNDERLYING TRIGGERS

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Aim: Hyperinflammation represents a shared clinical phenotype rather than a single disease entity. Although early recognition of hemophagocytic lymphohistiocytosis/macrophage activation syndrome (HLH/MAS)-like inflammation is essential, treatment should not be limited to nonspecific immunosuppression. We aimed to illustrate how distinct underlying triggers may shape treatment strategy and outcome in children presenting with similar hyperinflammatory phenotypes.

Case: We describe three children with severe hyperinflammation resembling secondary HLH/MAS but arising from distinct aetiological backgrounds (Table 1, 2). The first patient was a 4-year-old immunosuppressed girl with relapsed metastatic Wilms tumour who developed persistent fever and nodular-cavitary pulmonary lesions following febrile neutropenia. The second patient was a previously healthy 5-year-old boy who rapidly progressed from a hepatitis-like presentation to shock, coagulopathy, hypofibrinogenaemia, hyperferritinaemia, markedly elevated interleukin-6 levels, and multiple organ dysfunction. The third patient was a 7-year-old girl with prolonged fever, lymphadenopathy, and erythema nodosum-like lesions who developed fulminant MAS/secondary HLH complicated by capillary leak, refractory shock, disseminated intravascular coagulation, fulminant hepatic failure, and multiple organ failure.

Table 1. Clinical Trajectories of a Shared Hyperinflammatory Phenotype with Distinct Triggers

	Case 1	Case 2	Case 3
Etiology-oriented interpretation	Tuberculosis-triggered hyperinflammation	Fulminant hyperinflammation suggesting immune	*CASP10*-associated autoimmune/

		dysregulation / HLH susceptibility	autoinflammatory hyperinflammation
Age / sex	4-year-old girl	5-year-old boy	7-year-old girl
Initial context	Immunosuppressed patient with relapsed/metastatic Wilms tumor, febrile neutropenia, and pulmonary nodular/cavitary lesions	Previously healthy child presenting with fever, gastrointestinal symptoms, and hepatitis-like laboratory findings	Child presenting with prolonged fever, generalized lymphadenopathy, tonsillar swelling, and erythema nodosum-like lesions
Hyperinflammatory turning point	Persistent/recurrent fever, cytopenias, hyperferritinemia, elevated inflammatory markers, and progressive pulmonary lesions	Rapid progression within hours to shock, coagulopathy, hypofibrinogenemia, hyperferritinemia, marked IL-6 elevation, and multiple organ dysfunction	Rapid increase in ferritin and D-dimer, thrombocytopenia, hypofibrinogenemia, rash progression, and increasing oxygen requirement
Identified or suspected trigger	Microbiologically confirmed tuberculosis	No clearly demonstrable infectious, autoimmune, or metabolic driver, raising suspicion for underlying immune dysregulation / HLH predisposition	No classical trigger identified during the acute phase; post hoc analysis revealed a *CASP10 mutation*
Treatment strategy	Anti-tuberculosis therapy plus controlled immunomodulation and intensive care support	Broad antimicrobial coverage, immunomodulation, organ support, and further immunologic/genetic evaluation	Intensive immunomodulation, extracorporeal support, and advanced life-support measures
Outcome	Clinical stabilization and discharge	Clinical stabilization and discharge	Death due to refractory hyperinflammation and multiple organ failure

Key message	Tuberculosis was the infectious spark; controlling hyperinflammation required infection-directed therapy as well as immunomodulation.	Fulminant hyperinflammation with no clear conventional driver should prompt evaluation for immune dysregulation or monogenic HLH predisposition.	*CASP10*-associated autoimmune/autoinflammatory susceptibility may underlie rapidly fatal MAS/secondary HLH-like hyperinflammation.

Results: Although all three patients shared a severe HLH/MAS-like hyperinflammatory phenotype, the underlying triggers and treatment implications differed substantially (Table 1). In the first case, tuberculosis was the decisive infectious trigger, and clinical control was achieved only after pathogen-directed therapy was initiated. In the second case, the absence of an identifiable acquired trigger shifted the clinical focus toward possible primary immune dysregulation and long-term genetic/immunological evaluation. In the third case, fatal refractory hyperinflammation was retrospectively linked to CASP10-associated immune dysregulation, highlighting the potential role of monogenic/autoinflammatory mechanisms in fulminant secondary HLH/MAS presentations.

Table 2. Clinical and Laboratory Evidence Supporting the Shared Hyperinflammatory Phenotype

	Case 1	**Case 2**	**Case 3**
Fever / organ involvement	Persistent recurrent fever; hepatosplenomegaly	Fever; hepatomegaly/ hepatosplenomegaly during follow-up	Prolonged fever and generalized lymphadenopathy; no hepatosplenomegaly
Cytopenias	Anemia, thrombocytopenia, severe lymphopenia	Leukopenia/lymphopenia followed by anemia and thrombocytopenia	Rapidly progressive anemia and severe thrombocytopenia with reactive neutrophilia
Peak ferritin	16,955 ng/mL	3,426 ng/mL	31,505 ng/mL
Cytokine/ inflammatory response	Recurrent CRP/PCT/IL-6 elevation; peak IL-6: 455.5 pg/mL	Marked cytokine response; IL-6: 22,335 pg/mL	Marked IL-6 elevation; peak IL-6: 2,099 ng/L

Coagulopathy	Marked D-dimer elevation; fibrinogen remained above HLH-2004 threshold	INR prolongation and hypofibrinogenemia requiring blood product support	Severe DIC with unmeasurable fibrinogen, INR 12, and massive bleeding
Liver/tissue injury	Mild transaminase elevation	Acute hepatic involvement, subsequently improved	Fulminant hepatic failure and massive hepatic necrosis
Major organ support	HFNC and inotropic support	Mechanical ventilation, inotropes, hemodiafiltration, plasma exchange	Mechanical ventilation, VA-ECMO, CVVHDF, cytokine adsorption
Bone marrow findings	Hemophagocytosis present	Rare hemophagocytic macrophages	Limited hemophagocytic activity/debris phagocytosis postmortem
HLH-2004 criteria fulfilled	At least 6/8 evaluable criteria	At least 5/8 evaluable criteria	At least 4/8 evaluable criteria
MAS phenotype	Compatible laboratory pattern despite absence of sJIA	Compatible laboratory pattern despite absence of sJIA	Compatible laboratory pattern despite absence of sJIA

Conclusion: These cases demonstrate that the same paediatric hyperinflammatory storm may arise from different sparks: infection, suspected monogenic immune susceptibility, or autoimmune/autoinflammatory immune dysregulation. Recognising the storm is urgent, but identifying the spark is equally critical for directing treatment and interpreting outcome.

Keywords: Hemophagocytic lymphohistiocytosis, macrophage activation syndrome, hyperinflammation, immune dysregulation, tuberculosis

PP - 006

POST-TRANSFUSION HEMATURIA IN A PREMATURE NEONATE: A RARE RED FLAG FOR CROSS-MATCH-COMPATIBLE ACUTE HEMOLYTIC REACTION

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Aim: Acute hemolytic transfusion reaction (AHTR) is a rare but life-threatening complication in preterm neonates. While routinely driven by major ABO incompatibility, it can also arise from minor blood group antigens or passive alloantibodies transferred via donor plasma. This report addresses the diagnostic and therapeutic challenges of immune-mediated AHTR in a premature infant despite fully compatible pre-transfusion testing.

Case: The premature infant (birth weight: 1180 g, born at 28 weeks due to maternal preeclampsia) was admitted to the Neonatal Intensive Care Unit with an admission diagnosis of respiratory distress syndrome. and suspected congenital pneumonia. On postnatal day 4, severe anemia (hemoglobin: 12.6 g/dL) prompted a packed red blood cell (PRBC) transfusion. Although pre-transfusion cross-matching was fully compatible, the infant developed acute hematuria 12 hours post-transfusion. Laboratory workup confirmed immune-mediated hemolysis: a positive direct Coombs test, elevated lactate dehydrogenase (2002 U/L), indirect hyperbilirubinemia, and widespread spherocytes on peripheral blood smear. We initiated emergency supportive care alongside a single dose of intravenous immunoglobulin (IVIG, 0.5 g/kg). Clinical and laboratory markers normalized rapidly, and the infant was discharged in stable condition.

Results: Fully compatible cross-match results do not entirely eliminate the risk of AHTR in highly vulnerable preterm neonates. Unexplained clinical deterioration or hematuria during or after transfusion warrants immediate cessation of the product and prompt evaluation.

Conclusion: Adopting restrictive transfusion thresholds and implementing delayed cord clamping are essential proactive strategies to minimize transfusion dependency and subsequent iatrogenic risks. IVIG may be considered as part of prompt management in suspected cases.

Keywords: Acute hemolytic transfusion reaction, preterm neonate, intravenous immunoglobulin, hematuria, spherocytosis

PP - 007

DELAYED NEUROLOGICAL DEFICIT SECONDARY TO A TRANSORBITAL ORGANIC FOREIGN BODY

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Aim: Transorbital-cranial penetrating injuries are rare but high-morbidity pediatric traumas. Organic materials like wood are highly porous, which invites infection, while their low density makes initial radiological detection notoriously difficult. Because of this, retained fragments can remain hidden for months before triggering severe, delayed neurological complications.

Case: A 2.5-year-old girl presented with right-sided hemiparesis, limping, and a lost left pupillary light reflex. Five months earlier, a flower stalk had penetrated her left eye, but the family believed it was completely removed at the scene. Following a five-month asymptomatic window after the injury, the clinical presentation emerged. An exploratory fronto-temporal craniectomy was performed to retrieve a 3-cm woody foreign body that had directly injured the oculomotor nerve (Figure 1), based on preoperative imaging that revealed a linear hypodense lesion extending from the posterior orbit to the brainstem (Figure 2, Figure 3). A postoperative infection developed but resolved with targeted antibiotics. At discharge, the left pupil was fixed and dilated; examination revealed left third and sixth cranial nerve palsies alongside optic disc pallor. Considering the existing optic nerve pallor and the secondary development of amblyopia, the visual prognosis for the left eye was expected to be poor.

Figure 1. Intraoperative view of the surgically removed flower stalk



Intraoperative view of the surgically removed flower stalk

Figure 2. Axial cranial CT image demonstrating a linear hypodense foreign body extending from the orbital region toward the skull base, consistent with an organic wooden fragment.

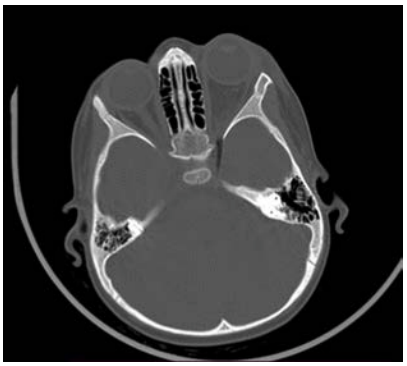
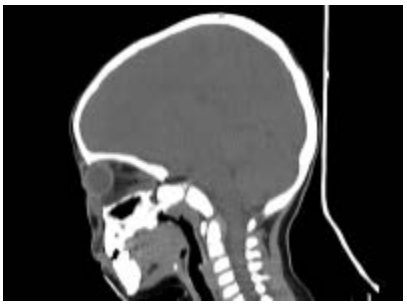


Figure 3. Sagittal CT image showing a retained linear wooden foreign body extending from the orbit toward the skull base.



Results: This case highlights that even when parents are certain a foreign body was fully extracted, wooden fragments can sit undetected deep within the orbit for months. When they finally surface, they can cause devastating sequelae, including refractory infections, permanent cranial nerve palsies and poor long term visual outcomes.

Conclusion: Advanced radiological imaging and extended clinical surveillance are mandatory, even in seemingly minor or suspect orbital traumas, to head off these delayed, life altering complications.

Keywords: wooden foreign body, pediatric trauma, neurological deficit, transorbital penetrating injury

PP - 008

NICOLAU SYNDROME FOLLOWING VITAMIN K INJECTION IN TERM NEONATES: TWO CASES

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Aim: Nicolau syndrome is an iatrogenic soft tissue injury that may occur following intramuscular drug administration. Per Turkish Ministry of Health regulations, all newborns receive a single 1 mg intramuscular dose of vitamin K at birth. Even with correct technique, the small size of vascular segments in young infants may predispose to this complication, underscoring the importance of staff training and close monitoring of the injection site.

Case: Case 1: A male neonate born at 38+5 weeks of gestation, weighing 3355 g (Apgar 8/9), developed widespread pressure-blanching hyperemia over the medial knee and lateral upper thigh following vitamin K injection. He was observed with cold saline compresses and admitted to the NICU at postnatal hour 74 for hyperbilirubinemia. Dermatological assessment revealed urticarial lesions progressing to violaceous patches at the injection site (Figure1). Case 2: A female neonate born at 39+3 weeks, weighing 2835 g (Apgar 8/9), presented with an identical hyperemic reaction at the same site. Four-extremity Doppler ultrasonography was normal. The dermatological findings mirrored Case 1 (Figure 2).

Figure 1. Case 1.



Hyperemic and violaceous patchy discoloration extending over the lateral thigh and medial knee at the intramuscular vitamin K injection site on the first day of life. No necrosis was noted.

Figure 2. Case 2.



Diffuse erythema and ecchymotic discoloration on the lateral thigh at the site of intramuscular vitamin K injection, observed on the first day of life. No necrosis was detected.

Results: In both cases, local phytotherapy and Madecassol were initiated. Neither infant developed necrosis. At day 14, Case 1 showed a residual livedo-like patch on the lateral thigh. Both infants were scheduled for follow-up at 3 months with differential diagnoses of Nicolau syndrome and capillary malformation.

Conclusion: Nicolau syndrome following vitamin K injection has been reported exclusively in preterm and extremely low birth weight neonates. These two cases demonstrate that term, appropriate-weight neonates without circulatory compromise are also at risk, representing a novel contribution to the literature. Clinicians should remain alert to early signs at the vitamin K injection site, since prompt recognition and treatment may reduce the risk of tissue loss.

Keywords: Nicolau Syndrome, Newborn, Vitamin K, Soft Tissue Injury

PP - 009

ACUTE-ONSET OCD SYMPTOMS AFTER IVIG: A CASE REPORT

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Aim: Intravenous immunoglobulin (IVIG) is a commonly used immunomodulatory agent for immune thrombocytopenia (ITP). Data on specific neuropsychiatric symptoms following IVIG are limited. This report presents acute-onset obsessive-compulsive symptoms in a child receiving IVIG for ITP.

Case: A 7-year-8-month-old girl was referred to the child and adolescent psychiatry outpatient clinic with obsessions, repetitive verbal expressions, and disturbing thoughts. She had received IVIG for ITP, and obsessive-compulsive symptoms began approximately 10 days after the last administration. Symptoms initially appeared as repeated faucet checking and frequent handwashing, followed by repetitive verbal expressions such as “okay” and “I was kidding.” Her parents also reported occasional aggressive intrusive thoughts toward her mother. At presentation, handwashing and faucet-checking symptoms had markedly decreased, whereas verbal repetitions persisted. No significant impairment in sleep, appetite, academic functioning, or peer relationships was reported.

Results: Psychiatric evaluation showed a clinical presentation consistent with an obsessive-compulsive symptom pattern characterized by contamination- and control-related compulsions, aggressive intrusive thoughts, and repetitive verbal expressions. Symptom severity was assessed with the Children’s Yale-Brown Obsessive-Compulsive Scale. At admission, the obsession subscore was 9, the compulsion subscore was 9, and the total score was 18. After 3 weeks of follow-up, these scores decreased to 6, 5, and 11, respectively. The total score on the Naranjo Adverse Drug Reaction Probability Scale was 4, indicating a possible adverse drug reaction.

Conclusion: This case suggests that acute-onset obsessive-compulsive symptoms emerging after IVIG may represent a rare but clinically meaningful presentation. Although the clinical picture was consistent with childhood OCD phenomenology, the relationship between IVIG and symptom onset can currently be interpreted only as a temporal association rather than direct causality.

Keywords: Obsessive-compulsive symptoms, Intravenous immunoglobulin, Adverse drug reaction, Child psychiatry

PP - 010

ASSOCIATION BETWEEN GESTATIONAL AGE AND THYROID HORMONE PROFILE IN PRETERM NEONATES

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Aim: Neonatal growth, brain maturation and metabolic regulation are vastly influenced by the the thyroid hormones. Due to the general immaturity of the hypothalamic-pituary-thyroid axes, the thyroid function among preterm born babies is characterizes by physiological alterations. Such fluctuations are influenced by the gestational age of the preterm newborns. Therefore, understanding the relationship between gestational age and thyroid hormone profile may improve interpretation of neonatal thyroid screening results in premature infants. Therefore, the main rationale behind the research is to determine the nature of association between gestational age and the thyroid hormone profile among preterm neonates born in the Republic of North Macedonia.

Material & Method: 25000 newborns were surveyed for the needs of the paper. Methodologically, the screening is performed by determining TSH in a sample of seminal blood applied to a filter paper ground 48-72 hours after birth. Samples are sent to the central Laboratory for Neonatal Screening at the Clinic for Children's Diseases in Skopje and analyzed using the DELFIA method. Data were processed with eview. The premature newborns are classified according to the classification proposed by the WHO. All obtained data were put into mutual correlation with the aim of conducting a comparative analysis of TSH values depending on gestational week.

Results: Preliminary analysis demonstrated gestational age–related variations in thyroid hormone profile among preterm neonates. Lower gestational age was associated with altered TSH response patterns, reflecting developmental immaturity of the hypothalamic–pituitary–thyroid axis. Thyroid hormone values tended to approach physiologic neonatal ranges with increasing gestational maturity.

Conclusion: Gestational age significantly influences thyroid hormone profile in preterm neonates. Recognition of physiologic variations related to prematurity is important for accurate interpretation of neonatal thyroid screening and avoidance of overdiagnosis of thyroid dysfunction in premature infants.

Keywords: Preterm neonates, Gestational age, Thyroid hormones, TSH

PP - 011

EVALUATION OF OXIDATIVE STRESS AND PROINFLAMMATORY CYTOKINE LEVELS IN NEWBORNS WITH HYPERBILIRUBINEMIA

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Aim: Neonatal hyperbilirubinemia is one of the most common clinical conditions encountered during the neonatal period. This study aimed to evaluate oxidative stress and inflammatory response in newborns with hyperbilirubinemia by measuring total antioxidant status (TAS), total oxidant status (TOS), oxidative stress index (OSI), interleukin-1β (IL-1β), interleukin-6 (IL-6), and tumor necrosis factor-alpha (TNF-α) levels.

Material & Method: Newborns diagnosed with hyperbilirubinemia and healthy newborns with similar characteristics in terms of age, sex, gestational age, and birth weight were included in the study. Serum TAS, TOS, OSI, IL-1β, IL-6, and TNF-α levels were measured and compared between the groups. A p-value of < 0.05 was considered statistically significant.

Results: No significant differences were observed between the groups regarding demographic characteristics (all comparisons, $p > 0.05$). TOS and OSI levels were significantly higher in newborns with hyperbilirubinemia than in the control group ($p < 0.05$), whereas TAS levels were significantly lower ($p < 0.05$). Furthermore, IL-1β, IL-6, and TNF-α levels were significantly elevated in the hyperbilirubinemia group compared with healthy controls ($p < 0.05$).

Conclusion: The findings of this study demonstrate that the oxidant–antioxidant balance in newborns with hyperbilirubinemia is shifted toward oxidative stress and is accompanied by a marked proinflammatory response. These results suggest that oxidative stress and inflammatory mechanisms may play important roles in the pathogenesis of neonatal hyperbilirubinemia. A better understanding of these mechanisms may contribute to the development of novel diagnostic and therapeutic approaches for this condition.

Keywords: hyperbilirubinemia, oxidative stress, proinflammatory cytokine, newborns

PP - 012

BARTTER SYNDROME IN A CHILD WITH RECURRENT HYPOKALEMIA AND METABOLIC ALKALOSIS: A CASE REPORT

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Aim: Bartter Syndrome is a rare inherited renal tubular disorder caused by defective electrolyte reabsorption in the thick ascending limb of the loop of Henle. It is characterized by hypokalemic metabolic alkalosis, secondary hyperaldosteronism, polyuria, and polydipsia. Early diagnosis is essential for prognosis.This case presents a pediatric patient diagnosed with Bartter syndrome and highlights the importance of evaluating recurrent electrolyte disturbances for renal tubulopathies.

Case: A pediatric patient presenting with hypokalemic, hypomagnesemic, and hypochloremic metabolic alkalosis was evaluated. Similar electrolyte abnormalities had previously been detected without further investigation.The patient was admitted with fever, foul-smelling urine, and constipation. Laboratory investigations revealed elevated inflammatory markers and electrolyte abnormalities, including hyponatremia, hypokalemia, and hypomagnesemia. Urinalysis showed pyuria and proteinuria, while urine culture grew Escherichia coli.The patient was diagnosed with urinary tract infection and treated with intravenous antibiotics and fluid therapy. Due to persistent hypokalemia, pediatric nephrology consultation was requested, and further evaluation for renal tubulopathy was performed.Sweat chloride testing was normal, excluding Cystic Fibrosis. Persistent hypokalemia, hypomagnesemia, and hypochloremia continued during follow-up. Renal ultrasonography demonstrated normal kidney structure without dilatation. Genetic analysis revealed findings compatible with Bartter Syndrome.

Results: Recurrent hypokalemic, hypochloremic metabolic alkalosis together with hypomagnesemia strongly suggested an underlying renal tubulopathy. Differential diagnosis included Gitelman Syndrome, cystic fibrosis, and diuretic use. Clinical presentation, laboratory findings, and genetic analysis supported the diagnosis of Bartter syndrome.

Conclusion: Bartter syndrome is a rare but clinically important disorder that should be considered in children with persistent or recurrent hypokalemia and metabolic alkalosis. Early diagnosis and appropriate electrolyte replacement therapy are essential for preventing complications and improving long-term outcomes.

Keywords: Bartter Syndrome, Hypokalemic Metabolic Alkalosis, Renal tubulopathy

PP - 013

SEVERE GINGIVAL HYPERTROPHY AS A RARE INTRAORAL FINDING OF TYPE 1 GM-1 GANGLIOSIDOSIS

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Aim: The glycoproteins and keratan sulfate accumulate in GM-1 gangliosidosis cause vacuolization not only in the central nervous system and visceral organs but also in fibroblasts and histiocytes within the gingival connective tissue. This condition may lead to diffuse gingival enlargement. In this poster, we present a GM-1 gangliosidosis case with a rare but peculiar feature.

Case: A 24-month-old boy was referred with complaints of excessive gingival overgrowth and delayed tooth eruption. His medical history included a diagnosis of GM-1 gangliosidosis. On examination, diffuse gingival hypertrophy was observed across maxillary and mandibular arches, almost completely covering the dental crowns (Figure 1). On ultrasound, soft tissue mass is seen containing vascular signals on Doppler, but not as much as hemangioma (Figure 2A). On MRI, a heterogeneous lesion measuring 47x25 mm with a bilobed appearance was observed (Figure 2 C-E). We also performed CT, to see if there is bone invasion or destruction (Figure 2B). Biopsy was performed to mass, showing squamous hyperplasia , stromal fibrovascular proliferation(Figure 3).

Figure 1. Photos of a 24-month-old boy previously diagnosed with GM-1 Gangliosidosis, presented with a giant oral mass protruding out of his mouth (A and B)

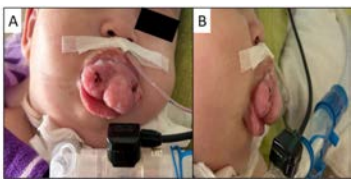
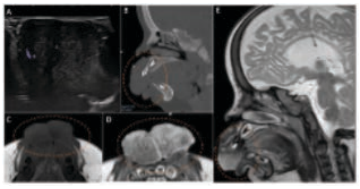
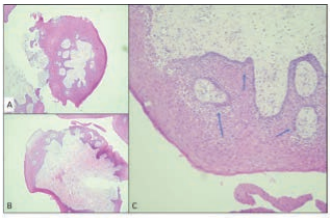


Figure 2.



Ultrasound (A), coronal reformatted CT (B), axial T1-weighted MRI (C), axial (D) and sagittal (E) T2-weighted MRI images of the patient demonstrate the mass with bilobed appearance (dashed circles) containing vascularity on US (blue and red colors). There are also parenchymal atrophy in the brain and pathological signals at the with matter probably related to his hereditary disease.

Figure 3.



Hematoxylin-eosin (HE)–stained sections with x40 (A and B) and x100 (C) magnification images reveal prominent, symmetrical hyperplasia in the squamous epithelium and fibroblastic proliferation in the submucosal connective tissue. Mild chronic inflammation is noted in the background

Results: The primary goal of imaging of gingival enlargement is to determine whether the lesion is confined solely to the soft tissue, contains calcification, and causes any destruction or resorption in the underlying alveolar bone. The differential diagnoses can be epulis, peripheral giant cell granuloma and peripheral ossifying fibroma, Langerhans Cell Histiocytosis, and intraoral hemangiomas. In evaluating these differential diagnoses, it is necessary to use tomography to assess the condition of bone structures, although it is generally not preferred in the infantile period due to the adverse effects of ionizing radiation.

Conclusion: In pediatric patients presenting with a widespread, non-bleeding mass similar to gingiva in the oral cavity in a case diagnosed with GM-1 gangliosidosis, it is of critical importance for multidisciplinary diagnosis that clinicians and radiologists keep the diagnosis of gingival hypertrophy in mind in the differential diagnosis.

Keywords: CT, epulis, gingival hypertrophy, GM-1 gangliosidosis, MRI

PP - 014

A RARE CASE PRESENTING WITH MICROCEPHALY AND CEREBELLAR HYPOPLASIA: PMM2-CDG (CDG TYPE IA)

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Aim: Congenital disorders of glycosylation (CDG) are rare inherited metabolic diseases resulting from defects in protein and lipid glycosylation and are characterized by multisystem involvement. PMM2-CDG (CDG type Ia) is the most common subtype and exhibits autosomal recessive inheritance. Although its clinical spectrum is broad, developmental delay, cerebellar atrophy or hypoplasia, hypotonia, microcephaly, and dysmorphic features are prominent. This report presents a patient initially evaluated for a suspected metabolic disorder and subsequently diagnosed with PMM2-CDG based on biochemical and genetic investigations.

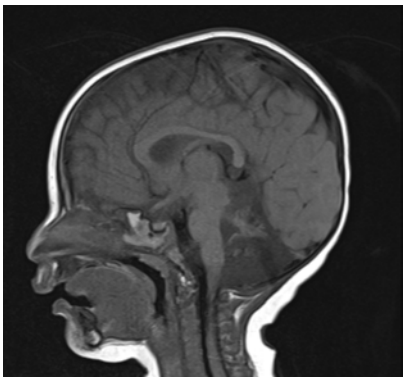
Case: A female patient was referred to our clinic from another center because of developmental delay and suspected metabolic disease. She had significant delays in developmental milestones, inadequate head control, inability to sit without support, and inability to roll over. Electroencephalography performed during the neurological evaluation revealed mild epileptiform activity. Cranial magnetic resonance imaging demonstrated pontocerebellar hypoplasia and mildly increased signal intensity in the cerebellar cortex (Figure 2). Her family history revealed that a maternal cousin had been diagnosed with PMM2-CDG and that her parents were fourth-degree relatives. Physical examination revealed microcephaly, synophrys, and inverted nipples (Figure 1). Transferrin isoelectric focusing demonstrated a pattern consistent with a type I glycosylation defect. Whole-exome sequencing detected a homozygous p.V129M variant in the PMM2 gene, confirming the diagnosis of PMM2-CDG.

Figure 1. Clinical Appearance of the Patient



Microcephaly, synophrys, inverted nipple observed in the patient with PMM2-CDG.

Figure 2. Pontocerebellar Hypoplasia on Sagittal MRI



Sagittal MRI showing pontocerebellar hypoplasia

Results: PMM2-CDG is a rare inherited metabolic disease characterized by neurodevelopmental abnormalities and multisystem involvement. Common manifestations include microcephaly, developmental delay, cerebellar hypoplasia, and dysmorphic features. A type I transferrin isoelectric focusing pattern may support the diagnosis, which can be confirmed through molecular genetic analysis. In this patient, the diagnosis was confirmed by identifying a homozygous variant in the PMM2 gene.

Conclusion: Congenital disorders of glycosylation should be considered in the differential diagnosis of patients presenting with microcephaly, cerebellar atrophy or hypoplasia, developmental delay, and dysmorphic features.

Keywords: PMM2-CDG, Congenital Disorders of Glycosylation, Microcephaly, Cerebellar Hypoplasia, Developmental Delay

PP - 015

OLD DISORDER NEW PHENOTYPE: A CASE OF AUTOSOMAL RECESSIVE SPASTIC ATAXIA OF CHARLEVOIX-SAGUENAY PRESENTING WITH ALTERED CONSCIOUSNESS EPISODES

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Aim: Autosomal Recessive Spastic Ataxia of Charlevoix-Saguenay (ARSACS) is a childhood-onset neurodevelopmental and neurodegenerative disorder characterized by cerebellar ataxia, spasticity, and sensorimotor polyneuropathy. Although ARSACS exhibits a wide range of phenotypic heterogeneity, a phenotype that progresses with episodes has not been previously reported in the literature.Here, we aim to present an ARSACS case diagnosed with recurrent headache and confusion episodes, and to discuss the role of mitochondrial dysfunction in the pathomechanism of ARSACS.

Case: A 13-year-old girl presented with headache and confusion episodes that had been present since the age of seven, and progressively worsening balance problems over the years. Her medical history was unremarkable except for parental consanguinity and global developmental delay. Episodes were lasting 4-5 days, and characterized by headache, altered consciousness, muscle weakness, and urinary incontinence. Neurological examination revealed microcephaly, muscle weakness in the distal lower extremities, hyporeflexia, extensor plantar response, dysarthria, dysmetria, ataxia, and Romberg test positivity. Biochemical, metabolic, neuroimmunological, and rheumatological tests were within normal ranges except for borderline elevated lactate and pyruvate levels. Magnetic resonance imaging showed superior vermian atrophy, paramedian pontine T2 hypointensity, a thin corpus callosum, and spinal cord atrophy. Electroencephalography was normal. Electroneurography revealed axonal-predominant sensorimotor polyneuropathy. Exome sequencing analysis identified a novel homozygous variant of SACS gene ([NM_014363.6]:c.5605dup p.[Glu1869Glyfs*28]), and she was diagnosed with ARSACS.

Results: SACS gene, which is located on chromosome 13q12.12, encodes sacsin. Sacsin plays a crucial role in many processes, including the regulation of intracellular distribution and function of mitochondria. While the exact pathophysiology of ARSACS is unknown, it has been shown that in cases of biallelic loss-of-function of SACS gene, mitochondrial ATP production is impaired and intracellular reactive oxygen species are increased.

Conclusion: In conclusion, our case expands the phenotypic spectrum of ARSACS, and mitochondrial dysfunction may explain the progressive disease course and relapses seen in our case.

Keywords: Autosomal Recessive Spastic Ataxia of Charlevoix-Saguenay, mitochondrial dysfunction, ARSACS

PP - 016

A RARE NEONATAL ENTEROPATHY: MEDNIK SYNDROME

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Aim: MEDNIK syndrome is a very rare autosomal recessive genetic disorder caused by mutations in the AP1S1 gene and characterized by intellectual disability, enteropathy, deafness, neuropathy, ichthyosis, and keratoderma. The syndrome, which also involves impaired copper metabolism, usually presents early in life.

Case: A male infant, born at 38 weeks of gestation weighing 3820 grams, with a prenatal history of polyhydramnios, was admitted to the tertiary neonatal intensive care unit due to absence of stool passage and abdominal distension. Family history revealed a sibling who had died during the neonatal period because of refractory diarrhea. It was reported that the mother, father, and deceased sibling carried heterozygous mutations in the AP1S1 (7q22.1) and MEI-1 genes, and the parents were first-degree relatives.

Results: The amniotic fluid analysis of our patient demonstrated a homozygous AP1S1 (7q22.1) gene mutation. During clinical follow-up, adequate weight gain could not be achieved due to recurrent episodes of refractory diarrhea, accompanied by repeated metabolic disturbances and dehydration attacks. Despite close monitoring of daily nutrition, caloric intake, and metabolic parameters throughout hospitalization, but the patient died of sepsis at 5 months of age.

Conclusion: The literature demonstrates significant variability in the onset and severity of symptoms in MEDNIK syndrome, particularly regarding enteropathy. While some patients die from dehydration during the neonatal period, others may not develop symptoms until later in life. In the absence of prior diagnostic information from affected family members, establishing the diagnosis during the neonatal period may be challenging. In our case, early diagnosis was possible thanks to a positive family history and antenatal genetic diagnosis. This case is presented to emphasize that MEDNIK syndrome should be considered in cases of refractory enteropathy during the neonatal period.

Keywords: AP1S1 Gene Mutation, MEDNIK Syndrome, Neonatal Enteropathy

PP - 017

POLYCYTHEMIA TO PARAGANGLIOMA: A PACAK-ZHUANG PHENOTYPE CASE

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Aim: Pacak–Zhuang syndrome is a rare disorder characterized by secondary polycythemia and neuroendocrine tumors, associated with HIF2A/EPAS1 mutations. This report presents a pediatric patient with a history of secondary polycythemia who developed catecholamine-secreting paragangliomas, highlighting phenotypic overlap with the HIF2A-related tumor–erythrocytosis spectrum. The clinical course, diagnostic challenges, and the importance of a multidisciplinary approach are discussed.

Case: A 15-year-old female patient (79 kg) presented with headache. Her medical history revealed childhood-onset idiopathic polycythemia. During follow-up, hypertension developed, and 24-hour Holter monitoring demonstrated 5–6 episodes of paroxysmal hypertensive attacks. Renal Doppler ultrasonography revealed a mass lesion adjacent to the renal artery. PET-CT imaging, performed due to suspicion of a catecholamine-secreting neuroendocrine tumor, demonstrated two hypermetabolic lesions measuring 43 mm in the left paraaortic region and 32 mm in the aortocaval region. Plasma norepinephrine levels were markedly elevated.Given the coexistence of early-onset polycythemia and multifocal catecholamine-secreting paraganglioma, the patient was evaluated for HIF2A-related tumor–erythrocytosis syndrome, and genetic testing was planned. A multidisciplinary tumor board initially considered surgical intervention high risk, and the patient was referred to a tertiary center. Blood pressure was stabilized with antihypertensive therapy.

Results: Subsequently, the patient underwent surgery performed by an experienced surgical team, and all paraaortic and paracaval tumor lesions were completely excised. Histopathology confirmed paraganglioma. Postoperatively, the patient remained normotensive, and complete resolution of polycythemia was observed. At the latest follow-up, the patient was asymptomatic and clinically stable.

Conclusion: This case demonstrates early-onset polycythemia with multifocal paraganglioma, showing strong phenotypic overlap with HIF2A-related tumor–erythrocytosis spectrum and Pacak–Zhuang syndrome. Resolution of both hypertension and polycythemia after surgical resection supports the underlying pathophysiological relationship. Early recognition, genetic evaluation, and a multidisciplinary approach are essential in such complex cases.

Keywords: Polycythemia, Paraganglioma, Pacak-Zhuang Syndrome, Catecholamine-Secreting Tumor, Pediatric hypertension

PP - 018

ESCOBAR SYNDROME: A CASE REPORT

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Aim: Escobar Syndrome (ES) is a rare genetic disorder characterized by multiple pterygia causing flexion contractures of the joints and various congenital anomalies.[1] Although it is most commonly inherited in an autosomal recessive manner, autosomal dominant and X-linked lethal forms of multiple pterygium syndrome (MPS) have also been reported.[2]To emphasize that ES should be considered in newborns presenting with joint flexion contractures and rocker-bottom feet deformity.

Case: The patient was the first live-born male infant of a healthy consanguineous couple (second-degree relatives) from their first pregnancy. According to the last menstrual period, the gestational age was 35 weeks, whereas ultrasonography estimated it as 32+5 weeks. Due to intrauterine growth restriction (IUGR) and decreased fetal movements, the infant was delivered by cesarean section with a birth weight of 2060 g. Physical examination revealed low-set ears, ptosis, a high-arched palate, a short webbed neck, contractures of all four extremities, and multiple pterygia. The second finger overlapped the third finger. Bilateral rocker-bottom feet deformity was also present (Figures 1–2). Chromosome analysis and whole-exome sequencing (WES) were performed for diagnostic evaluation. Chromosome analysis demonstrated a normal male karyotype (46,XY). WES identified a homozygous pathogenic variant in the CHRNG (NM_005199.5) gene, consistent with ES.

rocker-bottom feet deformity



The second finger overlapped the third finger



Results: ES is most commonly caused by homozygous or compound heterozygous mutations in the CHRNG gene. Located on chromosome 2q37.1, CHRNG encodes the gamma subunit of the acetylcholine receptor (AChR).[3] Clinically, the disorder is classified into two forms: lethal MPS and the non-lethal Escobar variant.[4]The most common clinical findings reported in MPS include pterygia involving the neck (100%), elbows (90%), and popliteal regions (90%), syndactyly (74%), camptodactyly (84%), multiple joint flexion contractures (74%), and foot deformities (74%).[5]

Conclusion: After five months of treatment and follow-up in the neonatal intensive care unit, the patient was transferred to the pediatric intensive care unit for continued management.

Keywords: Escobar Syndrome, multiple pterygium syndrome, rocker-bottom feet deformity

PP - 019

EXPANDING THE B3GALT6-RELATED AL-GAZALI/SEMDJL1 SPECTRUM: PROGRESSIVE OBSTRUCTIVE HYDROCEPHALUS, CORPUS CALLOSUM DYSGENESIS, AND A NOVEL HOMOZYGOUS C.638C>G VARIANT IN EARLY INFANCY

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Aim: Al-Gazali syndrome (OMIM #609465) represents the severe end of the autosomal recessive B3GALT6-related glycosaminoglycan biosynthesis disorder spectrum, overlapping with spondylodysplastic Ehlers-Danlos syndrome type 2 (spEDS-B3GALT6; OMIM #615349) and spondyloepimetaphyseal dysplasia with joint laxity type 1 (SEMDJL1; OMIM #271640). We aim to report a genetically investigated infant with a phenotype highly compatible with this spectrum, presenting with unusual and progressive central nervous system involvement.

Case: A female infant was born at 37 weeks of gestation via cesarean section to consanguineous parents, with a birth weight of 2850 g. The family history was notable for four siblings who died within the first postnatal week. The neonatal period was complicated by respiratory distress requiring nasal continuous positive airway pressure, congenital pneumonia, and indirect hyperbilirubinemia. Physical examination revealed coarse facial features, a depressed nasal bridge, hypertelorism, micrognathia, low-set ears, a short neck, a narrow chest, hip dislocation, proximal limb shortening, bilateral ulnar deviation, and bilateral pes equinovarus (Figure 1, 2). Severe feeding difficulties, growth failure, and motor developmental delay were observed, alongside poor head control.

Figure 1. Clinical phenotype of the patient.



Figure 2. Clinical phenotype of the patient.



Results: Serial neuroimaging demonstrated progressive triventricular obstructive hydrocephalus, characterized by dilatation of the lateral and third ventricles. Brain MRI further revealed corpus callosum dysgenesis and a frontoparietal arachnoid cyst. Endoscopic third ventriculostomy and cyst fenestration successfully achieved clinical stabilization. Clinical exome sequencing identified a novel, homozygous B3GALT6 c.638C > G, p.(Ala213Gly) variant, classified as a variant of uncertain significance (VUS) according to ACMG criteria (PM1, PM2). The variant was absent from literature databases and predicted to be deleterious by in silico tools.

Conclusion: This case is compatible with the severe SEMDJL1/Al-Gazali syndrome spectrum associated with B3GALT6 and expands the known clinical phenotype to include obstructive hydrocephalus, corpus callosum dysgenesis, and arachnoid cysts that manifest in early infancy.

Keywords: Al-Gazali syndrome, B3GALT6, spondyloepimetaphyseal dysplasia with joint laxity, obstructive hydrocephalus

PP - 020

CHRONIC NONBACTERIAL OSTEOMYELITIS (CNO) / CHRONIC RECURRENT MULTIFOCAL OSTEOMYELITIS (CRMO): A PEDIATRIC CASE WITH CUTANEOUS INVOLVEMENT AND MRI FINDINGS

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Aim: Chronic non bacterial osteomyelitis (CNO), also known as chronic recurrent multifocal osteomyelitis (CRMO), is a rare autoinflammatory bone disorder in children that occurs without identifiable infectious agents.Diagnosis relies on the exclusion of infectious and malignant processes, supported by characteristic clinical, laboratory, and imaging findings.This case report aims to highlight the importance of early recognition and multidisciplinary management in a pediatric patient presenting with prominent cutaneous manifestations and typical MRI features of CNO.

Case: A 15 year old male patient presented with a 10 day history of leg and joint pain, difficulty walking, a 2.5 month history of skin eruptions, and significant weight loss. Physical examination revealed widespread necrotic crusted papular and nodulocystic lesions on the face, back, and arms, without overt arthritis (Figure 1). He reported arthralgia in the left wrist, tenderness in the right arm, and left sacroiliac tenderness. Laboratory showed elevated acute phase reactants (CRP and ESR), leukocytosis with neutrophilia and thrombocytosis.Peripheral blood smear demonstrated neutrophil predominance without atypical cells or hemolysis. Cultures, serologic tests for infection, and malignancy work-up were negative. An autoinflammatory disease panel were ordered.

Figure 1.Widespread necrotic crusted papular and nodulocystic lesions



Results: MRI revealed active bilateral sacroiliitis with subchondral osteitis (prominent on the left) and osteitis in the left distal radial metaphysis with periosteal reaction and soft tissue inflammation.The patient received pulse corticosteroids, isotretinoin for acne fulminans, and topical treatment.Subcutaneous methotrexate was started after discharge with steroid taper.Significant improvement occurred in joint symptoms and skin lesions.

Conclusion: This case underscores that CNO/CRMO should be considered in the differential diagnosis of unexplained bone pain in children, particularly when accompanied by dermatologic findings.Characteristic MRI findings and cutaneous involvement serve as key diagnostic clues, enabling prompt diagnosis and avoidance of unnecessary antibiotics.Multidisciplinary collaboration between pediatric rheumatology and other specialties facilitates timely initiation of appropriate anti-inflammatory therapy, therebyreducing long-term skeletal damage and complications.Early and accurate diagnosis remains critical for optimal outcomes.

Keywords: Chronic non-bacterial osteomyelitis, chronic recurrent multifocal osteomyelitis, autoinflammatory disease, sacroiliitis, pediatric rheumatology.

PP - 021

GENOMIC NEWBORN SCREENING IN PRECISION PEDIATRICS

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Aim: Recent improvements in genomic technologies have significantly expanded the diagnostic capabilities of neonatal medicine. This study aims to evaluate the current applications, clinical utility and future perspectives of genomic newborn screening in pediatric practice and ethical considerations.

Material & Method: A comprehensive literature review was conducted using Scopus, PubMed and Web of Science databases. Recent clinical studies, publications and international guidelines related to genomic newborn screening, whole exome sequencing (WES), next-generation sequencing (NGS) and neonatal precision medicine published within the last decade were analyzed.

Results: Genomic newborn screening has emerged as a promising approach for the early diagnosis of rare pediatric disorders that may not be detected by traditional newborn screening programs. Recent studies have shown that rapid genomic sequencing can improve diagnostic yield, particularly in critically ill neonates admitted to neonatal intensive care units. Early molecular diagnosis supports personalized treatment strategies, enables timely therapeutic interventions and may reduce the prolonged diagnostic process experienced by affected families. In addition, although genomic technologies have the potential to improve long-term clinical outcomes through earlier identification of actionable genetic conditions, important challenges remain regarding interpretation of incidental findings, variants of uncertain significance, informed consent, healthcare disparities, genomic data privacy and cost-effectiveness.

Conclusion: Genomic newborn screening represents a major advancement in precision pediatrics and is expected to play an increasingly critical role in neonatal healthcare. Despite ongoing technical, ethical and economic limitations, continued developments in bioinformatics and genomic technologies are likely to accelerate the integration of genomic screening into routine clinical practice. Standardized guidelines and international collaboration will be essential for the equitable and effective implementation of genomic newborn screening programs worldwide.

Keywords: Genomic newborn screening, precision pediatrics, neonatal genomics, rare diseases, next-generation sequencing

PP - 022

LATE-ONSET CITRULLINEMIA TYPE 1 MIMICKING ACUTE LIVER FAILURE: A CASE REPORT

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Aim: Citrullinemia Type 1 is a rare metabolic disorder of the urea cycle caused by a deficiency of the enzyme argininosuccinate synthetase 1 (ASS1). Although it typically presents in the neonatal period as hyperammonemic encephalopathy, late-onset forms can manifest as a clinical picture mimicking acute liver failure following catabolic stressors, such as infections.

Material & Method: A five-year-old previously healthy girl was admitted with abdominal pain and hematuria following a rotavirus infection. Initial investigations showed significantly elevated transaminases (AST: 1100 U/L, ALT: 1862 U/L) and coagulopathy (INR: 3), leading to her referral to a liver transplant center with a preliminary diagnosis of acute liver failure. Upon admission, her ammonia level was 221 µmol/L

Results: The patient was treated with plasmapheresis and N-acetylcysteine for four days; however, after supportive treatments were tapered, ammonia levels and INR rose again, with ammonia peaking at 250 µmol/L. Metabolic screening revealed high plasma levels of citrulline (1322 µmol/L) and glutamine (2193 µmol/L), while arginine was markedly low (13 µmol/L), confirming the diagnosis of Citrullinemia Type 1.

Conclusion: Hepatocellular damage in Citrullinemia Type 1 is believed to be related to mitochondrial dysfunction in the liver caused by intermediates of the urea cycle. This case demonstrates that metabolic diseases must be included in the differential diagnosis of unexplained acute liver failure. Achieving metabolic stability through early intervention—including protein-restricted diets, anabolism support, and nitrogen-scavenging therapies—can prevent patients from undergoing unnecessary liver transplantation.

Keywords: Citrullinemia Type 1, Acute Liver Failure, Hyperammonemia, Argininosuccinate Synthetase 1

PP - 023

THERAPEUTIC RESPONSE TO IVY LEAF EXTRACT IN COUGHING CHILDREN: A SINGLE-ARM META-ANALYSIS AND SYSTEMATIC REVIEW

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Aim: Cough is among the most common presenting complaints in the paediatric population. Hedera helix is becoming widely available in the treatment of cough in children. Despite the increasing number of studies evaluating Hedera helix in children with cough, a comprehensive synthesis of the clinical evidence is lacking.

Material & Method: The study was prospectively registered in the PROSPERO (registration number: CRD420251031536). A systematic synthesis was conducted using eleven eligible clinical studies (n = 13715) (Figure 1, Table 1). Heterogeneity was assessed using I^2 and τ^2, and risk of bias was qualitatively evaluated based on study design, outcome reporting, and sample size sufficiency.

Figure 1. PRISMA 2020 flow diagram of study selection for the systematic review and meta-analysis

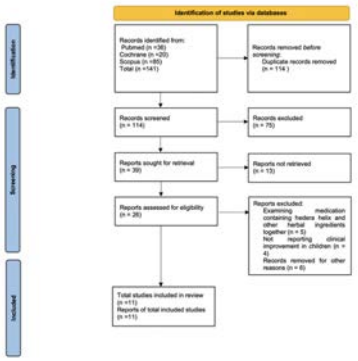


Figure 1 summarises the study selection process, showing how records were identified, duplicates removed, and studies screened for eligibility. It also presents the reasons for exclusion at the full-text assessment stage, leading to the inclusion of 11 studies in the systematic review and meta-analysis.

Table 1. Characteristics of the studies included in the analysis

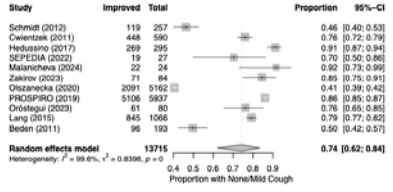
Author	Year	Country	Design	Single/Double armed	Disease	Sample Size (N)	Mean Age	Race	Proportion None/Mild Cough (%)	Adverse Effects
Schmidt et al	2012	Germany	Observational, Two independent non-interventional studies	Single armed	Mixed	257	0 - 12 years	NA	46.3	4/5 GIT (diarrhoea, nausea, vomiting, angular cheilitis+diaper dermatitis)
Cwientzek et al	2011	Germany	Comparative, RCT	Double armed	Acute Bronchitis	590	23 ± 20 years	Caucasian	0.76	2.7% of patients with mostly GIT
Schönknecht et al	2017	Poland	non-randomized, non-interventional, multicenter, open-label, post-authorization effectiven	Single armed	Mixed	295	5.8 ± 2.7 years	NA	91.2	no adverse effect

			ess study (PAES)							
Núñez et al	2022	Spain	Comparative, prospective, interventional, randomized, double-blind, placebo-controlled clinical trial	Double armed	Mixed	27	8.65 ± 2.14 (5 to 11)	NA	0.71	no adverse effect
Malanicheva et al	2024	Russia	Comparative, open-label, prospective	Double armed	Acute bronchitis	24	4 months - 3 years	NA	91.6	4.2 % (1 child with allergic rash)
Zakirov et al	2023	Russia	Prospective observational	Single armed	Acute respiratory viral infections	84	5.57 ± 0.88 (4 - 7 years)	NA	84.52	no adverse effect
Olszaneczka-Gliniano wicz et al	2020	Poland	Multicenter, prospective observational	Single armed	Mixed	5162	5.7 ± 2.9 (2-12 years)	NA	40.5	no adverse effect
Mizernitsky et al	2019	Russia	Comparative, multicenter	Multi-armed	Acute/ Recurrent Bronchitis	5937	5,3 ± 3,8	NA	0.86	no serious adverse effect

			observational study							
Oróstegui et al	2023	Colombia	Retrospective observational	Single armed	Acute bronchitis	80	0 - 12 years	NA	0.76	no adverse effect
Lang et al	2015	Germany	Prospective, multicenter, non-interventional study	Multi-armed	Acute bronchitis	1066	8,5 ± 0,06 years (6-12)	NA	0.793	0.94 % (7 GIT, 2 allergic, 1 other)
Beden et al	2011	Slovenia	Prospective post-marketing observational study	Single armed	Acute inflammatory airway disease	193	2 - 14 years	NA	0.495	1 patient with urticaria

Results: The random-effects model estimated a pooled recovery of 0.74 (95% CI: 0.62–0.84) with high heterogeneity (I^2 = 99.6%) (Figure 2). Subgroup analysis showed differences between study types: comparative studies yielded a pooled recovery of 0.76 (95% CI: 0.73–0.79) with moderate heterogeneity (I^2 = 39.6%), while single-arm studies contributed to the overall variability. Removing the two largest studies increased the pooled estimate to 0.82 (95% CI: 0.74–0.88) (Figure 3).

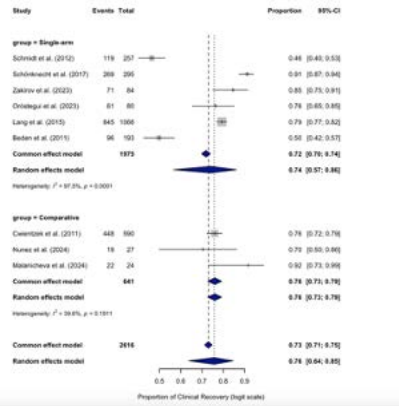
Figure 2. Forest plot of the original meta-analysis



Alt text: Forest plot displaying the effect estimates and confidence intervals of individual studies included in the original meta-analysis, along with the pooled overall effect size. Each

line represents a study, with the square indicating the effect estimate, the line showing the confidence interval, and the diamond representing the overall pooled effect.

Figure 3. Subgroup forest plot of the meta-analysis



Forest plot showing the results of subgroup analyses within the meta-analysis. Each subgroup is displayed separately, with individual study effect estimates and confidence intervals, as well as pooled estimates for each subgroup. The diamond shapes represent the pooled effect sizes for subgroups, allowing comparison between groups.

Conclusion: Hedera helix demonstrated clinically significant effectiveness in children with cough. The findings support its therapeutic use in children; however, controlled trials and standardised outcomes are needed to confirm these results and minimise potential bias (Table 2).

Table 2. GRADE Assessment

Outcome	No. of Participants (Studies)	Certainty of Evidence (GRADE)	Relative Effect (95% CI)	Anticipated Absolute Effects	Reasons for Downgrading
Overall Clinical Recovery	2,616 (9 studies)	Moderate ⨁⨁⨁◯	0.76 (0.64 to 0.85)	76% achieved recovery (64% to 85%)	a, b

Single-Arm Studies	1,975 (6 studies)	Low ⨁⨁⨀⨀	0.74 (0.57 to 0.86)	74% achieved recovery (57% to 86%)	a, b, c
Comparative Studies	641 (3 studies)	Moderate ⨁⨁⨁⨀	0.76 (0.73 to 0.79)	76% achieved recovery (73% to 79%)	b

a: Downgraded one level for inconsistency due to substantial statistical heterogeneity (I^2 = 99.6% overall, I^2 = 97.5% for single-arm studies). Sensitivity analysis was performed, removing two studies (Olszanecka et al. 2020, PROSPIRO Study 2019) with high heterogeneity contribution.

b: Downgraded one level for potential publication bias, which was not formally assessed but is a concern in herbal medicine studies.

c: Single-arm studies downgraded one additional level due to study design limitations in establishing efficacy.

Table showing the GRADE evidence assessment framework with columns for outcome, study design, risk of bias, inconsistency, indirectness, imprecision, publication bias, and overall certainty.

Keywords: paediatrics, respiratory diseases, Hedera helix, ivy leaf, cough

PP - 024

CYTOKINE PROFILE IN CHILDREN WITH COMPLICATED AND UNCOMPLICATED INFLUENZA A

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Aim: Influenza A remains clinically relevant in children because of its potential to cause complications even when timely diagnosis is achieved. Assessment of the cytokine profile may contribute to the early identification of patients at increased risk of a complicated disease course.To compare selected cytokine levels in children with complicated and uncomplicated laboratory-confirmed influenza A during the 2025–2026 epidemic seasons.

Material & Method: The study included 74 children aged 5–14 years; the median age was 9.2 years [6.8–12.1]. Influenza A was confirmed by real-time reverse transcription polymerase chain reaction performed on nasopharyngeal swabs. According to the clinical course, patients were divided into two groups: uncomplicated influenza A, comprising 43 children, and complicated influenza A, comprising 31 children. Complications included pneumonia, broncho-obstructive syndrome, acute otitis media, and sinusitis. Serum concentrations of IL-6, IL-8, and IFN-γ were measured within the first 48 hours of disease onset. Data are presented as median and interquartile range.

Results: In children with uncomplicated disease, the IL-6 level was 15.8 [9.4–24.6] pg/mL, whereas in those with complicated influenza A it was 44.9 [31.7–70.5] pg/mL; the difference was statistically significant ($p < 0.001$). IL-8 concentrations were also higher in children with complications: 57.3 [36.2–86.9] pg/mL versus 24.9 [15.8–38.1] pg/mL in the uncomplicated group ($p < 0.001$). In contrast, IFN-γ showed a tendency to be lower in complicated cases: 14.6 [8.1–23.7] pg/mL compared with 20.7 [13.2–32.5] pg/mL in children without complications ($p=0.071$).

Conclusion: Complicated influenza A in children was characterized by a marked increase in IL-6 and IL-8 levels, accompanied by a relative decrease in IFN-γ. These findings suggest a predominance of systemic pro-inflammatory and neutrophil-mediated immune responses in complicated forms of the disease and may be relevant for early clinical risk stratification.

Keywords: children; influenza A; cytokines; IL-6; IFN-γ.

PP - 025

ADAPTIVE FUNCTIONING AND PARTICIPATION IN KABUKI SYNDROME: THREE CASES

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Aim: Kabuki syndrome is a rare genetic disorder associated with multisystem involvement and neurodevelopmental difficulties. This case series aimed to describe the adaptive functioning and participation characteristics of three children with genetically confirmed Kabuki syndrome evaluated in a developmental pediatrics clinic.

Case: Three children with genetically confirmed Kabuki syndrome underwent developmental evaluation using the Vineland Adaptive Behavior Scales–II and family interviews. Participation was assessed through family interviews focusing on school attendance, daily functioning, and educational participation. Case 1 was a 5-year-old girl with growth retardation requiring growth hormone therapy. Case 2 was an 8-year-old boy with repaired aortic coarctation, ventricular septal defect, cleft lip/palate, ophthalmologic abnormalities, and prominent expressive language difficulties. Case 3 was a 10-year-old girl with hearing impairment, feeding difficulties, and renal and adrenal involvement requiring surgical intervention. All three children had mild-to-moderate cognitive and developmental difficulties. All attended school and received special education and speech-language interventions.

Results: Vineland-II profiles demonstrated the greatest difficulties in expressive communication and daily living skills, whereas receptive language abilities and socialization skills were relatively preserved across cases. Motor impairments, feeding difficulties, hearing impairment, congenital cardiac anomalies, renal involvement, ophthalmologic abnormalities, and repaired cleft lip/palate contributed to varying functional challenges across cases. Participation restrictions were most evident in communication, self-care, feeding, and educational functioning. Despite their developmental and medical challenges, all children maintained school participation and continued to receive individualized developmental support.

Conclusion: Assessment of adaptive functioning and participation in children with Kabuki syndrome may provide clinically meaningful information beyond medical findings alone. Despite broader developmental difficulties, receptive language and socialization skills may remain relatively preserved. These findings highlight the importance of individualized, function-oriented developmental assessment and support in children with Kabuki syndrome.

Keywords: kabuki syndrome, participation, adaptive functioning, developmental disabilities

PP - 026

EARLY MATERNAL DISTRESS AND COPING AFTER CHILDHOOD CANCER DIAGNOSIS

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Aim: Childhood cancer places a major psychological burden not only on affected children, but also on their caregivers. Early emotional distress among parents may influence family functioning, treatment adaptation, and the overall psychosocial environment surrounding the child. Data regarding caregiver distress and coping in pediatric oncology settings from non-Western populations remain limited. The objective was to investigate psychological distress and coping patterns among mothers of children recently diagnosed with cancer in a Turkish pediatric oncology setting.

Material & Method: This observational cohort study included mothers of children newly diagnosed with cancer and treated at Cerrahpaşa Medical Faculty, Istanbul, Türkiye. Assessments were performed between 4 weeks and 6 months after diagnosis. Maternal psychological distress was evaluated using Turkish versions of the Beck Depression Inventory (BDI), State Anxiety Inventory (SAI), Impact of Event Scale (IES), and Ways of Coping Inventory (WCI). Correlational analyses were performed to explore associations between coping styles and psychological symptom burden.

Results: Preliminary findings from 25 mothers demonstrated substantial psychological distress during the early phase following childhood cancer diagnosis. Intrusive post-traumatic stress symptoms were particularly common, with 80% of participants reporting moderate-to-severe intrusion symptoms. Elevated symptoms of anxiety, depression, and post-traumatic stress reactions were observed across the cohort.Several coping patterns showed associations with psychological symptom burden. More adaptive coping tendencies, particularly optimistic coping, were associated with lower levels of depressive symptoms, whereas maladaptive coping patterns were associated with greater emotional distress. Associations between social support-seeking behaviors and emotional outcomes appeared more variable during the early treatment phase.

Conclusion: Mothers of children newly diagnosed with cancer experience substantial psychological distress early in the treatment trajectory. Early identification of caregiver distress and coping patterns may help guide psychosocial support strategies and strengthen family-centered pediatric oncology care. Further research in larger and culturally diverse pediatric populations is warranted.

Keywords: pediatric oncology, caregiver distress, psychological adaptation, coping strategies, family-centered care

PP - 027

THE EFFECT OF THERAPEUTIC PLAY AND REHABILITATION ON HOSPITALIZED CHILDREN WITH DISABILITIES

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[1]Başakşehir Çam and Sakura City Hospital

Aim: This study aims to evaluate the impact of therapeutic play and rehabilitation interventions on the physical and psychosocial recovery process in hospitalized children with disabilities. ([3]Karamanoğlu vd., 2020)

Therapeutic Play in the Hospital



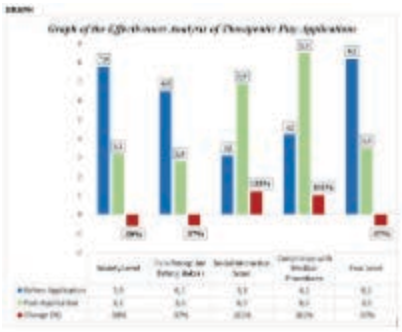
Material & Method: • Literature review / observational study •Children with disabilities hospitalized in the pediatric ward • Therapeutic play interventions and rehabilitation processes were examined

Therapeutic Play



Results: • A decrease in anxiety levels • Increased adherence to treatment • Improvements in social interaction • Reduction in pain perception

Figure 1. Effectiveness of therapeutic play interventions on anxiety, pain perception, social interaction, compliance with medical procedures, and fear levels.



Studies have shown that therapeutic play reduces children's anxiety scores, pain perception, and fear levels by more than 50%, while increasing their social interaction scores and compliance with medical procedures by more than 100% (Figure 1). Source: This table was compiled by synthesizing empirical findings from the literature in Dergi pPark (2018), NCBI/PMC (2024), and the Journal of Pediatric Nursing regarding the effects of therapeutic play on children's psychosocial processes.

Conclusion: Therapeutic play and rehabilitation programs help improve the hospital experience for children with disabilities, thereby contributing to both their psychological and physical recovery.

Sources

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Keywords: Child with a disability, Hospital experience, Psychosocial support, Rehabilitation, Therapeutic play

PP - 028

PERISTOMAL DERMATITIS IN A NEWBORN WITH ILEOSTOMY AND NURSING CARE

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Aim: Peristomal dermatitis is one of the most common complications encountered in patients with a stoma. Particularly in patients with an ileostomy, the risk of skin irritation and dermatitis increases significantly due to the liquid and enzymatic content of the stool. Peristomal dermatitis compromises patient comfort and complicates stoma management. Therefore, early-stage wound care and appropriate nursing interventions are of paramount importance. To share the outcomes of the wound care protocol and nursing interventions

Case: An ileostomy was present in a newborn patient monitored in the Neonatal Intensive Care Unit (NICU). The infant had a birth weight of 3000 grams, a height of 50 cm, and a head circumference of 31 cm. The patient's general condition was moderate-to-poor; the infant was intubated and exhibited decreased physical activity. Physical Examination: The skin appeared mature. No cyanosis, pallor, jaundice, or rash was observed. Abdominal examination revealed a surgical scar and an ileostomy. Dermatitis due to fecal contact was identified in the peristomal region (Figure 1).

Figure 1. Peristomal dermatitis caused by fecal contact in a newborn with an ileostomy.



Results: The following wound care protocol was applied:The wound area was primarily cleansed with a wound irrigation solution containing polyhexanide.Following cleansing, a wound care spray containing silver, hyaluronic acid, and Vitamin E was applied to the affected area.The stoma bag was changed daily to protect the peristomal skin and prevent further irritation.The peristomal area was carefully assessed during each dressing change, and skin integrity was monitored regularly (Figure 2).

Figure 2. Assessment of the peristomal area during stoma care.



Conclusion: Significant improvement in peristomal dermatitis was observed through regular wound care and appropriate stoma bag management (Figure 3). Skin integrity was largely restored, and clinical signs of irritation regressed. In patients developing peristomal dermatitis, appropriate wound cleansing, preservation of the skin barrier, and consistent stoma care play a vital role in the healing process.

Figure 3. Improvement in peristomal dermatitis following regular wound care and appropriate stoma bag management.



Keywords: Stoma, Ileostomy, Peristomal Dermatitis, Wound Care, Nursing Care.

PP - 029

FAMILY-CENTERED NURSING CARE IN NEWBORNS WITH PIERRE ROBIN SEQUENCE

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Aim: Pierre Robin Sequence is a rare congenital anomaly characterized by micrognathia, glossoptosis, and cleft palate, often leading to airway obstruction and feeding difficulties in the neonatal period. This case report aimed to present the importance of family-centered nursing care and parental involvement during the intensive care process of a newborn diagnosed with PRS.

Case: A male newborn delivered at 38+4 weeks of gestation was admitted to the neonatal intensive care unit because of noisy breathing in the second postnatal hour. During the intensive care process, the mother was actively involved in the infant's care and provided kangaroo care (Figure 1). Physical examination revealed micrognathia, retrognathia, and cleft palate without cleft lip (Figure 2). Due to respiratory distress, oxygen therapy and subsequently CPAP support were initiated. Computed tomography showed tongue-based nasopharyngeal obstruction. Feeding was maintained using a cleft palate bottle and orogastric tube. On the 42nd hospitalization day, nasoalveolar molding (NAM) was performed (Figure 3). Nursing care focused on airway management, respiratory support, feeding, and family education.

Figure 1 – Being held by the mother



Figure 2 – General appearance



Figure 3 – NAM placement



Results: Following NAM application, the mother was actively involved in the infant's care. She received education regarding NAM management, orogastric tube care, suctioning, feeding techniques, and daily infant care. The mother participated regularly in care practices, independently performed procedures, and provided kangaroo care. With multidisciplinary management, individualized nursing care, and active family participation, the infant's clinical condition improved and the need for ventilatory support, oxygen therapy, and suctioning resolved.

Conclusion: Family-centered nursing care and active parental participation contributed positively to treatment adherence, continuity of care, and discharge preparation in this newborn with PRS. Strengthening family education and involving parents in daily care practices may improve clinical outcomes and support long-term management in newborns with complex congenital anomalies.

Keywords: Family-Centred Care, Nursing Care, Nasoalveolar Molding, Pierre Robin Sequence, Newborn

PP - 030

PREOPERATIVE NUTRITION IN A PREMATURE INFANT WITH NEC AND AORTIC COARCTATION

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Aim: To present the effects of individualized medical nutrition therapy on growth and weight gain during the preoperative period in a premature infant with coarctation of the aorta and necrotizing enterocolitis (NEC).

Case: A premature infant born at 33 weeks of gestation with a birth weight of 1800 g and diagnosed with coarctation of the aorta and NEC was transferred to the Pediatric Cardiac Intensive Care Unit on the 16th day of life following balloon angioplasty. Nutritional risk assessment using the STRONGkids screening tool identified the patient as being at high risk for malnutrition. Following regression of NEC-related findings, enteral feeding was initiated with minimal trophic feeds. However, due to abdominal distension, enteral feeding could not be advanced as planned, and parenteral nutrition was required. Although the patient reached a body weight of approximately 2000 g, weight gain stagnated, and body weight remained around 1880 g for a period of time. Nutritional management was individualized according to the patient's clinical condition and feeding tolerance. During periods of inadequate oral intake, enteral nutritional support was provided via a nasogastric tube.

Results: During nasogastric tube feeding, the patient's energy and nutrient requirements were adequately met. Consistent weight gain was achieved through high-energy enteral formulas and close nutritional monitoring. As a result of individualized medical nutrition therapy, body weight reached 2560 g by the second month of hospitalization. After attaining a body weight of 2700 g, the patient underwent surgical repair of the hypoplastic/interrupted aortic arch using autologous or prosthetic material.

Conclusion: Malnutrition is a common problem in children with congenital heart disease. Despite enteral feeding intolerance, adequate weight gain was achieved through individualized enteral and parenteral nutritional support. This case highlights the importance of early and close nutritional monitoring in neonates with complex congenital heart disease who are at high risk of malnutrition.

Keywords: Necrotizing enterocolitis, Coarctation of the aorta, Nutritional management

PP - 031

PARENTING EXPERIENCE OF PARENTS CARING FOR AN INFANT WITH HYPOPLASTIC AORTIC ARCH: AN ABC-X MODEL ANALYSIS

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Aim: This case report aimed to evaluate the rooming-in experience and nursing care of an infant diagnosed with hypoplastic aortic arch who underwent cardiac surgery and experienced a prolonged intensive care stay using the ABC-X Family Crisis Model.

Case: Infant H, aged 2 months and 20 days, was hospitalized in a pediatric cardiovascular intensive care unit for 75 days following surgery for hypoplastic aortic arch. The infant experienced recurrent intubation-extubation cycles and was undergoing diagnostic evaluation for spinal muscular atrophy due to hypotonia. On postoperative day 59, a rooming-in process was initiated to support mother-infant bonding, improve parental caregiving skills, and promote family-centered care. The 26-year-old primiparous mother received structured caregiving education before the intervention. The infant remained extubated under maternal care for five days. However, aspiration during enteral feeding required reintubation and return to intensive care. Throughout hospitalization, the mother was encouraged to participate in caregiving activities and received ongoing support.

Results: According to the ABC-X Model, stressors (A) included congenital heart disease, cardiac surgery, prolonged intensive care hospitalization, recurrent intubation-extubation cycles, and reintubation following aspiration. Family resources (B) consisted of nursing support, parental education, mother-infant interaction, and family-centered care practices. The mother's perception of the event (C) involved guilt, fear of caregiving, and feelings of inadequacy. The crisis response (X) was reflected in increased anxiety and difficulty fulfilling the parental role. Following therapeutic communication, parental role support, caregiving skill reinforcement, and psychosocial interventions, the mother's participation in care increased and her caregiving confidence improved.

Conclusion: Complications during prolonged postoperative intensive care should not be viewed as reasons to discontinue family participation. Instead, they provide opportunities to strengthen parental competence through structured nursing support. The ABC-X Family Crisis Model offers a useful framework for assessing family crisis experiences and planning family-centered nursing interventions.

Keywords: ABC-X Family Crisis Model, Family-Centered Care, Nursing Care, Pediatric Cardiovascular Intensive Care Unit

PP - 032

VIOLATION OF CHILDREN'S RIGHTS ON SOCIAL MEDIA AND CHILDREN'S RIGHT TO BE FORGOTTEN

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[2]Istanbul University, Faculty of Nursing

Aim: Gelişen teknoloji ve sosyal medya kullanımının artması ile birlikte çocuk istismarını farklı boyutları ortaya çıkmıştır. Ebeveynlerin, çocukları hakkında sosyal medya uygulamalarında paylaşımlarda bulunması İngilizce "paylaşma (share)" ve "ebeveynlik (parenting)" kavramlarının bir birleşimi olan "sharenting"/"paylaşan ebeveynlik" olarak tanımlanmaktadır. Ebeveynler tarafından çocuklarının mahremiyetini ihlal eden fotoğraf, video ve gönderiler ile çok sayıda ayrıntılı bilgi paylaşılmakta ve bu da çocuğun istismara açık hale gelmesine sebep olmaktadır. Bu derlemede çocuklar ile ilgili sosyal mecralarda yapılan paylaşımlardan doğabilecek tehlikelerin belirlenmesi, önlenmesi ve farkındalık kazandırılması amaçlanmaktadır.

Material & Method: Bu derleme çalışmasında sosyal medyada çocuk hakları ihlalleri ve çocukların unutulma hakkına ilişkin ulusal ve uluslararası literatür incelenmiştir. Çalışma kapsamında PubMed, Google Scholar, Scopus, Web of Science ve DergiPark veri tabanlarında tarama yapılmıştır. Çalışmaya 2016–2026 yılları arasında yayımlanan ve konu ile doğrudan ilişkili kaynaklar dahil edilmiştir.

Results: Sosyal medya yapılan paylaşımlar ile kişilik hakkı ihlalleri artmaktadır. Ebeveynlerin çocukların hayatını kutlamak için yaptığı paylaşımlardan; çocuklar psiko-sosyal, bilişsel, bedensel ve cinsel gelişimlerini olumsuz etkileyecek durumlarla karşı karşıya kalabilmektedir. Ayrıca sosyal medyadan ürün tanıtımı yaparak, bu ürünlerin çocuklar üzerinden pazarlanması ve çocukların nesneleştirilerek birer pazarlama aracı haline gelmesi sorununu ortaya çıkarmıştır. Çocuğa ait resim, ses veya içeriklerin sosyal medya platformlarında paylaşılması çocuğun silinmeyen bir dijital ayak izinin oluşmasına neden olmaktadır. Paylaşımı yapan ebeveynler, diğer aile üyeleri, öğretmenler ve sağlık çalışanları; çocuğun unutulma hakkının ihlaline neden oldukları gibi, onur ve saygınlığının korunması ve özel hayat haklarının da ihlaline neden olmaktadır.

Conclusion: Sağlık profesyonelleri olarak hemşireler, kamuoyunu ve ebeveynleri eğiterek çocukların karşılaşabileceği potansiyel tehlikeler hakkında değişimi gerçekleştirmeye çalışmalıdır. Bir sağlık modeli ile ebeveynlerin, çocuklarının mahremiyetini koruma ihtiyacı ile uyumlu sosyal medya kullanımı konusunda eğitilmesinin faydalı olacağı düşünülmektedir. Pediatri hemşiresi savunucu rolü ile çocuğun esenliğinin yalnızca geleneksel sağlık kavramları ile sınırlı olmadığını bilir ve mahremiyet duygusu ile büyümek çocuğun hayatta daha iyi olmasını sağlar.

Keywords: unutulma hakkı, çocuk ihlali, pediatri hemşireliği, sosyal medya

PP - 033

DETERMINATION OF CAREGIVER BURDEN AND DEPRESSION LEVELS OF PARENTS OF TRACHEOSTOMIZED CHILDREN DEPENDENT ON HOME MECHANICAL VENTILATION

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Aim: This study was conducted to determine the caregiver burden and depression levels of parents of tracheostomized children dependent on home mechanical ventilation and to examine the factors affecting caregiver burden and depression levels.

Material & Method: This descriptive study was carried out between September 2017 and September 2018 with 70 parents of tracheostomized children dependent on home mechanical ventilation. Data were collected through face-to-face interviews using a 38-item Sociodemographic Data Form, the Caregiver Burden Scale, and the Beck Depression Inventory. Descriptive statistics, comparative, and correlation analyses were used for data evaluation.

Results: Of the children, 62.9% were male and 47.1% were diagnosed with neuromuscular diseases. All caregivers were mothers, and 55.7% were between 31 and 40 years of age. No statistically significant relationship was found between caregiver burden and depression scores and maternal education level, family type, or child-related characteristics ($p > 0.05$). Significant relationships were identified between caregiver burden and depression scores and maternal age, presence of maternal illness, family economic status, experience of social isolation, encountering problems during caregiving, and perceptions that family relationships and privacy were negatively affected ($p < 0.05$). Furthermore, a positive and weak correlation was found between caregiver burden and depression scores.

Conclusion: The responsibility for caring for tracheostomized children dependent on home mechanical ventilation was largely assumed by mothers, and this situation could negatively affect their psychosocial well-being. Increased caregiver burden was associated with higher levels of depression. Therefore, strengthening educational programs, counseling services, and psychosocial support for parents may contribute to reducing caregiver burden.

Keywords: Technology-dependent child, caregiver burden, depression, home care, nursing.

PP - 034

PREDICTING ANAPHYLAXIS AND REACTIVITY IN PEDIATRIC COW'S MILK ALLERGY

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Aim: Predicting acute reactivity and anaphylaxis during an oral food challenge (OFC) is critical for managing pediatric cow's milk allergy (CMA) safely and avoiding unnecessary dietary restrictions.To evaluate the predictive performance of baseline diagnostic test thresholds alongside clinical, demographic, and perinatal characteristics in forecasting OFC reactivity and anaphylaxis risk.

Material & Method: We retrospectively reviewed the medical records of patients with IgE-mediated CMA who underwent 138 OFCs between September 2019 and December 2024 at the Istanbul University-Cerrahpasa, Cerrahpasa Faculty of Medicine Department of Pediatric Allergy and Immunology outpatient clinics. Diagnostic performance for anaphylaxis was determined using ROC analysis. Independent predictors for clinical reactivity were calculated using multivariable logistic regression.

Results: Out of 138 OFCs, 28 (20.3%) yielded positive results (manifesting mainly as cutaneous symptoms, anaphylaxis, or respiratory/gastrointestinal involvement). On a patient-basis, 25.0% experienced active reactivity (median challenge age: 20.5 months), with a median diagnostic delay of 15.0 months from symptom onset to the positive challenge. Conversely, 29 unique patients developed tolerance and successfully passed subsequent OFCs (median age at tolerance: 24.0 months, median follow-up duration: 21.5 months). Conversely, 22.8% of patients with negative pre-challenge profiles had been placed on unnecessary dietary restrictions before admission by families.For predicting anaphylaxis, ROC analysis identified a milk SPT cut-off of 9.00 mm as highly accurate (100.0% sensitivity, 88.4% specificity). Casein SPT demonstrated no significant predictive value. Robust serological cut-offs were established at 14.65 kU/L for milk sIgE and 3.98 kU/L for casein sIgE (Table 1). Personal history of atopy was most prominent in the active reaction group (90.50%), followed by the tolerance group (79.31%) and the unnecessary restriction group (50.00%) (Table 2). Multivariable logistic regression identified personal history of atopy (Adjusted OR: 7.20, p=0.014) and preterm birth

(Adjusted OR: 3.10, p=0.041) as the strongest independent clinical predictors of active reactivity in OFC (Table 3).

Table 1: Diagnostic Performance of Baseline Tests in Predicting Anaphylaxis

Diagnostic Tests	AUC (95% CI)	Cut-off	p-value	Sensitivity (%)	Specificity (%)
Milk sIgE	0.882 (0.790–0.974)	14.65 kU/L	0.004	80.0	21.8
Casein sIgE	0.868 (0.757–0.979)	3.98 kU/L	0.006	80.0	21.7
Milk SPT	0.932 (0.873–0.991)	9.00 mm	0.001	100.0	88.4
Casein SPT	0.690 (0.501–0.880)	5.50 mm	0.168	60.0	54.8

Table 2: Comparison of Patient Characteristics Across Clinical Groups (n=73)

Characteristic Features	Active Reaction Group(n=23 Patients)	Unnecessary Restriction Group(n=21 Patients)	Tolerance Developed Group(n=29 Patients)
Personal History of Atopy, *n (%)*	19 / 21 (90.50%)	10 / 20 (50.00%)	23 / 29 (79.31%)
Family History of Atopy, *n (%)*	10 / 21 (47.60%)	6 / 20 (30.00%)	8 / 29 (27.59%)
Prematurity, *n (%)*	5 / 23 (21.70%)	2 / 19 (10.50%)	2 / 29 (6.90%)
History of NICU Admission, *n (%)*	5 / 21 (23.80%)	4 / 19 (21.10%)	5 / 29 (17.24%)

Table 3: Logistic Regression Analysis for Predicting Active Reactivity During OFC

Risk Factor / Independent Variable	Univariate OR (95% CI)	p-value	Multivariate Adjusted OR (95% CI)	p-value
Personal History of Atopy	9.50 (2.10–43.20)	0.003	**7.20 (1.50–34.80)**	**0.014**
Prematurity	3.75 (1.10–12.80)	0.035	**3.10 (1.05–9.10)**	**0.041**
Family History of Atopy	2.38 (0.80–7.10)	0.118	1.65 (0.50–5.40)	0.412
History of NICU Admission	1.50 (0.40–5.20)	0.520	—	—

Conclusion: Objective risk stratification before an OFC relies on combining laboratory thresholds with phenotypic markers. Deferring challenges until 24 months of age is reasonable for high-risk cohorts displaying milk SPT 9.00 mm, elevated sIgE levels, atopic comorbidities, or prematurity. Conversely, early controlled challenges in low-risk infants prevent unnecessary dietary over-restrictions.

Keywords: Anaphylaxis, Cow's Milk Allergy, Oral Food Challenge

PP - 035

DELAYED DIAGNOSIS OF RIGHT PULMONARY VEIN ATRESIA AND RIGHT PULMONARY ARTERY HYPOPLASIA FOLLOWING A LONG ASYMPTOMATIC COURSE: A PEDIATRIC CASE PRESENTING WITH PERSISTENT COUGH

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Aim: Unilateral pulmonary vein atresia (UPVA) is a rare congenital vascular anomaly usually diagnosed in early childhood due to recurrent respiratory infections, hemoptysis, or pulmonary hypertension. However, some patients may remain asymptomatic until adolescence and present with nonspecific respiratory symptoms, resulting in delayed diagnosis. Recognition of characteristic radiological findings is essential for accurate diagnosis. We present a fifteen-year-old girl with persistent cough and exertional dyspnea unresponsive to antibiotic therapy.

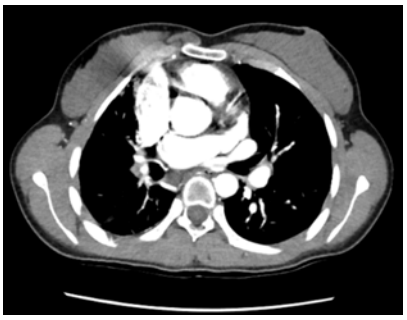
Case: A fifteen-year-old girl was evaluated for persistent cough and exertional dyspnea. Despite one month of antibiotic therapy for presumed persistent bacterial bronchitis, her symptoms persisted. She also reported exercise intolerance and easy fatigability over the previous year. Physical examination revealed pectus carinatum and markedly decreased breath sounds over the right hemithorax, while oxygen saturation was normal. Chest radiography demonstrated right-sided lung volume loss and mediastinal shift toward the right hemithorax (Figure 1). Due to persistent and progressive symptoms together with abnormal radiographic findings, computed tomography angiography was performed. Imaging revealed absence of the right pulmonary veins and a hypoplastic right pulmonary artery, consistent with right pulmonary vein atresia associated with right pulmonary artery hypoplasia (Figure 2). Further imaging, cardiologic, and pulmonary evaluations are summarized in Table 1. Pulmonary hypertension was absent. As the patient remained clinically stable with mild symptoms and no oxygen requirement, conservative follow-up was planned with close monitoring for hemoptysis and pulmonary hypertension.

Figure 1: Chest Radiograph Findings



Chest radiograph demonstrating right lung volume loss and mediastinal shift toward the right hemithorax.

Figure 2: Thoracic CT Angiography



Contrast-enhanced axial CT image demonstrating absence of right pulmonary venous drainage into the left atrium, consistent with right pulmonary vein atresia.

Table 1. Imaging and Cardiologic Evaluation Findings

Examination	Findings
Thoracic CT	Right lung volume loss; diffuse interlobular septal thickening (suggestive of venous congestion);

	mediastinal shift to the right
CT angiography	Right pulmonary veins not visualized (atresia); hypoplastic right pulmonary artery; enlarged left pulmonary artery; presence of systemic venous collateral circulation
Echocardiography	Minimal mitral regurgitation; increased left ventricular trabeculation; suspicion of PAPVC (vertical vein?)
Cardiac catheterization / angiography	Absence of right pulmonary venous return; hypoplastic right pulmonary artery (9 mm, Z score −3.33); enlarged left pulmonary artery (23.1 mm); pulmonary venous return draining into the SVC, azygos, and hemiazygos systems via collateral vessels; no pulmonary hypertension detected (PVR 2.31 WU·m^2)
Pulmonary function test	Normal spirometry; DLCO 68%

Results: UPVA is a rare congenital anomaly with a broad clinical spectrum ranging from recurrent infections to hemoptysis. Characteristic imaging findings include ipsilateral lung volume loss, pulmonary artery hypoplasia, and systemic venous collaterals. Delayed diagnosis may occur in patients with mild or nonspecific symptoms despite significant underlying vascular abnormalities.

Conclusion: This case highlights the importance of considering rare congenital anomalies in adolescents presenting with persistent cough unresponsive to antibiotic therapy and emphasizes the critical role of radiological evaluation in preventing diagnostic delay.

Keywords: Unilateral pulmonary vein atresia, Persistent cough, Adolescent

PP - 036

THE SILENT SIGNALS: AN UNCOMMON CASE OF PEDIATRIC RIGHT VENTRICULAR FAILURE

Seyma Kayalı[1]

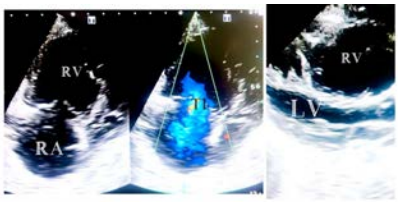
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Aim: Arrhythmogenic right ventricular dysplasia/cardiomyopathy (ARVD/C) is a rare inherited myocardial disease characterized by fibrofatty replacement of the right ventricular myocardium. While predominantly diagnosed in young adults, its presentation in early childhood is extremely rare and often atypical. This case aims to highlight the critical importance of integrating echocardiographic and electrocardiographic (ECG) markers for the early detection of pediatric ARVD/C before severe structural failure ensues.

Case: A 6-year-old girl presented to the pediatric cardiology clinic with a history of progressive fatigue and exertional dyspnea as her sole clinical symptoms. On admission, her vital signs were stable (heart rate: 88 bpm, blood pressure: 105/65 mmHg). Comprehensive systemic physical examinations were normal, showing no clinical signs of systemic venous congestion or hepatomegaly. Cardiac auscultation revealed no cardiac murmur. Notably, her past medical history and family history for cardiomyopathy or sudden cardiac death were completely unremarkable.

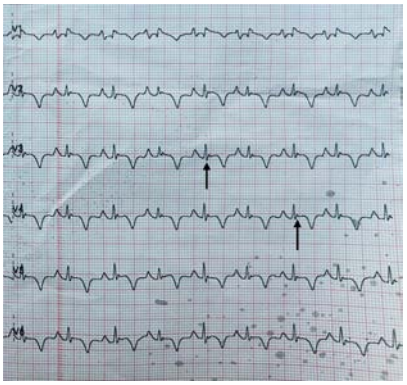
Results: Transthoracic echocardiography demonstrated marked right ventricular (RV) dilatation and severely reduced RV systolic function, accompanied by severe functional tricuspid regurgitation (Figure 1A). Crucially, the twelve-lead ECG revealed a rare and striking electrical clue: an epsilon wave visible across all precordial leads (\(V_1-V_6\)), indicating widespread, significantly delayed ventricular activation (Figure 1B). A 24-hour ambulatory Holter ECG monitoring demonstrated no significant arrhythmia periods or ventricular ectopy. Due to prominent structural RV failure, a combined regimen of oral anticongestive therapy and beta-blockers was successfully initiated for cardioprotection, and genetic counseling was planned for the family.

Figure 1A



Transthoracic echocardiographic assessment. (Left) Color Doppler imaging demonstrating severe, prominent functional tricuspid regurgitation. (Right) Parasternal long-axis view revealing massive right ventricular (RV) dilatation causing left ventricular (LV) compression, characterized by the typical flattening of the interventricular septum.

Figure 1B



Precordial ECG leads (\(V_1-V_6\)) demonstrating an uncommon and striking electrical presentation of pediatric ARVD/C. Distinctive epsilon waves are clearly visible across all precordial channels, as indicated by the black arrows, representing widespread and significantly delayed right ventricular activation

Conclusion: The right ventricle may remain clinically silent at first glance, but its electrical and structural signals are definitive for those who evaluate thoroughly. In pediatric cardiology, combining comprehensive echocardiographic assessments with meticulous ECG analysis is essential. Early identification of specific markers, especially an atypical extension of epsilon waves across all precordial leads, is life-saving, preventing progressive right ventricular failure and sudden cardiac death.

Keywords: Arrhythmogenic right ventricular dysplasia, Electrocardiography (ECG), Epsilon wave, Pediatric cardiomyopathy, Right ventricular failure

PP - 037

PEDIATRIC LEFT VENTRICULAR NONCOMPACTION CARDIOMYOPATHY: FROM EXERTIONAL SYMPTOMS TO SYSTOLIC DYSFUNCTION

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Aim: Left ventricular noncompaction cardiomyopathy (LVNC) is a rare myocardial phenotype characterized by prominent trabeculations and deep intertrabecular recesses. While its clinical spectrum ranges widely, the onset of left ventricular systolic dysfunction in pediatric patients represents a critical turning point that demands early recognition. This case aims to emphasize the clinical presentation and red flags for general pediatricians to ensure timely referral.

Case: A 15-year-old male presented to the pediatric cardiology clinic with a history of progressive exertional dyspnea and decreased exercise tolerance over the past few months. On admission, his vital signs were stable (heart rate: 76 bpm, blood pressure: 110/70 mmHg). Systemic examinations were normal; however, cardiac auscultation revealed a soft systolic murmur at the apex. Notably, his past medical history and family history for early-onset cardiomyopathy or sudden cardiac death were completely unremarkable.

Results: Transthoracic echocardiography unmasked highly definitive diagnostic features of LVNC, demonstrating prominent left ventricular apical trabeculations and deep intertrabecular recesses communicating with the ventricular cavity (Figure 1). Crucially, the noncompacted-to-compacted myocardial ratio was greater than 2:1. This phenotype was accompanied by marked left ventricular (LV) dilatation, moderate functional mitral regurgitation, and significantly reduced LV systolic function (ejection fraction: 42%). A 24-hour ambulatory Holter ECG showed no complex arrhythmias. Given the highly clear echocardiographic diagnosis and the presence of structural systolic failure, standard cardioprotective medical therapy including an ACE inhibitor and a beta-blocker was immediately initiated alongside prophylactic antiplatelet therapy to prevent thromboembolic complications. Cardiac MRI and genetic testing were scheduled for the follow-up period.

Figure 1



Transthoracic echocardiographic view of the patient demonstrating LVNC. The yellow arrows clearly delineate the deep intertrabecular recesses.

Conclusion: LVNC can present with progressive systolic dysfunction, ventricular dilatation, and valvular insufficiency in adolescents. In general pediatric practice, a high index of clinical suspicion regarding exertional symptoms and murmurs is vital for prompt specialist referral. For pediatric cardiologists, immediate initiation of guideline-directed medical therapy based on definitive echocardiographic findings is life-saving.

Keywords: Left ventricular noncompaction, Cardiomyopathy, Systolic dysfunction, Mitral regurgitation, Echocardiography

PP - 038

COMPARISON OF THE SHORT-TERM EFFECTS OF ISOCALORIC MCT-CONTAINING AND HYPERCALORIC ENTERAL FORMULAS ON GROWTH IN PEDIATRIC PATIENTS WITH BILIARY ATRESIA

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Aim: Background: Biliary atresia is associated with impaired bile flow, leading to fat malabsorption and growth failure. Nutritional management includes hypercaloric and medium-chain triglyceride (MCT)-enriched formulas; however, their comparative effectiveness remains unclear.Objective: To compare short-term weight gain between isocaloric MCT-containing and hypercaloric formulas and to evaluate clinical factors influencing growth response.

Material & Method: Methods: A retrospective cohort study including 30 pediatric patients with biliary atresia was conducted. Weight-for-age Z-score changes over a two-week preoperative period were analyzed. Group comparisons were performed using independent t-tests, while correlations and subgroup analyses were conducted using Pearson correlation and ANOVA.

Results: Results: The demographic characteristics of the study population are presented in Table 1. No significant difference in weight Z-score change was observed between Pediasure Peptid and Fortini groups (0.253 ± 0.078 vs. 0.251 ± 0.136; p = 0.96) (Table 2). A significant negative correlation was found between age and weight gain (r = -0.377, p = 0.04), indicating greater improvement in younger patients (Table 3). Additionally, patients with moderate-to-severe malnutrition exhibited significantly higher weight gain compared to those with normal nutritional status (p = 0.019).

Demographic Characteristics of the Study Population

Demographic Characteristics of the Study Population	
Variable	**Value**
Age (months, mean ± SD)	18.43 ± 11.86
Age (min–max)	6.14 – 56.28

Sex (Female/Male)	21 / 9
Female (%)	70%

Change in Weight Z-score According to Formula Type

Change in Weight Z-score According to Formula Type

Group	Δ Weight Z-score (mean ± SD)	p-value
Pediasure Peptid (n=11)	0.253 ± 0.078	
Fortini (n=19)	0.251 ± 0.136	0.96

Change in Weight Z-score According to Age Groups

Change in Weight Z-score According to Age Groups

Age Group	n	Δ Weight Z-score (mean ± SD)
1–12 months	11	0.253 ± 0.078
12–24 months	14	0.283 ± 0.132
25–59 months	5	0.161 ± 0.114

Note: A significant negative correlation was found between age and Δ weight Z-score (r = -0.377, p = 0.04).

Conclusion: Conclusion: Growth response in biliary atresia appears to be influenced more by patient-related factors such as age and baseline nutritional status than by formula caloric density.

Keywords: Biliary atresia, MCT, malnutrition, pediatric nutrition, enteral support

PP - 041

ACUTE SIGMOID VOLVULUS: A RARE CAUSE OF ACUTE ABDOMEN IN CHILDREN

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Aim: The aim of this report is to present a rare case of pediatric sigmoid colon volvulus (SCV) in a 16-year-old female, and to highlight the critical importance of considering underlying Hirschsprung's disease (HD) before definitive surgical intervention to prevent life-threatening complications.

Case: A 16-year-old female presented with severe abdominal pain, bilious vomiting, and a one-week history of obstipation. Abdominal radiography demonstrated the characteristic “coffee bean” sign (Figure 1). Abdominal CT revealed a dilated bowel segment with a "swirl sign," indicating sigmoid volvulus. An emergency exploratory laparotomy confirmed a 540-degree volvulus without ischemia or perforation (Figures 2, 3). Following manual detorsion, a sigmoidectomy was performed. Intraoperative frozen section was unavailable to evaluate for Hirschsprung's disease (HD); thus, multiple-level biopsies were obtained. The patient had an uneventful recovery. A subsequent definitive rectal biopsy confirmed the presence of ganglion cells, conclusively excluding HD.

Figure 1. Coffee bean sign in the X-ray of the patient



Figure 2. Intraoperative megasigmoid

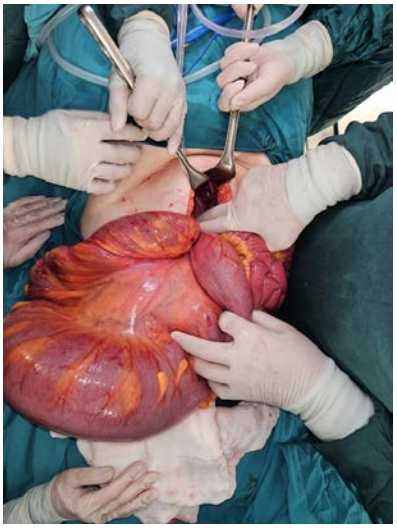


Figure 3. Intraoperative sigmoid volvulus



Results: Analysis of the literature reveals that pediatric sigmoid colon volvulus (SCV) presents a significant diagnostic challenge. Classic radiographic findings, such as the "coffee bean" sign, are present in only 17–30% of pediatric cases, whereas contrast-enhanced CT is diagnostic in approximately 56%. Clinically, the most frequent symptoms are abdominal pain (90%), distention (79%), and vomiting (74%). Crucially, while Hirschsprung's disease (HD) is associated with only 0.6–3% of the general SCV population, its prevalence increases dramatically to 17% in patients under 18 years of age, and up to 33% in patients aged 14 to 30 years, highlighting a strong correlation in younger demographics.

Conclusion: Pediatric sigmoid colon volvulus is a rare but life-threatening surgical emergency. A high index of suspicion for underlying Hirschsprung's disease (HD) is imperative, particularly in patients with a history of chronic constipation. To prevent severe anastomotic complications, HD must be definitively excluded before performing a primary colonic anastomosis. When HD is suspected or cannot be ruled out intraoperatively, an initial colostomy is the safest surgical approach.

Keywords: sigmoid, volvulus, colon, sigmoidectomy, hirschsprung

PP - 042

TRANSVERSE TESTICULAR ECTOPIA ASSOCIATED WITH AMYAND'S HERNIA: A LAPAROSCOPIC APPROACH

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Aim: Transverse testicular ectopia (TTE) is a rarely described urogenital anomaly in the literature, characterized by both testes descending through the same inguinal canal. Amyand's hernia refers to the presence of the appendix within the hernia sac. In this presentation, we report the diagnosis and treatment of a case of TTE associated with a laparoscopic Amyand's hernia in an infant with an empty contralateral scrotum.

Case: A one-year-old male patient presented with a right-sided reducible inguinal hernia. His medical history revealed a previous operation at another center for a left ectopic testis, during which both testes were found on the right side and subsequently descended into the right scrotum. Preoperative ultrasonography identified two testes in the right scrotum and a hernia sac on the right that became prominent with the Valsalva maneuver.During laparoscopic exploration, the following was observed: The left internal ring was closed. Both vasa deferentia and vascular structures exited the abdomen through the right internal ring. The vascular structures of the left testis crossed the ureter in the retroperitoneum before deviating medially toward the opposite side. An Amyand's hernia was diagnosed upon seeing the appendix within the right hernia sac, with an inflamed tip.

Results: A laparoscopic appendectomy and intracorporeal internal ring repair were performed. No Müllerian remnants were detected during pelvic exploration. Due to the fusion of the testes and cord structures, no separation was performed to preserve vascular integrity.

Conclusion: The coexistence of TTE and Amyand's hernia is extremely rare. TTE should be considered in cases of inguinal hernia where the contralateral testis is non-palpable. Laparoscopy is the gold standard for such complex cases, as it allows for the clarification of the anatomical course of vascular structures, the exclusion of additional pathologies like Persistent Müllerian Duct Syndrome, and the opportunity for simultaneous treatment.

Keywords: transverse, testicular, ectopia, amyand, laparoscopic

PP - 043

SEVOFLURANE-INDUCED DIFFUSE ALVEOLAR HEMORRHAGE: A RARE COMPLICATION OF INHALATIONAL ANESTHESIA

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Aim: Diffuse alveolar hemorrhage (DAH) is a severe clinical condition resulting from alveolar capillary damage and may progress rapidly. Clinically, it is characterized by hemoptysis, hypoxemia, anemia, and bilateral diffuse infiltrates on radiologic imaging. Sevoflurane is an inhalational anesthetic frequently preferred, especially in pediatric patients, due to its rapid induction and hemodynamic stability. However, rare cases of diffuse alveolar hemorrhage associated with sevoflurane use have been reported in the literature.

Case: A 17-year-old male patient presented with a diagnosis of acute appendicitis. Due to acute onset, preoperative chest X-ray had not been obtained. The patient underwent surgery under general anesthesia induced with inhaled sevoflurane. In the postoperative period, the patient developed sudden hypoxemia and hematemesis. A bedside radiograph revealed diffuse bilateral alveolar infiltrates (Figure 1). For further evaluation of these findings, chest CT was performed, which demonstrated bilateral patchy ground-glass areas, more prominent on the right side, predominantly located centrally with focal peripheral extension. The imaging appearance was consistent with a crazy-paving pattern (Figure 2). These findings were interpreted in favor of postoperative diffuse alveolar hemorrhage. The patient was treated with intravenous methylprednisolone at a dose of 1 mg/kg/day for 3 days. On the fourth day of treatment, the patient's hypoxemia resolved, and follow-up chest radiography demonstrated complete regression of the alveolar infiltrates (Figure 3).

Figure 1



Figure 1. A 17-year-old male underwent surgery due to acute appendicitis; a bedside portable chest radiograph was obtained in the postoperative period. Diffuse bilateral alveolar infiltrates were detected, more prominent in the right lung.

Figure 2

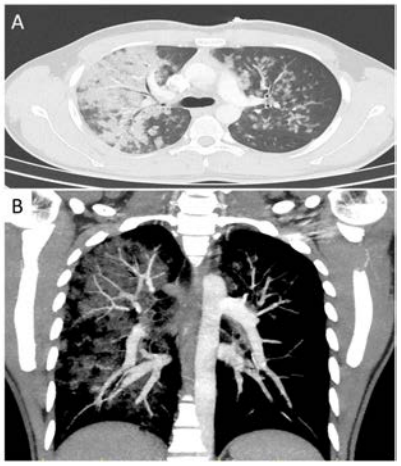


Figure 2. Axial image in lung window (A) and coronal reconstruction in mediastinal window (B) CT images show diffuse bilateral pulmonary opacities affecting all lobes, with central predominance and greater involvement of the right lung.

Figure 3

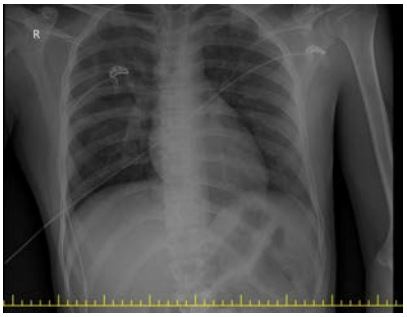


Figure 3: Follow-up chest radiograph obtained on the fourth day demonstrated complete resolution of the alveolar infiltrates.

Results: .

Conclusion: Sevoflurane-associated DAH is extremely rare, and its pathophysiology has not yet been fully elucidated. The proposed mechanism involves excessive negative intrathoracic pressure, leading to increased transcapillary hydrostatic pressure, and hemorrhage. In this case, no infectious, autoimmune, or hematologic etiology for the development of DAH was identified. Therefore, clinical presentation was considered a possible complication associated with sevoflurane exposure. Alveolar hemorrhage secondary to inhaled sevoflurane should be kept in mind in cases of postoperative acute respiratory distress and pulmonary hemorrhage in which other etiologies have been excluded.

Keywords: diffuse alveolar hemorrhage, anesthesia, computed tomography, sevoflurane, pulmonary edema