7th International Conference on Esophageal Atresia

11th International Pediatric Adolescent Adult Foregut Interdisciplinary Society Symposium 2025

Aerodigestive Society Meeting

PAAFIS Aerodigestive Society

INoEA 25

April 30 - May 3, 2025

Renaissance Polat İstanbul Hotel

Yeşilköy - İstanbul / Türkiye

ABSTRACT BOOK

"All About Esophageal Atresia and Tracheoesophageal Fistula"

TURKISH ASSOCIATION of PEDIATRIC SURGEONS

TURKISH ASSOCIATION of ESOPHAGEAL ATRESIA CHILD and FAMILY SUPPORT

PEDIATRIC ADOLESCENT ADULT FOREGUT INTERDISCIPLINARY SOCIETY

AERODIGESTIVE SOCIETY

ESOPHAGEAL ATRESIA GLOBAL SUPPORT GROUPS

TÜRK ÇOCUK GASTROENTEROLOJİ HEPATOLOJİ ve BESLENME DERNEĞİ

ÇOCUK GÖĞÜS HASTALIKLARI DERNEĞİ

ÇOCUK KULAK BURUN BOĞAZ BAŞ-BOYUN CERRAHİSİ DERNEĞİ

TİKA

EUROPEAN PAEDIATRIC SURGEONS ASSOCIATION

www.inoea2025.org

INVITATION

Dear Colleagues,

It is our great pleasure to invite you to the joint meeting of INoEA, PAAFIS and Aerodigestive Society which will be held in Istanbul Türkiye between April 30th and May 3rd, 2025. The meeting will be hosted by Turkish Association of Pediatric Surgeons (TAPS) under the auspices of these three societies.

As a rare disease, esophageal atresia has its challenges both in research area and on clinical grounds. Professionals working in the field of esophageal atresia from around the world have been gathering at the INoEA conferences for more than a decade. These meetings have had a great impact in understanding the disease process, promoting scientific knowledge and collaboration, and thus, improving patient care.

PAAFIS is an interdisciplinary forum on foregut disease from birth to adults and focuses on congenital and acquired disorders involving all organs derived from the embryological foregut.

Aerodigestive Society deals with the understanding and care of multifaceted problems of aerodigestive patients whose diseases originate in childhood.

Our meeting in Istanbul will begin with multiple workshops for a whole day which will be followed by a day of PAAFIS and Aerodigestive Society meetings in parallel sessions. A single joint meeting will be held in the last two days and reserved to cover all aspects of esophageal atresia which is the main subject for INoEA.

We are working for a prestigious international conference which will host a great number of distinguished experts in the fields of pediatric surgery, gastroenterology, neonatology, pulmonology, otolaryngology, basic sciences, nutrition, and occupational and speech therapy. As a member of The Federation of Esophageal Atresia and Tracheo-esophageal Fistula (EAT), Turkish Esophageal Atresia Child and Family Support Organization (TROAD) will share their knowledge and experience and help to promote awareness of the condition across the world from the patients' perspective. Delegates will witness and engage in state of art lectures, symposia and workshops for four days.

The host city, Istanbul is a sound central meeting point for international conference delegates by virtue of its location at the crossroads of Asia and Europe. The city has a high-quality infrastructure, excellent flight connections and offers a variety good accommodation. Istanbul incorporates a blend of both European and Eastern sensibilities as a-8.700-year-old beauty.

We warmly invite you to this joint meeting to take another step towards the better care for our patients.

Co- Chairperson
Prof. Çiğdem Ulukaya Durakbaşa

Co- Chairperson
Prof. Tutku Soyer

President of Aerodigestive Society
Matthew Brigger, MD

President of PAAFIS
Thomas Ciecierega, MD

President of INoEA
Prof. Christophe Faure

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CO- CHAIRS
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Çiğdem Ulukaya Durakbaşa

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Tutku Soyer
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Matt Brigger
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Kaalan Johnson
Scott Rickert
Jeremy Prager
Tom Gallagher
Paul Boesch
David Molter
Christopher Wootten

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UNDER THE PATRONAGE OF TURKISH ASSOCIATIONS OF PEDIATRIC SURGEONS (TAPS)
Çiğdem Ulukaya Durakbaşa
Hüseyin İlhan
Tutku Soyer
Müjdem Nur Azılı
Arzu Şencan
Abdülkerim Temiz
Hanifi Okur

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Ömer Faruk Çelik
Numan Demir
Yaşar Doğan
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Ödül Eğritaş Gürkan
Fatma Ilgaz
Fazilet Karakoç
Gürsu Kıyan
Selen Serel Arslan
Nagehan Emiralioğlu

FAMILY SUPPORT GROUPS
The Federation of Esophageal Atresia and Tracheoesophageal Fistula (EAT)
Anke Widenmann-Grolig
Joanne Fruithof
Vito Guidance
Corinna Gilhaus
Werner de Vos
Graham Slater

Turkish Esophageal Atresia Family Support Group (TROAD)
Bilge Sesli
Erdem İnmez
Murat Şişman
Celal Boratav
Hülya Sağır

SCIENTIFIC PROGRAM

30 APRIL 2025, WEDNESDAY

Time	Thoracoscopy Course on 3-D Printed Materials	Endoscopy and Endoscopic Interventions	High Resolution Esophageal Manometry	Fiberoptic Endoscopic Evaluation of Swallowing	Interventional Pulmonology
13:00-15:00	**Chairs:** Oliver Muensterer, Mohammed Abdel Aziz, Sherif Shehata, Mohammed El-barbary, Müjdem Nur Azılı, Rahşan Özcan • Basic Thoracoscopic Skills • Esophageal Atresia Model • Diaphragmatic Hernia Repair • Other Upper GI Anomalies stryker mega OLYMPUS	**Chairs:** Mutaz Sultan, Gökhan Baysoy, Özlem Kalaycık **Diagnostic Upper Gastrointestinal Endoscopy** Dr. Ozlem Kalaycik • Technical knowledge of an endoscope including different sizes • Choosing the correct endoscope size in the child • Correct handling of an endoscope • Correct placement of the patient, endoscopist, tower and video monitor • Checking the instruments before starting endoscopy • Perform an upper endoscopy on a model **Foreign Body Extraction** Dr. Mutaz Sultan • Know indications and time point for endoscopic FB removal • Train the use of different types of instruments for FB removal • Know and practice techniques for removal of button batteries, magnets, sharp objects, large objects, coins, food bolus etc. (overcap, overtube etc. included) **PEG Insertion** Dr. Gokhan Baysoy • Know indications and contraindications for percutaneous endoscopic gastrostomy • Know the possible complications and how to treat them • Discuss advantage/ disadvantage of the different techniques • Practice on a model: pull through technique, one-step button PEG FUJIFILM AVANOS	**Chairs:** Thomas Ciecierega, Ersin Gümüş, Bengi Öztürk • Basic Principles of HREM • Patient Selection and Application • Interpretation of Results and Case Discussions Medtronic	**Chairs:** Numan Demir, Kimberly Morris • Basic Principles • Practice on Volunteers • Case Discussions mega OLYMPUS	**Chairs:** Kim Kaspy, Paul Boesch, Mikhail Kazachkov, Sara Zak ATAK GROUP Ambu erbe

SCIENTIFIC PROGRAM

30 APRIL 2025, WEDNESDAY

Time	Thoracoscopy Course on 3-D Printed Materials	Endoscopy and Endoscopic Interventions	High Resolution Esophageal Manometry	Fiberoptic Endoscopic Evaluation of Swallowing	Interventional Pulmonology
15:00-15:30	**Coffee Break**				
15:30-18:00	**Chairs:** Oliver Muensterer, Mohammed Abdel Aziz, Sherif Shehata, Mohammed El-barbary, Müjdem Nur Azılı, Rahşan Özcan • Basic Thoracoscopic Skills • Esophageal Atresia Model • Diaphragmatic Hernia Repair • Other Upper GI Anomalies stryker mega OLYMPUS	**Chairs:** Mutaz Sultan, Gökhan Baysoy, Özlem Kalaycık **Diagnostic Upper Gastrointestinal Endoscopy** Dr. Ozlem Kalaycik • Technical knowledge of an endoscope including different sizes • Choosing the correct endoscope size in the child • Correct handling of an endoscope • Correct placement of the patient, endoscopist, tower and video monitor • Checking the instruments before starting endoscopy • Perform an upper endoscopy on a model **Foreign Body Extraction** Dr. Mutaz Sultan • Know indications and time point for endoscopic FB removal • Train the use of different types of instruments for FB removal • Know and practice techniques for removal of button batteries, magnets, sharp objects, large objects, coins, food bolus etc. (overcap, overtube etc. included) **PEG Insertion** Dr. Gokhan Baysoy • Know indications and contraindications for percutaneous endoscopic gastrostomy • Know the possible complications and how to treat them • Discuss advantage/ disadvantage of the different techniques • Practice on a model: pull through technique, one-step button PEG FUJIFILM AVANOS	**Chairs:** Thomas Ciecierega, Ersin Gümüş, Bengi Öztürk • Basic Principles of HREM • Patient Selection and Application • Interpretation of Results and Case Discussions Medtronic	**Chairs:** Numan Demir, Kimberly Morris • Basic Principles • Practice on Volunteers • Case Discussions mega OLYMPUS	**Chairs:** Kim Kaspy, Paul Boesch, Mikhail Kazachkov, Sara Zak ATAK GROUP Ambu erbe

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SCIENTIFIC PROGRAM

1 MAY 2025, THURSDAY	
HALL A (Paafis)	
07:30	**Welcome**
08.00-09.00	**Congenital Lung Malformations** **Chairs:** Zafer Dökümcü, Yousef Abu Asbeh, Fayssal Lazrak
	Conservative Management of Congenital Lung Malformations: To whom? How? Anne-Sophie Holler
	Surgery For Congenital Lung Malformations: Indication, Timing and Technical Tips Dariusz Patkowski
	The Risk of Malignancy in Patients with CLM: Myth or Reality? Gürsu Kıyan
09.00-09.40	**The Esophagus** **Chairs:** Mutaz Sultan, Mohamed El Barbary
	Tips and Tricks in Performing Esophageal Biopsies and the Correlation with Clinical Diagnosis Thomas Ciecierega
	The Management of Esophageal Perforations in Children Tutku Soyer
09.40-10.20	**Upper Gastrointestinal Tract** **Chairs:** Amine Ksia, Başak Erginel
	Variable Presentations of Hypertrophic Pyloric Stenosis and the Long Term Follow-up Özlem Boybeyi
	Management of Duodenal Atresia Associated with Other Gastrointestinal Atresias Çiğdem Ulukaya Durakbaşa
10.20-10.40	**Coffee Break**
10.40-11.40	**Esophageal Motility Disorders** **Chairs:** Thomas Ciecierega, Funda Çetin, Hamed Seleim
	Does Chicago Classification Give a Clue About the Outcomes of Achalasia Surgery? Ersin Gümüş
	Esophageal Motility Disorders in Children: Current Approach to Diagnostics and Therapeutics Funda Çetin
	The Results of Different Surgical Approaches in Heller Esophagomyotomy Zafer Dökümcü
11.40-12.20	Abbott **Abbott Satellite Symposium** **Emerging Approach to Nutritional Intervention: Application and Added Value of Peptide-Based Formula** Aydan Kansu
12.20-13.00	**Management of Pancreatic Pseudocysts** Gonca Gerçel
	The Therapeutic Approach For Asymptomatic Gallbaldder Stones: Do the Age and the Size Matter? Sebahat Çam
13.00-14.00	**Lunch and Poster Walk** **Chairs:** Rahşan Özcan, Özlem Kalaycık
	Thoracic Outlet Syndrome From Anomalous 8th Cervical Vertebrae Ribs: A Rare Pediatric Diagnosis M Oumaya, PY Rabattu, C Saadi, PL Vérot, R Faguet, S Antoine, C Jacquier, C Piolat
	Thoracoabdominal Cystic Foregut Duplication: Unusual Presentation Ö Kılıç Bayar*, AC Bakır*, S Abidoğlu**, K Karadeniz Cerit*, G Kıyan*
	Life-Threatening Mediastinal Teratoma of a Newborn Ö Kılıç Bayar*, AC Bakır*, S Abidoğlu**, E Demirbaş***, K Ak***, G Kıyan*

SCIENTIFIC PROGRAM

1 MAY 2025, THURSDAY	
HALL A (Paafis)	
	Management of Neonatal Duodenal Obstruction by Open Approach. Z Rahal*, S Sahli**, R Jouini**
	A Rare Presentation: Duodenal Obstruction Secondary to Lymphadenopathy in Pediatrics AC Bakır*, M Jafarov*, Ö Kılıç Bayar*, S Abidoğlu**, K Karadeniz Cerit*, G Kıyan*
	Management and Outcomes of Esophageal Perforation Due to Foreign Body Ingestion. Z Nedra, M Marwa, BF Meriem, BH Samia, K Amine, B Mohssen, M Mongi, S Lassaad
	An Observational Study Comparing Two Analgesic Regimes for Children Following Outpatient Surgery N Mama*, Z Necib*, M Ben Mansour*, O Mandhouj**, S Ben Youssef***, S Laaribi***, R Haj Salem**, M Messaoud***, A Ksia***, S Chakroun*, L Sahnoun***
	Endoscopic Approaches to Managing Secondary Duodenal Strictures in Children: A Case Report AC Bakır*, Z Atay*, Ö Kılıç Bayar*, S Abidoğlu**, K Karadeniz Cerit*, G Kıyan*
	Spontaneous Expulsion of Intact Membrane of Liver Hydatid Cyst: About Two Cases H Drissi*, A Ben Younes*, M Oumaya**, Y Ben Ahmed*, MS Jlidi**
	Surgical Management of Severe Complications from Button Battery Ingestion in Children: Timing and Outcomes S Chennouf*, N Abdou*, H Choutri*, A El Gouacem*, A Bensebti*, Z Atrih*, H Zemouli**, A Bouguebs**, M Khellaf**, S Chabou**
	Congenital Diaphragmatic Hernia in a Developing Country: Short-Term Outcomes and Predictors of Survival S Fkaier, BF Meriem, S Ben Youssef, R Ben Salah, M Messaoud, S Sfar, N Kechiche
	Retrograde Tracheal Intubation for a Giant Fetal Neck Mass MM Urquizo Lino, J Camacho
	Esophageal Perforation, Mediastinitis, and Delayed Hemorrhage Due to a Pseudoaneurysm of an Aberrant Right Subclavian Artery Following Button Battery Ingestion: Management of a Complex Case with an Esophageal Stent and an Endovascular Stent Graft VS Çayhan*, SA Bostancı**, V Çayhan***, A Ertürk**, G Hızal****, EE Erten*, MN Azılı**, E Şenel**, Cİ Öztorun**
	Kaposi's Sarcoma After Pediatric Liver Transplantation: A Case Report S Fkaier, S Ben Youssef, S Sfar, BF Meriem, S Mani, N Kechiche, L Sahnoun, A Ksia, M Mekki
	Choledochocele in Children Mistaken for Duodenal Duplication: Two Case Reports on Diagnosis and Treatment S Fkaier*, S Ben Youssef**, S Sfar**, S Mani**, BF Meriem**, L Sahnoun**, M Mekki**
	Neonatal Gastric Perforation: A Bi-Centric Study M Salma*, K Nahla*, T Fatma**, B Nouha*, L Rachida*, K Amine*, M Mongi*, B Mohsen*, R Jouini**, L Sahnoun*
14.00-15.00	**Congenital Disorders of Biliary Ducts** **Chairs:** Martin Lacher, Lassad Sahnoun, Toni Risteski
	CMV Infection and Biliary Atresia: Is it a Different Type of Biliary Atresia? Mutaz Sultan
	Treatment of Choledochal Cysts: Hepaticojejunostomy vs Hepaticoduodenostomy Oliver Muensterer
	Does Laparoscopic Resection of Choledochal Cysts Achieve the Goal of Complete Resection? Mohamed Abdel Aziz
15.00-15.40	**Oncology** **Chairs:** Oliver Muensterer, Rahşan Özcan
	Benign Tumors of Liver in Children Amine Ksia
	Resolved and Unresolved Controversies About Benign Pediatric Pancreatic Masses Kıvılcım Karadeniz Cerit
15.40-16.15	**Coffee Break**

SCIENTIFIC PROGRAM

1 MAY 2025, THURSDAY	
HALL A (Paafis)	
16.15-17.00	**Swallowing Disorders** **Chairs:** Numan Demir, Zeineddin Etkaidek
	Surgical Options for Tube Feeding in Children with Swallowing Disorders Iain Yardley
	Therapeutic Approach to Dysphagia in Neurologically Impaired Children Sandra Bergmann
17.00-18.00	**Oral Presentations (3+2 min)** **Chairs:** Müjdem Nur Azılı, Yousef Kyrem, Yacoub Sghair
	Eversion Cruroplasty and Collar Overwrap: A Novel Hybrid Approach for Refractory Gastroesophageal Reflux Disease in Children, with Assessment of Mid-Term Outcomes. H Seleim
	Pediatric Esophageal Stent Applications: An Alternative to Surgery or a Bridge to Definitive Repair? SA Bostancı*, VS Çayhan**, EE Erten**, AN Abay**, A Ertürk*, Cİ Öztorun*, S Demir***, E Şenel*, MN Azılı*
	Double Aortic Arch in Children: Diagnostic Challenges and Surgical Management Outcomes S Fkaier, S Ben Youssef, o jarboui, S Sfar, A Ksia, BF Meriem, s belhssan
	Esophageal Stent Placement for Pediatric Esophageal Strictures: Safety, Efficacy, and Long-Term Outcomes S Fkaier, M Messaoud, S Ben Youssef, N Zribi, A Ksia, l sahnoun, M Mekki, M Belghith
	Congenital Pyloric Atresia: Presentation, Management, and Outcomes – A Single-Center Experience S Mani, N Kechiche, R Lamiri, N Boukhrissa, A Ksia, I Krichene, M Mekki, M Belghith, L Sahnoun
	Congenital cystic malformations of foregut in children Ö Kılıç Bayar*, AC Bakır*, S Abidoğlu**, K Karadeniz Cerit*, G Kıyan*
	Disc batteries in the esophagus in children: fire in the hole! S Hancıoğlu, B Dağdemir Ezber, B Yağız, BD Demirel
	Long-Term Outcomes of Nissen Fundoplication in Children: Efficacy and Patient Satisfaction S Fkaier, S Ben Youssef, s meddeb, BF Meriem, S Sfar, s Laaribi, n kechiche, l sahnoun
	Thoracoscopic Surgery in Pediatric Patients: Expanding Indications and Outcomes in a 15-Year Experience S Fkaier*, S Ben Youssef*, s meddeb*, BF Meriem*, M Abdelali**, S Chakroun***
	FEES in complex pediatric patients -initial experience, indications, and outcomes S Bergmann, A Holler, O Muensterer
	Investigation of the effects of hydroxychloroquine on rats with pulmonary contusion caused by blunt thoracic trauma Aİ Anadolulu*, S Aydöner*, A Pirim*, SŞ Özkanlı**, Ç Ulukaya Durakbaşa*
18:00-18:30	**PAAFIS General Assembly**
18:30-19:00	**Welcome Speech** Tutku Soyer Çiğdem Ulukaya Durakbaşa Matthew Brigger Thomas Ciecierega Christophe Faure
19:00-19:40	**"Climb Your Own Everest: Find Your Place in Life" by Nasuh Mahruki**
19:40-20:10	**Children's Choir**
20:10-22:30	**Welcome Cocktail**

SCIENTIFIC PROGRAM

1 MAY 2025, THURSDAY	
HALL B (Aerodigestive Society-I)	
07:30	**Welcome**
07:45-08:45	**The Aerodigestive Care Model** Lyndy Wilcox, Paul Boesch, Sari Acra, Kim Morris
08:45-09:45	**Diagnosis and Management of Airway Inflammation** Mikhail Kazachkov, Sari Acra, Matthew Brigger
09:45-10:45	**Laryngotracheal Stenosis: Management of Difficult Cases** Ömer Faruk Ünal, Bas Pullens, Nagarajan Muthialu, Lyndy Wilcox
10:45-11:00	**Coffee Break**
11:00-12:00	**Long-term Tracheostomy Management and Decannulation** Ozan Gökler, Bas Pullens, Thirunavukkarasu Saravanamuthu, Kim Kaspy
12:00-13:00	**Rings and Slings, and Trachealbronchial Airway Problems** Nagarajan Muthialu, Juan Anton-Pacheco
13:00-13:45	**Lunch**
13:45-14:45	**Diagnosis and Management of Bilateral Vocal Fold Movement Impairment** Thirunavukkarasu Saravanamuthu, Christopher Wootten, Patrick Scheffler
14:45-16:00	**Pediatric Interventional Pulmonology in 2025** Kim Kaspy, Paul Boesch, Mikhail Kazachkov, Sara Zak, Bülent Karadağ
16:00-16:15	**Coffee Break**
16:15-17:15	**Retrograde Cricopharyngeal Dysfunction and Cricopharygneal Achalasia** Sari Acra, Hayat Mousa, Shikib Mostamand
17:15-18:30	**Controversies in Clefts: Laryngotracheoesophageal Clefts--Types 1 and 3** Matthew Brigger, Christopher Wootten, Ozan Gökler
18.30-18.50	**Oral Presentations-1 (3+2 min)** **Chairs:** Christopher Wootten
	Posterior Tracheopexy for the Treatment of Tracheomalacia: Is Robotic Assisted Thoracoscopy an Advantage? M Torre, F Lena, F Palo, G Mattioli
	Fetosopic Tracheal Occlusion. Experience in a High Complexity University Hospital MM Urquizo Lino, J Camacho
	Increased Prevalence of Laryngeal Clefts in Patients with Vascular Rings I O'Riordan*, L Cole**, A Mohamed**, B Zendejas**, S Choi*
18:30-19:00	**Welcome Speech** Tutku Soyer Çiğdem Ulukaya Durakbaşa Matthew Brigger Thomas Ciecierega Christophe Faure
19:00-19:40	**"Climb Your Own Everest: Find Your Place in Life" by Nasuh Mahruki**
19:40-20:10	**Children's Choir**
20:10-22:30	**Welcome Cocktail**

SCIENTIFIC PROGRAM

1 MAY 2025, THURSDAY	
HALL C (Aerodigestive Societ-II)	
07:30	**Welcome**
07:45-08:45	**ROOM 1 Plenary Talk**
08:45-09:45	**Microlaryngoscopy, Tracheobronchoscopy and the Management of Laryngeal Intubation Injury** Christopher Wootten, Thirunavukkarasu Saravanamuthu
09:45-10:45	**Bedside and Instrumental Evaluations of Swallowing : Techniques and Interesting Cases** Numan Demir, Kimberly Morris
10:45-11:00	**Coffee Break**
11:00-12:00	**Case Discussion: Caustic Ingestion, Button Battery Injuries** Çiğdem Ulukaya Durakbaşa, Sari Acra, Seema Khan
12:00-13:00	**Pediatric Dysphagia: Thickeners and Oral Ties** Kimberly Morris, Numan Demir
13:00-13:45	**Lunch**
13:45-14:45	**When to/not to Use Stents in the Aerodigestive Tract** Juan Anton-Pacheco, Matthew Brigger, Jamie Robinson
14:45-16:00	**Congenital Airway Malformations: Laryngomalacia, Vallecular Cysts, Saccular Cysts, Clefts, Recurrent Croup, Tracheal Rings** Lyndy Wilcox, Ömer Faruk Ünal
16:00-16:15	**Coffee Break**
16:15-17:15	**Injectable Fillers for Vocal Fold Movement Impairment** Patrick Scheffler
17:15-18:30	**The Lung at Risk: PFTs, BAL (Including BAL in the Diagnosis of Aspiration), Role of Chest Imaging--When to CT?** Sara Zak, Bülent Karadağ, Mikhail Kazachkov
18.30-18.45	**Oral Presentations-1 (3+2 min)** **Chairs:** Matthew Brigger
	Use a Decanulation Protocol in the Pediatric Population MM Urquizo Lino, J Camacho
	Fetal Airway Assessment MM Urquizo Lino, J Camacho
	Association Between Subglottic Stenosis and Intubation in Tracheostomized Pediatric Patients MM Urquizo Lino, J Camacho
	Thoracoscopic Division of an Incomplete Double Aortic Arch MD Traynor, SA Husain, ZJ Kastenberg
18:30-19:00	**Welcome Speech** Tutku Soyer Çiğdem Ulukaya Durakbaşa Matthew Brigger Thomas Ciecierega Christophe Faure
19:00-19:40	**"Climb Your Own Everest: Find Your Place in Life" by Nasuh Mahruki**
19:40-20:10	**Children's Choir**
20:10-22:30	**Welcome Cocktail**

SCIENTIFIC PROGRAM

1 MAY 2025, THURSDAY	
HALL D TROAD (Family Meeting Event)	
10:00-15:00	
18:30-19:00	**Welcome Speech** Tutku Soyer Çiğdem Ulukaya Durakbaşa Matthew Brigger Thomas Ciecierega Christophe Faure
19:00-19:30	**"Climb Your Own Everest: Find Your Place in Life" by Nasuh Mahruki**
19:30-22:30	**Welcome Cocktail**

SCIENTIFIC PROGRAM

2 MAY 2025, FRIDAY	
08:00-09:00	**Quality of Life Research in Esophageal Atresia** **Chairs:** Graham Slater, Ivana Sabolic
	Results of International QOL Initiative Michaela Dellenmark-Blom
	QOL in Adult Esophageal Atresia Patients Andre Rietman
	QOL as Experienced by the Patients and from the Parental Perspective Anke Widenmann
09:00-10:00	**Transition and Adulthood** **Chairs:** Philipp Schwabl, Caroline Love
	Core Outcome Sets in Esophageal Atresia Rebecca Thursfield
	Experience of Parents Vuokko Wallace
	A Real Life Follow-up of Adult Esophageal Atresia Patients: What are the Challenges? Umut Berk Şahanlık, Vito Guidice
10:00 - 10:30	**Coffee Break**
10:30-11:30	**Surgical Treatment of Esophageal Atresia-Tracheoesophageal Fistula** **Chairs:** Benjamin Zendejas-Mummert, Stefaan Tytgat, Rony Sfeir
	Tips and Tricks in Thoracoscopic Repair of Esophageal Atresia Dariusz Patkowski
	Surgical Treatment Options in Long-gap Esophageal Atresia Aaron Garrison
	Novel Treatment Modalities in Esophageal Atresia and the Future Perspectives Oliver Muensterer
11:30-12:30	Nestlé HealthScience **Nestle Satellite Symposium** **Challenges and Solutions for Enteral Nutrition in Esophageal Atresia and Other Gastrointestinal Impairment Conditions** **Tutku Soyer:** Enteral Nutrition and EA: Setting the scene **Frederic Gottrand:** Enteral Nutrition Indication in EA **Claudio Romano:** Considerations for Enteral Feeding in Children with GI issues
12.30-13:30	**Lunch and Poster Exhibition**
	Electronic Poster - A **Chairs**: Michaela Dellenmark Blom, Anne Sophie Holler
	Understanding the Emotional Journey of Parents of Young Children Born with Esophageal Atresia: Insights from a Focus Group Study J Bennett*, R Micalizzi*, B Zendejas*, K Woods*, L Cardoni*, L Cole**, L Frain*, A Mohamed*, J Yasuda***, P Ngo***, A Widenmann****, G Slater****, M Dellenmark-Blom*****
	Parental Perspectives of Disease Burden and Healthcare Experiences in Young Children with Esophageal Atresia A Mohamed*, M Dellenmark-Blom**, J Bennett*, R Micalizzi*, K Woods*, L Cole***, L Frain*, J Yasuda****, P Ngo****, A Widenmann*****, G Slater*****, B Zendejas*
	Bridging Gaps in Care of Children with EA. Implementation of Family Liaison Nurses in German Hospitals. J Seifried*, L Lang**, A Widenmann*, J Hubertus**

SCIENTIFIC PROGRAM

2 MAY 2025, FRIDAY

	Revisiting the Turkish Esophageal Atresia Registry for Quality Indicators T Soyer*, SA Bostancı**, Ç Ulukaya Durakbaşa***, C Özcan****, İ Çiftçi*****, G Göllü******, A Parlak*******, EB Çığşar Kuzu********, BD Demirel*********, OD Ayvaz**********, B Fırıncı**********, A Şencan***********, A Temiz************, E Özçakır**************, S Özaydın***************
	Physical Activity Enjoyment and Physical Self-Concept Positivity Among Teenagers with Esophageal Atresia: A Comparative Survey TT König*, L Frankenbach**, A Holler***, J Brendel*, C Oetzmann von Sochaczewski****, L Wessel*****, A Widenmann******, OJ Muensterer***, C Niessner*******
	Developing a Core Data Set for Esophageal Atresia Care and Research N Teunissen*, J Brendel**, R Wijnen*, S Eaton***
	Evaluation of the Results of Multidisciplinary Esophageal Atresia Outpatient Clinic S Hancıoğlu*, F Eren**, F Zirek***, İ Erensoy****, S Hepçin*****, B Yağız*, BD Demirel*
	Improving Medical Care for Children with Esophageal Atresia Through Telementoring – Final Results of the TIC-PEA Study MC Stefanescu*, TT König**, LM Frankenbach*, E Gianicolo***, OJ Muensterer****
	Some Epidemiological Aspects of GERD in a Group of Children with Esophageal Atresia E Levkovich, K Marakhouski, A Sautin, A Svirsky
	General Usability and Effectiveness of the Pediatric Patient-Generated Index (pPGI) for Esophageal Atresia Follow-up: Insights from Children and Clinicians Z Nafees*, J Ferreira*, E Guadagno*, N Ow*, N Mayo, D Poenaru*, JM Laberge* McGill University, Montreal, Kanada / **McGill University, Montreal, Kanada / *University of British Columbia, Kanada
	General Ocelot Study: Defining and Measuring the Core Outcomes for People Born With Oesophageal Atresia and/or Tracheo-Oesophageal Fistula L Gutierrez Gammino, N Teunissen*, L Bray*, J Faulkner*, P Cullis**, S Gorst**, R Thursfied** Servicio de Cirugia Pediatrica, Hospital Pedro de Elizalde, Buenos Aires, Argentina / **Department of Pulmonology, Erasmus MC, University Medical Center Rotterdam, Rotterdam, the Netherlands / *Edge Hill University, Liverpool, United Kingdom / **TOFS Patient Support Group, Nottingham, United Kingdom / ***Royal Hospital for Children & Young People, Edinburgh, United Kingdom / **University of Liverpool, Liverpool, United Kingdom / ****Department of Paediatric Respiratory Medicine Alder Hey Children's Hospital NHS Foundation Trust Liverpool, United Kingdom
	Electronic Poster - B **Chairs:** Amine Ksia, Ülgen Çeltik
	Thoracoscopic Salvage Surgery for Oesophageal Atresia Is Feasible After Previous Thoracotomy. C Pardy*, D Borselle**, AS Martinho***, S Giuliani*, S Tytgat****, J Correia-Pinto***, A Bonnard*****, D Patkowski**, S Rothenberg******, P De Coppi*
	Isolated Tracheo-Esophageal or Broncho/Esophageal Fistula: Should We Prefer an Individualized Multidisciplinary or a Standardized Approach? M Torre*, G Mandrile*, G Brenco*, S Buratti**, R D'Agostino**, G Mattioli*
	Reversed Gastric Tube Esophagoplasty in Long Gap Esophageal Atresia: Short and Long-Term Post Operative Complications H Drissi*, M Oumaya**, Y Ben Ahmed*, A Ben Younes**, MS Jlidi**
	Surgical Strategies and Outcomes in Newborns with Esophageal Atresia and Tracheoesophageal Fistula Associated with Duodenal Atresia D Borselle, S Gerus, D Patkowski
	Method of Internal Traction in the Management Long Gap Esophageal Atresia: Our Experience A Podkamenev, R Ti, S Kuzminykh, V Dvoreckiy, A Syrtsova, O Murashova
	Esophageal Stenosis: Is Home Catheter Balloon Dilation a Solution for an Unsolved Problem? O Diez, B Diez-Mendiondo, J Hencke, S Loff
	Unusual Presentation of Esophageal Perforation Following Esophageal Elongation Procedure: A Case Study N Almefleh
	Long Gap Oesophagus Atresia, a Challenging Primary Repair. I Apostolopoulou, I Chronopoulou, G Iordanoglou, N Kelaidi, C Siouli, C Petropoulou, N Gkavera, A Krikri

SCIENTIFIC PROGRAM

2 MAY 2025, FRIDAY	
	Benefit of Pharyngostomy in Long Gap and/or Complicated Esophageal Atresia R Sfeir, P Fayoux, A Maltezeanu, F Gottrand, D Sharma
	Surgical Approaches and Mortality Outcomes in Very Low Birth Weight Infants with Esophageal Atresia SA Bostancı*, İ Akbaş**, VS Çayhan***, EE Erten**, AN Abay***, A Ertürk*, Cİ Öztorun*, S Demir***, MN Azılı*, E Şenel*
	Repair of Type 2 Laryngeal Cleft with Esophageal Atresia + Tracheoesophageal Fistula C Topsakal*, G Şalcı**, HS Yalçın Cömert**, M İmamoğlu**, H Sarıhan**
13:30-14:10	**Patient Registries for Esophageal Atresia** **Chairs:** Jan F Svensson, Anke Widemann
	How to Develop a Population-Based Esophageal Atresia Registry? Rony Sfeir
	Establishing International Collaboration by Using National Esophageal Atresia Registries Rene Wijnen
14:10-15:10	**Gastroesophageal Reflux and Esophageal Atresia** **Chairs:** Funda Çetin, Gökhan Baysoy, Mohammed Abdel Aziz
	Routine Use of PPI in Esophageal Atresia Children Under Age 1 Year: Should it still be recommended? Iain Yardley
	Should it be a Standard or a Personalized Treatment for GERD in Esophageal Atresia Patients? Michiel van Wijk
	Surgical Treatment of GERD in Esophageal Atresia Patients: Indications, Technique and Outcome Gürsu Kıyan
15:10-15:40	**Coffee Break**
15:40-16:40	**Development of a Global Esophageal Atresia Initiative** **Chairs:** Christophe Faure, Tutku Soyer
	Expert Forum Mohamed El-Debeiky, Marcelo Mauricio Urquizo Lino, EAT Representative
16:40- 17:20	**Difficult Cases** **Chairs:** Christophe Faure, Frederic Gottrand, Usha Krishnan, Rene Wijnen, Michaela Dellenmark-Blom, Tom Kovesi, Anastassios Koumbourlis, Michiel van Wijk, Amornluck Krasaelap, EAT Representative
17:20-18:30	**Oral Presentations-1 (3+2 min)** **Chairs:** Özlem Boybeyi, Gonca Gerçel
	Esophageal Atresia and Genetic Study: Experience of a Single Center G Brunetti, A Di Pede, L Valfrè, F Beati, DU De Rose, M Magliozzi, A Braguglia, I Capolupo, A Dotta, A Conforti
	Environmental Exposure History and Its Contribution to Esophageal Atresia: A Case-Control Study M Çelik*, Aİ Anadolulu**, SS Yalçın*, Ö Boybeyi***, Ç Ulukaya Durakbaşa**, T Soyer****
	Are National Guidelines for the Care Pathway of Esophageal Atresia Being Followed During the First Year of Life? M Pruche*, A Lapillonne**, M Antoine*, A Bonnard***, N Caron****, N Panait*****, S Irtan******, T Lamireau*******, D Forgues********, I Talon*********, A Le Mandat**********, V Fouquet**********, A Guinot**********, C Jacquier**********, N Berte**********, L Bridoux-Henno**********, F Elbaz**********, F Laconi**********, J Michel**********, C Borderon**********, H Lardy**********, A Haffreingue**********, M François**********, F Schmitt**********, P Buisson**********, J Lecompte**********, D Potop**********, F Auber**********, I Cousin**********, C Tölg**********, C Crémillieux**********, M Pouzac**********, A Nicolas**********, C Pelatan**********, O Jaby**********, C Ternynck*, R Sfeir*, F Gottrand*, M Aumar*

SCIENTIFIC PROGRAM

2 MAY 2025, FRIDAY

Stricture Classification of Pediatric Esophageal Strictures (SCOPES): The Use of a Novel Stricture Classification System to Predict Response to Endoscopic Therapy
B Oby*, S Staffa**, P Ngo*, D Chang*, M Manfredi***, J Yasuda*

Characterization of Eosinophilic Esophagitis in Patients with Esophageal Atresia: A Multicenter International Study
M Aumar*, U Krishnan**, H Mousa***, M Antoine*, C Faure****, M Veira*****, R Tambucci******, L Maria Antoniello*******, J Svensson********, A Koivusalo*********, K Katileta**********, M van Wijk**********, Ç Ulukaya Durakbaşa**********, S Oliva**********, S Vandevelde**********, N Zevit**********, R Nassar**********, T Soyer**********, N Thapar**********, H Hölz**********, C Tzivinikos**********, S Husby**********, V Urbonas**********, F Çullu Çokuğraş**********, MdC Espinheira**********, A Papadopoulou**********, L Mortain**********, M Leroy*, F Gottrand*

Are Airway Microbiota and Inflammation in Children with Esophageal Atresia Related to Reflux Aspiration?
R Dissanayake*, H Yuan*, M Coffey**, I Traini*, SY Chin*, J Menzies***, J Hughes****, I McKay*, J van Dorst*, C Hodgkins*****, S Leach*, C Ooi**, U Krishnan**

Clinical Yield of Esophagogastroduodenoscopy and pH-Impedance Testing in Esophageal Atresia Patients Performed According to International Guidelines
C Mussies*, M van Lennep*, M Benninga*, R Gorter**, U Krishnan***, M van Wijk*

High Resolution Manometry in Patients with Esophageal Atresia: Classification and Relation with Clinical Symptoms
M van Lennep*, C Mussies*, R Gorter**, U Krishnan***, M van Wijk*

Pilot Study: The Role of Body Surface Gastric Mapping in Evaluating Gastric Function in Children with Esophageal Atresia
S Raza*, G Humphrey**, D Foong***, S Kelly****, S Calder*****, G O'Grady******, V Ho*******, U Krishnan********

Comparison of Proactive vs Reactive Endoscopic Approaches for Surveillance in Patients Post-Esophageal Atresia Repair
C Sanon, JE Frias Mantilla, H Bacha, A Bouragbi, AM Sant'Anna

Is Health-Related Quality of Life in Children Born with Esophageal Atresia-Tracheoesophageal Fistula Reduced Compared with General Population Norms and What Are the Main Associated Factors? – A Systematic Literature Review
A Abrahamsson*, U Krishnan**, C Faure***, T Kovesi****, A C Koumbourlis*****, R Wijnen******, L Dall'Oglio*******, D von Allmen********, F Gottrand*********, P Lobos**********, M van Wijk**********, J Dingemann**********, J H Quitmann**********, M Aumar**********, A Widenmann**********, G Slater**********, T Soyer**********, C de Vos**********, M Dellenmark-Blom**********

The Impact of OA/TOF Associated Feeding Difficulties on Parent Well-Being
A Stewart*, R Govender**, C Smith***, S Eaton****, P De Coppi****, J Wray*

Prevalence and Predictors of Mental Health Difficulties in Adolescents Born with Esophageal Atresia in Conjunction with Transfer from Pediatric to Adult Care – A Nationwide Prospective Observational Study in Sweden
M Dellenmark-Blom*, E Gustafsson**, E Omling***, C Reilly****, H Engstrand Lilja*****, J F Svensson******, S Persson*******, L Jönsson*******, V Gatzinsky*******, N Högberg**, K Abrahamsson*******, T Wester******, E Öst******

Quality of Life and Burden of Disease in Parents of Children Born with Esophageal Atresia – A Review
S Witt*, M Dellenmark-Blom**, M Hagen***, J Dingemann****, J Quitmann*

SCIENTIFIC PROGRAM

3 MAY 2025, SATURDAY	
HALL A	
07:45-08:00	**Video presentations (3+2 min)** **Chairs:** Gülnur Göllü Bahadır
	Use of Endovac Under 1000 Grams Babies with Esophageal Atresia MM Urquizo Lino, J Camacho
	Left-Sided Thoracoscopic Redo Esophageal Anastomosis for Intractable Post-EA Stricture: Experience at Cairo University H Seleim*, A Wishahy**, B Magdy**, M Elsoudi**, M Elbarbary**
	Efficacy of Endoscopic Vacuum Therapy in Treating Large Esophageal Perforation in a Pediatric Patient M Pickens, T Piester, N Pattamanuch, M Abts, A Utria, K Riehle, M Dellinger, A Krasaelap
08:00-09:00	**Respiratory Problems in Esophageal Atresia** **Chairs:** Anastassios Koumbourlis, Bülent Karadağ, Caroline Love
	Challenges and Long Term Concerns in Respiratory Care in Esophageal Atresia-Tracheoesophageal Fistula Patients Tom Kovesi
	Management of Tracheal Pouches After Esophageal Atresia Repair Matthew Brigger
	Bronchiectasis in Esophageal Atresia Patients Yasemin Gökdemir
09:00-10:00	**Tracheomalacia** **Chairs:** Tom Kovesi, Zafer Dökümcü, Lyndy Wilcox
	Conservative Treatment of Tracheomalacia in Esophageal Atresia Patients Anastassios Koumbourlis
	Surgical Treatment of Tracheomalacia: To whom and how? Benjamin Zendejas-Mummert
	Congenital Aerodigestive Anomalies Associated with Esophageal Atresia-Tracheoesophageal Fistula Colin Butler
10:00 - 10:30	**Coffee Break**
10:30-11:30	**Anastomotic Strictures** **Chairs:** Gülnur Göllü Bahadır, Amine Ksia
	Optimal Management of Recurrent Anastamotic Strictures in 2025 Amornluck Krasaelap
	Use of Steroids in Dilatation Treatment Çiğdem Ulukaya Durakbaşa
11:30-12:30	NUTRICIA **Nutricia Satellite Symposium** **Numil Gıda Ürünleri San. ve Tic. A.Ş.** **Chair:** Ödül Eğritaş Gürkan
	Enteral Nutrition in Esophageal Atresia Patients with Eosinophilic Esophagitis Usha Krishnan
12.30-13:30	**Lunch and Poster Exhibition**
	Electronic Poster - A **Chairs:** Yasemin Gökdemir, Zane Abola
	Sleep-disordered breathing and dysphagia in children with esophageal atresia and/or tracheoesophageal fistula T Krishnananthan*, A O'Connor**, J Hughes***, G Thambipillay*, A Teng*, U Krishnan****

SCIENTIFIC PROGRAM

3 MAY 2025, SATURDAY

Support of EA children through a network of speech-language professionals. The NEST project.
S Bergmann*, O Muensterer*, J Seifried**, A Widenmann**

Peripheral airway function in adolescents operated for esophageal atresia
V Gatzinsky*, M Dellenmark-Blom**, E Axman***, L Jönsson**

Tracheomalacia and airway obstruction among infants with esophageal atresia with/without tracheoesophageal fistula
E Lapidus-Krol*, E Propst*, N Wolter*, J Siu*, P Campisi*, O Honjo*, T Moraes*, M Marcon*, M Gould*, P Chiu**

Evaluation of Pulmonary Complications in Patients Diagnosed with Esophageal Atresia: A Single-Center Study
B Özgünay*, Ö Kılıç Bayar**, Ş Karabulut*, M Selçuk Balcı*, CA Yıldız*, AC Bakır**, MM Akkitap Yiğit*, EE Baysal*, F Özdemircioğlu*, E Uğurlu*, G Alışbeyli*, AP Ergenekon*, K Karadeniz Cerit**, E Erdem Eralp*, Y Gökdemir*, G Kıyan**, B Karadağ*

Prevalence of attention deficit hyperactivity disorder in school-aged children and adolescents born with esophageal atresia - preliminary results from a nationwide follow-up study in Sweden
E Öst*, E Gustafsson**, E Omling***, C Reilly****, H Engstrand Lilja*, J F Svensson*, L Jönsson*****, V Gatzinsky*****, N Högberg**, K Abrahamsson*****, T Wester******, M Dellenmark-Blom*******

Quality of life at the age of 6 years in children operated at birth for esophageal atresia
E Bitoumbou*, A Bonnard**, A Lapillonne***, C Jacquier****, M Antoine*****, N Caron******, A Guinot*******, T Lamireau********, S Irtan*********, L Bridoux-Henno**********, C Dumant**********, A Breton**********, J Lirussi Borgnon**********, I Talon**********, A Fabre**********, N Panait**********, A Ranke**********, F Laconi**********, V Fouquet**********, N Kalfa**********, D Djeddi**********, S Willot**********, C Dupont**********, A Turquet**********, C Crémillieux**********, E Darviot**********, C Borderon**********, O Jaby**********, M Pouzac**********, C Pelatan**********, A Comte**********, P De Vries**********, A Nicolas**********, V Triolo**********, C Tölg**********, S Geiss**********, L Cadart*****, F Gottrand*****, M Aumar*****

Developing a Disease-Specific Questionnaire for Assessing Quality of Life and Burden of Disease in Parents with children born with Esophageal Atresia
S Witt*, M Hagen**, M Dellenmark-Blom***, J Dingemann****, J Quitmann*

Importance of Health-Related Quality of Life in Psychological Support during Transition of Children with Oesophageal Atresia to Adult Care
L Duvnjak*, I Sabolić**, D Šoša Škrljak**, M Pasini**, M Stilinović***

Development of a patient-reported outcome measure for symptoms of respiratory disease in esophageal atresia: experiences reported in young children
M Dellenmark-Blom*, J Bennett**, R Micalizzi**, K Woods**, L Cardoni**, L Cole***, L Frain**, A Mohamed**, J Yasuda****, P Ngo****, A Widenmann*****, G Slater*****, B Zendejas**

Children and young people with oesophageal atresia and/or tracheoesophageal fistula have a high burden of care and significant respiratory complications: a 20 year experience in a tertiary paediatric centre
K Rose*, L Brown*, P Lawrence*, F Murphy**, J Minford**, R Partridge**, A Donne***, J Ducey**, R Thursfield*

SCIENTIFIC PROGRAM

3 MAY 2025, SATURDAY	
	Electronic Poster - B **Chairs:** Ivana Sabolic, Fayssal Lazrak
	Iron deficiency anemia is frequent in children with esophageal atresia C Faure, K Kelu, C Daoust, A Aspirot
	Nerve injury and vocal cord paralysis after esophageal atresia and tracheoesophageal fistula: systematic review and meta-analysis T Soyer*, SM Akıncı**, B Pişiren**, UE Arslan***, Ö Boybeyi**
	Management and surgical outcomes in esophageal atresia with proximal fistula (Gross Types B/D): insights from the Turkish Esophageal Atresia Registry (TEAR) Ü Çeltik*, Ç Ulukaya Durakbaşa**, G Şalcı***, T Soyer****, SA Bostancı*****, A Karaman******, AE Hakalmaz*******, İ Çiftçi*******, A Parlak*********, D Demirel**********, G Göllü**********, B Çığşar Kuzu**********, İ Akkoyun**********, H İlhan**********, ŞS Kılıç**********, O Uzunlu**********, A Süzen**********
	Optimizing long-gap esophageal atresia repair: a multicenter retrospective study D Borselle*, J Davidson**, L Magni***, S Tytgat***, S Loukogeorgakis****, Pd Coppi****, D Patkowski*
	Laryngotracheal anomalies in patients with esophageal atresia MM Urquizo Lino, J Camacho
	Colonic interposition: a 10-year institution experience A Walther, A Garrison, K Cain, A Isphording, M Adams, D von Allmen, D von Allmen
	The long-term outcomes and quality of life of patients with long gap esophageal atresia A Rozensztrauch
	Very low birth weight neonates and esophageal atresia: primary or delayed esophageal-esophageal anastomosis? a single center experience G Brunetti, L Valfrè, F Beati, I Capolupo, A Di Pede, F Fusaro, P Bagolan, A Conforti, A Dotta
	Long-term outcome of esophageal atresia and distal tracheoesophageal fistula repaired through minimal and extensive mobilization of upper pouch D Yadav*, SK Acharya**, V Jain*, A Dhua*, P Goel*, S Agarwala*
	Right-sided thoracoscopic repair of esophageal atresia and tracheoesophageal fistula: feasibility and outcomes in patients with accompanying congenital vascular anomalies D Borselle, D Patkowski
13:30-14:10	**Eosinophilic Esophagitis (EoE) and Esophageal Atresia** **Chair:** Thomas Ciecierega
	Endoscopy and Diagnostic Approach to EoE in Esophageal Atresia Patients Ödül Eğritaş Gürkan
	When and How to Treat EoE in Esophageal Atresia Patients Usha Krishnan
14:10-15:10	**Management of Recurrent and Congenital Tracheoesophageal Fistula** **Chairs:** Gonca Tekant, JoAnne Fruithof
	Management of Congenital H Type Tracheoesophageal Fistula Stefaan Tytgat
	Diagnosis and Surgical Management of Recurrent Tracheoesophageal Fistula Tutku Soyer
	Endoscopic Treatment of Recurrent and Congenital Tracheoesophageal Fistula Christopher Wootten
15:10-15:40	**Coffee Break**

SCIENTIFIC PROGRAM

3 MAY 2025, SATURDAY	
15:40-16:40	**Dysphagia and Swallowing Disorders in Esophageal Atresia** **Chairs:** Sandra Bergmann, Mutaz Sultan
	Assessment of Swallowing Problems in Chidlren with Esophageal Atresia Madeleine Aumar
	Treatment of Dysphagia and Oral Aversion After Esophageal Atresia Repair: Strategies to Maintain the Swallowing Skills Numan Demir
	Feeding of Esophageal Atresia Patient with Swallowing Problems Fatma Ilgaz
16:40- 17:20	**Basic Science and Future Research** **Chairs:** Christophe Faure, Dariusz Patkowski
	Does Tissue Enginering Promise a New Replacement Method in Esophageal Atresia? Natalie Durkin
	Has Experimental Work in Esophageal Atresia Translated to Clinical Grounds? Aaron Zorn
17:20-18:30	**Oral Presentations-2 (3+2 min)** **Chairs:** Başak Erginel, Kıvılcım Karadeniz Cerit
	Characterisation Of Upper Oesophageal Function In Esophageal Atresia Patients With Dysphagia M Coffey*, S Kelly*, J Hughes**, M Szczesniak***, T Omari****, U Krishnan*
	Comparison Of Videofleuroscopic And Fiberoptic Endoscopic Evaluation Of Swallowing In Children With Esophageal Atresia T Soyer*, Ş Hoşal**, N Demir***
	The Relationship Between Nutritional Status And Surgical Outcomes In Patients With Esophageal Atresia: Findings From The Turkish Esophageal Atresia Registry T Soyer*, S Arif Bostancı**, Ç Ulukaya Durakbaşa***, C Özcan****, İ Çiftçi*****, G Göllü******, A Parlak*******, EB Çığsar Kuzu********, BD Demirel*********, İ Akkoyun**********, B Fırıncı***********, G Salcı***********, O Devrim Ayvaz***********, A Şencan***********, H İlhan**********, G Kıyan**********, AE Hakalmaz**********, A Karaman**********, F Saraç**********, SS Kılıç**********, O Uzunlu**********, A Temiz**********, E Özçakır**********, B Erginel**********, A Yıldız**********, AO Erdem**********, S Sancar**********, A Sü zen**********, A Atıcı**********, S Özaydın**********, E Yeşildağ**********, MA Özen**********, O Dağ**********
	Nutritional Status At The Age Of 6 Years Of Children Operated At Birth For Oesophageal Atresia E Bitoumbou*, A Bonnard**, A Lapillonne***, M Antoine*, C Jacquier****, N Caron*****, A Guinot******, T Lamireau*******, S Irtan********, L Bridoux-Henno*********, C Dumant**********, A Breton**********, J Lirussi Borgnon**********, I Talon**********, A Fabre**********, N Panait**********, A Ranke**********, F Laconi**********, V Fouquet**********, N Kalfa**********, D Djeddi**********, S Willot**********, C Dupont**********, A Turquet**********, C Crémillieux**********, E Darviot**********, C Borderon**********, O Jaby**********, M Pouzac**********, C Pelatan**********, A Comte**********, P De Vries**********, A Nicolas**********, V Triolo**********, C Tölg**********, S Geiss**********, L Cadart*, F Gottrand*, M Aumar*
	Key Factors Linked To The Development Of Restrictive Lung Syndrome In Children Following Surgery For Type III Esophageal Atresia J Goulin*, T Brigly**, F Bastard*, A Bonnard***, V Rousseau****, T Gelas*****, A Guinot******, E Habonimana*******, A Breton********, A Ranke*********, I Talon**********, S Irtan**********, T Lamireau**********, C Jacquier**********, F Elbaz**********, N Kalfa**********, N Panait**********, V Fouquet**********, H Lardy**********, A Scalabre**********, P Buisson**********, M Margaryan**********, F Auber**********, C Grosos**********, C Borderon**********, C Tölg**********, G Podevin*, R Sfeir**********, F Gottrand**********, F Schmitt*

SCIENTIFIC PROGRAM

3 MAY 2025, SATURDAY	
	High Prevalence Of Pulmonary Abnormalities On Chest CT And Changes In Pulmonary Function In Adult Patients Born With Esophageal Atresia: Follow-Up In Adulthood Is Needed S Wintels*, J Van De Ven**, L Visser**, A Duinisveld**, P Ciet***, H IJsselstijn*, R Wijnen*, J Vlot*, L Kamphuis**
	Pulmonary Function In Childhood After Thoracoscopic Esophageal Atresia Repair T Teunissen, L Magni, D Focke, J Verweij, E Reuling, J Bittermann, M Lindeboom, B Arets, S Tytgat
	Tracheostomies For Infants With Esophageal Atresia With/Without Tracheoesophageal Fistula (EA/TEF)- A Canadian Multi-Centre Study P Chiu*, E Lapidus-Krol**, E Propst*, N Wolter*, J Siu*, P Campisi*, O Honjo*, E St-Louis***, J Laberge***, K Jeong****, R Baird****, A Aspirot*****, S Laberge******, C Faure******
	Amylase Levels In Chest Tube Output: A Biomarker For Early Detection Of Esophageal Leaks In Children A Mohamed, R Leslie, S Mohammed, F Demehri, B Zendejas
	Transcervical Innominate Artery Suspension In EA/TEF Patients S Krishnapura, D Von Allmen
	Pure Esophageal Atresia: Comparison Of Thoracotomy Vs. Thoracoscopy N Newland*, J Snajdauf*, A Kokesova*, S Coufal**, J Styblova*, M Rygl*
	Risk Factors Influencing The Outcomes Of Treatment Of Esophageal Atresia Type C In Astana Z Sakuov*, K Bauyrzhan**, D Rustemov*, V Lozovoy***, A Erekeshov****, N Zheldybayev*****, K Rysbekov***
	Staged Thoracoscopic Internal Traction Approach For Repair Of Long Gap Esophageal Atresia With Distal Tracheoesophageal Fistula C Gigena Heitsman*, N Sajankila*, A DeRoss*, M Lopez*, M Maricic**, M Guelfand*
	Thoracoscopic Mobilization And Intraoperative Internal Traction: A Novel Approach For Managing Long-Gap Type C Esophageal Atresia With Distal Carinal Fistula L Magni, T Teunissen, D Focke, J Verweij, E Reuling, D Van Der Zee, M Lindeboom, S Tytgat
	CLOSING REMARKS

ORAL PRESENTATIONS

OP - 1

POSTERIOR TRACHEOPEXY FOR THE TREATMENT OF TRACHEOMALACIA: IS ROBOTIC ASSISTED THORACOSCOPY AN ADVANTAGE?

M Torre, F Lena, F Palo, G Mattioli

IRCCS Istituto Giannina Gaslini, Genova, Italy

Purpose: Posterior tracheopexy (PT) for tracheomalacia can be performed through open, pure thoracoscopic or robotic assisted (RAT) approach. One of the keys of the success is the number of PT stitches, which is variable, and can be limited by technical difficulties. Our aim was to evaluate the role of RAT.

Method: We performed 22 PT since 2019, excluding patients undergoing primary PT during esophageal atresia repair. Group A included 16 RAT, Group B 4 pure thoracoscopy and Group C 2 open cases. We evaluated: preoperative symptoms; endoscopic findings (according to European Respiratory Society (ERS) classification); surgical details (including number of stitches); complications; results (both endoscopic and clinical).

Results: All patients, affected by severe chronic respiratory symptoms, had a tracheomalacia grade 2 or 3 at bronchoscopy (ERS). Ten (45%) had comorbidities (mostly esophageal atresia), 7 were previously submitted to aortopexy. Patients of group B and C were significantly smaller than those of group A. In the latter, the smaller patient was 3 year-old (15 Kg). Average operative time did not differ between groups. In none of the groups intraoperative complications were registered. Robotic assisted PT allowed an easier placement of more PT stitches than pure thoracoscopic PT. Post-operative chylothorax (treated conservatively) and esophageal perforation (treated with a stent) were observed in one case each of group A; another patient of the same group complained of transient dysphagia. Improvement in respiratory outcome (both endoscopic and clinical) were observed in 95% of cases: in group A, 12 (75%) had a complete resolution and 4 (25%) an improvement of symptoms. In the other groups, we observed no symptom resolution, improvement in 5 cases and stable symptoms in 1.

Conclusion: PT is an effective approach for the treatment of tracheomalacia in children. RAT PT is an advantageous approach in patients over 15 Kg

Keywords: tracheopexy; tracheomalacia; robotic assisted surgery; thoracoscopy

OP - 2

FETOSCOPIC TRACHEAL OCCLUSION. EXPERIENCE IN A HIGH COMPLEXITY UNIVERSITY HOSPITAL

MM Urquizo Lino, J Camacho

Department of Pediatric Surgery, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina

INTRODUCTION:

Fetoscopic tracheal occlusion (FETO) is indicated for the treatment of moderate to severe congenital diaphragmatic hernia (CDH), especially when presenting with severe pulmonary hypoplasia and a poor survival prognosis. This technique aims to improve fetal lung development and survival rates at birth. Objective: To show the results of patients undergoing FETO in a single center.

MATERIALS AND METHODS:

Retrospective analysis of fetuses with CDH treated with endotracheal occlusion by fetal tracheoscopy. Pre- and post-procedure observed/expected lung-head ratios (O/E LHR), liver and stomach positions, gestational age (GA) at balloon placement and removal, maternal complications, and perinatal outcomes were recorded.

RESULTS:

9 patients treated between 2021 and 2024 were included. Two CDHs were right-sided. The median O/E LHR was 27.4% (moderate-severe herniation), with the liver herniated in all cases. The median GA at balloon placement was 29 weeks, and removal was performed at 32 weeks. The median duration of endotracheal balloon placement was 24 days. There were no maternal complications. One fetus with right-sided CDH died in utero from severe hydrops. Three patients died in the postnatal stage, two due to severe pulmonary hypoplasia, and one due to neonatal sepsis at 27 days.

DISCUSSION AND CONCLUSIONS:

Balloon placement and removal by fetal tracheoscopy were safe and feasible in all cases, with no fetal or maternal complications. FETO is an effective intervention for moderate to severe CDH. The benefits, risks, complications and potential decisions must be carefully evaluated by a multidisciplinary Fetal Medicine team.

Keywords: FETO, CDH

OP - 3

INCREASED PREVALENCE OF LARYNGEAL CLEFTS IN PATIENTS WITH VASCULAR RINGS

I O'Riordan [1], L Cole [2], A Mohamed [2], B Zendejas [2], S Choi [1]

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Introduction The prevalence of laryngeal clefts in patients with vascular rings has not been described in the literature. We hypothesize that patients with vascular rings are at increased risk of laryngeal clefts from abnormal embryological development of the aerodigestive system. This study aims to evaluate the prevalence of laryngeal clefts diagnosed in patients with vascular rings.

Methods We evaluated an IRB-approved prospective database of patients presenting to our Vascular Ring Center from 2016 to 2024. Data collected included demographics, type of vascular ring, syndromic diagnoses, presenting symptoms, nature of dysphagia, vocal fold mobility, and presence of laryngeal clefts identified on direct laryngoscopy and tracheobronchoscopy (DLB). We excluded patients with a history of esophageal atresia as they are known to have an increased prevalence of laryngeal clefts.

Results A total of 222 patients were analyzed. The male to female ratio was 1.2: 1. The mean age at presentation was 4 years (range: day 1 of life to 18 years, median: 19 months) Underlying genetic diagnosis were present in 25 patients (11%); 22q11 deletion syndrome and Trisomy 21 were the most common diagnoses. Of the entire cohort, 121 patients had a modified barium swallow, and 29 patients (32%) demonstrated aspiration.

There were 120 patients who had a DLB performed by otolaryngology. A laryngeal cleft was diagnosed in 25 patients (21%). Of these patients, 23 had type 1 laryngeal clefts and 2 had type 2 laryngeal clefts. Five patients (20%) underwent laryngeal cleft repair.

Conclusion Pediatric patients with vascular rings often present with diverse respiratory and swallowing symptoms. Our findings reveal an increased prevalence of laryngeal clefts and aspiration risk in this population compared to the general population. We recommend that patients with vascular rings undergo multidisciplinary evaluations with attention to aspiration symptoms warranting evaluation for laryngeal cleft.

Keywords: Vascular ring, laryngeal cleft, dysphagia, aspiration

OP - 4

USE A DECANULATION PROTOCOL IN THE PEDIATRIC POPULATION

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Aim

To report the results of our decannulation protocol performed by the aerodigestive team of the Italian Hospital of Buenos Aires.

Methodology

Retrospective study from 2014 to 2024 of 385 tracheostomized patients, in which the decannulation protocol (CP) was applied by an interdisciplinary team.

In 2014, we implemented a guided decannulation evaluation protocol in patients who had been successfully weaned from prolonged mechanical ventilation, which consisted of 3 parts: 1. Daily evaluation of the need for tracheostomy 2. Measurement of subglottic pressure, decreasing the diameter of the cannula and use of a speaking valve 3. Endoscopic evaluation of the airway, occlusion test according to age and decannulation. Main variable: days of use of the tracheostomy cannula, from the day of surgery to the day of decannulation.

Results

254 children achieved decannulation and were recruited consecutively, from a total of 385 patients tracheostomized in that period. The median age was 30 months, (1-228); the diagnosis of admission was respiratory cause 20% CI 95% (10-35), cardiovascular 15% CI 95% (7-30), neurological 17.5% CI 95% (8-33) and other causes 47.5% CI 95% (32-63). The surgical procedure was percutaneous in 10%, while 90% was open with the Björk technique. A vidobronchoscopy was performed in all cases. The average use of the tracheostomy cannula was 46 days with an IQR (29-144). In the CP group a median of 33 days with CI 95 5 (23-44) obtaining a p 0.0012.

Conclusion

The use of a decannulation protocol applied by an interdisciplinary work team showed a significant decrease in the days of use of tracheostomy cannulas in pediatric patients weaned from respiratory assistance

Keywords: Decanulation protocol, pediatric tracheostomy,

OP - 5

FETAL AIRWAY ASSESSMENT

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INTRODUCTION:

Fetuses with tumors of the head and neck require prenatal US, fetal MRI and Fetal Airway Assessment (FAS). To understand the extent of the lesion, the alteration of fetal airway and the adequate selection of patients for EXIT procedure is necessary a multidisciplinary team work.

AIM:

Describe multidisciplinary management and endoscopic evaluation of the airway in fetuses with head and neck tumors and patients with CDH

MATERIAL AND METHODS:

Report 34 FAS of fetuses with head and neck tumors and CDH with the same pediatric airway team

RESUITS:

14 Fetus with a giant cystic cervical tumor that occluded the larynx and trachea. Require EXIT procedure, FAS and retrograde fetal intubation.

2 Fetus with Congenital High Airway Obstruction Syndrome. Require EXIT procedure, FAS and tracheostomy on site.

1 Fetus with Giant Congenital lung malformation in the left side and bronchogenic cyst on the right. both displace the airway “S’’ form. require Exit procedure, FAS and subsequent lung resection.

6 Fetuses with Cervical Teratoma. Require EXIT procedure, FAS and tracheostomy on EXIT. In the subsequent days the resection of the tumor was made. One of the patients died by accidental decannulation

1 Fetus with Epignathus. Require EXIT procedure, FAS and resection of the tumor.

1 Fetus with Incomplete Congenital High Airway Obstruction Syndrome. Require EXIT procedure, FAS. The diagnosis was a congenital subglottic stenosis and a tracheostomy was made on EXIT.

9 Fetuses with CDH required FETO, we performed 18 fetal tracheoscopies between 29 to 32 weeks of gestation. We were able to improve lung development and increase survival rates.

CONCLUSION:

A multidisciplinary approach allows simulation scenarios, surgical planning with 3D reconstruction model optimizing the EXIT procedure.

The FAS by the same pediatric airway team allowed a potentially reducing morbidity and mortality in this patients group.

Keywords: Fetal Airway, Pediatric airway team

OP - 6

ASSOCIATION BETWEEN SUBGLOTTIC STENOSIS AND INTUBATION IN TRACHEOSTOMIZED PEDIATRIC PATIENTS

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INTRODUCTION:

The Time of endotracheal intubation (TEI) is considered one of the main causes of acquired subglottic stenosis. Studies in the adult population suggest that performing a tracheostomy between days 10 and 15 after intubation could prevent laryngotracheal lesions

AIM:

To determine the timing for tracheostomy that would reduce stenosis´ incidence in pediatric patients.

MATERIAL AND METHODS:

A six-year period retrospective study including children and neonates who required a tracheostomy after endotracheal intubation was performed. Endoscopic findings at the time of tracheostomy were reviewed.

RESULTS:

189 patients underwent tracheostomy during the study period, 72 of which meet the inclusion criteria. The mean age was 40 months. The incidence of stenosis was 21%. The mean length of TEI before tracheostomy was 30 days and the mean age was 23 months. Airway stenosis was found as follows: Grade I 53.3% with TEI of 11 days, Grade II 33.3% with TEI of 20 days and Grade III 13.3% TEI of 56 days. Mean time to stenosis was 56 days in patients under six months of age, whereas in the older group, it was 24 days. Regarding 79% who did not present stenosis, 45% had other airway injuries at the time of video bronchoscopy and tracheostomy: ulcers, edema and granulomas. The mean duration of TEI was 20 days. Currently, 50% of patients have been decannulated.

DISCUSSION AND CONCLUSION:

Endotracheal tube permanence was directly associated with the occurrence and also the severity of airway stenosis in our population. In patients where endotracheal intubation is necessary, measures should be taken to avoid the development of laryngotracheal lesions, considering the performance of a tracheostomy in a preventive manner.

Keywords: Subglotic Stenosis, Tracheal intubation

OP - 7

EVERSION CRUROPLASTY AND COLLAR OVERWRAP: A NOVEL HYBRID APPROACH FOR REFRACTORY GASTROESOPHAGEAL REFLUX DISEASE IN CHILDREN, WITH ASSESSMENT OF MID-TERM OUTCOMES.

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Abstract

Background:

Surgical fundoplication remains integral in managing gastroesophageal reflux disease (GERD) by addressing gastroesophageal valve incompetence. This study introduces a novel hybrid approach, the Eversion Cruroplasty and Collar Overwrap (ECCO) procedure, aiming to combine benefits of conventional partial wrapping and posteromedial cardiopexy, considering gastric fundus anatomical peculiarities as an anti-reflux barrier.

Methods:

A retrospective analysis of pediatric patients presenting with refractory GERD from 2021 to 2023 was conducted. Inclusion criteria focused on primary GERD cases; secondary and redo cases were excluded. Diagnostic modalities included upper gastrointestinal contrast series and endoscopy. Demographic, operative, and postoperative data were assessed.

Results:

Among 57 cases, 8 with recurrent hiatal hernia were excluded. Enrolled cases (n=49) had a mean age of 3.78 years and mean weight of 11.9 Kg. All underwent laparoscopic ECCO procedure, with a mean operative time of 87 minutes.

During follow-up, six children experienced transient gas-bloat, and four had temporary dysphagia to solids. Two cases required revisions for absolute failures, while three managed partial recurrences with proton pump inhibitors. Of the total 49 cases, only nine required post-operative endoscopic assessment, which revealed a fully competent cardia with adequate wrapping in four of them. The remaining 40 cases demonstrated clinical improvement with the cessation of PPIs over a mean follow-up period of 11.6 months.

Conclusions:

'Eversion Cruroplasty' preserves crural pillar muscle excursion, avoiding segmentation seen with traditional suturing. The 'Collar Overwrap' achieves a 90% success rate, aligning the GE-junction while maintaining fundic pouch geometry, emphasizing its effectiveness and anatomical fidelity.

Keywords: Pediatric GERD, Cruroplasty, Hybrid Technique, Partial Wrap, Belching, Dysphagia.

OP - 8

PEDIATRIC ESOPHAGEAL STENT APPLICATIONS: AN ALTERNATIVE TO SURGERY OR A BRIDGE TO DEFINITIVE REPAIR?

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Objective:

Esophageal perforations, strictures, and tracheoesophageal fistulas (TEFs) present significant management challenges in pediatric patients, often requiring surgical intervention. The aim of this study was to evaluate the clinical outcomes of esophageal stent placement for different indications.

Methods:

A retrospective analysis was performed on seven pediatric patients who underwent esophageal stent placement at our centre between January 2018 and January 2025. The age of the patients ranged from 18 months to 16 years. Indications for stent placement included esophageal perforation (28.5%, n=2), anastomotic leak (14.2%, n=1), corrosive esophageal stricture (42.8%, n=3), tracheoesophageal fistula (14.2%, n=1). The time for the removal of the stent ranged from 4 to 6 weeks. Patients were monitored for oral intake, need for additional dilation, complications and final clinical outcome.

Results:

Patients with esophageal perforation (n=2) achieved complete healing without the need for surgery. Perforation sizes ranged from 4 to 1 cm. The patient with an anastomotic leak (n=1) had complete resolution without further surgical intervention. The size of the leak was approximately 4 cm. In patients with corrosive esophageal strictures (n=3), the frequency of dilatation decreased after stent placement. However, two patients experienced late stricture recurrence requiring surgical resection. The patient with a tracheoesophageal fistula (n=1) had a 2 cm fistula that failed to close with the stent and required surgical repair. Overall, stent placement prevented the need for surgery in 71.4% (n=5) of cases.

Conclusions:

The use of an esophageal stent is an effective treatment modality for the management of esophageal perforation and anastomotic leakage and offers a reliable alternative to surgery. Esophageal stents may also be useful for tracheoesophageal fistulas due to button battery or corrosive esophagitis. The use of esophageal stents can also help to maintain the airway by preventing the unwanted connection with the trachea in poor general health and provide an important bridge to surgery, allowing stabilization prior to definitive repair.

Keywords: esophageal stent, esophageal perforation, battery

OP - 9

DOUBLE AORTIC ARCH IN CHILDREN: DIAGNOSTIC CHALLENGES AND SURGICAL MANAGEMENT OUTCOMES

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Introduction:

Double aortic arch (DAA) is a rare congenital vascular anomaly characterized by two aortic arches forming a complete vascular ring that encircles the trachea and/or esophagus, leading to compression and associated symptoms.

Aim:

This study aims to summarize the diagnostic and surgical management experience of children with congenital double aortic arch.

Materials and Methods:

A retrospective review was conducted on the clinical data of children diagnosed and treated for DAA between 1987 and 2024.

Results:

Thirteen patients were included in the study, with 70% being male. The median age at diagnosis was 11.8 months (range: 2–27 months), and the median delay between symptom onset and diagnosis was 14 months. Respiratory symptoms were universal, with stridor observed in 10 of the 13 patients. Gastrointestinal symptoms were reported in 5 cases.

Chest X-rays showed pulmonary infections in all patients and the absence of the aortic knob on the left in 2 cases. Upper gastrointestinal studies revealed a double esophageal impression in 6 cases and a single impression in 3 cases. CT angiography confirmed the diagnosis of DAA in 11 patients.

All patients underwent surgical treatment. Thoracotomy was performed in 7 cases, while thoracoscopy was used in 6 cases. Postoperative outcomes were satisfactory in 9 patients, with mild recurrence of symptoms observed in 2 cases. One patient succumbed postoperatively. No late reoperations were required.

Conclusion:
CT angiography plays a crucial role in the diagnosis of DAA. Thoracoscopy has emerged as a valuable minimally invasive approach for surgical treatment. Overall, surgical outcomes for DAA are excellent, with most patients experiencing significant improvement postoperatively

OP - 10

ESOPHAGEAL STENT PLACEMENT FOR PEDIATRIC ESOPHAGEAL STRICTURES: SAFETY, EFFICACY, AND LONG-TERM OUTCOMES

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Introduction:

The use of esophageal stents in the management of esophageal stenosis in children is still evolving and challenging.

We aimed to evaluate our experience and investigate whether esophageal stents could be used safely and effectively.

Methods:

Charts of patients with caustic or anastomotic esophageal strictures, having undergone esophageal stent placement, from 2006 to 2020 were retrospectively reviewed. The failure of medical treatment and balloon dilations indicated the procedure. It was performed under direct endoscopic or fluoroscopic guidance or both of them. Self-expanding silicone stent (Polyflex) was used for all patients. Clinical data, operative findings and outcomes were analyzed.

Results:

Twenty-three cases were included in the study (13 girls, 10 boys), mean operative age was 4.5 years, caustic stenosis was the first etiology in our series (22 cases) followed by anastomotic esophageal stricture (1 cases). The strictures Length were over 5 cm only in 2 cases, between 2-5 cm in the other cases. An average of 8 sessions per patient of dilation were realized prior to stent placement. Mean time of the procedure was 40 min. Stents were complicated with chest pain and immediate dysphagia in 2 cases, perforation conservatively managed only in one case and migration in 8 cases. Removal of the stents was performed after 3 weeks to 10 months. With follow-up improvement of dysphagia was reported in 13 of patients (57%), 7 children need further dilations, 7 children needed esophageal replacement.

Conclusion:

Esophageal stents may serve as a bridge to definitive surgical repair in the management of esophageal strictures. In our experience, esophageal stents were safe, quick and reliable. However, the development of esophageal stents with improved flexibility, anti-migration features and smaller diameters and lengths could further increase their successful application in children.

OP - 11

CONGENITAL PYLORIC ATRESIA: PRESENTATION, MANAGEMENT, AND OUTCOMES – A SINGLE-CENTER EXPERIENCE

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Introduction:

Congenital pyloric atresia (CPA) is a rare anomaly, accounting for approximately 1% of all intestinal atresias, with an incidence of about 1 in 100,000 live births. CPA can occur as an isolated condition or be associated with other congenital abnormalities. The treatment is primarily surgical, but the prognosis remains poor, especially when associated with epidermolysis bullosa (EB). This study aims to share our experience in the management of CPA.

Patients and Methods:

We conducted a retrospective study of patients diagnosed and operated for CPA, between 1990 and 2019.

Results:

Fourteen cases of CPA were reviewed, with a male predominance (9 boys, 5 girls). The mean age at presentation was 1.8 days. The most common symptom was non-bilious vomiting. Five patients had associated anomalies: three with epidermolysis bullosa (EB), one with Down syndrome, and one with multiple intestinal atresias. A family history was positive in one case, affecting three siblings. Abdominal X-rays showed gastric dilatation with no gas in the remainder of the intestinal tract in 13 cases, and pneumoperitoneum in one. Upper gastrointestinal contrast studies revealed a dilated stomach with significant constriction at the prepyloric region in two cases. Surgical treatment involved excision of the diaphragm and Heineke-Mikulicz pyloroplasty in eight patients, while the remaining six underwent gastroduodenostomy. The overall mortality rate was 64%.

Conclusion:

CPA is a rare condition with a poor prognosis, particularly when associated with other congenital anomalies such as EB and multiple intestinal atresias. Early diagnosis and appropriate surgical intervention are crucial, but the prognosis remains guarded, highlighting the need for further research into improving outcomes for these patients.

Keywords: Congenital, Pyloric Atresia, epidermolysis bullosa, management

OP - 12

CONGENITAL CYSTIC MALFORMATIONS OF FOREGUT IN CHILDREN

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Purpose: Bronchogenic and duplication cysts are congenital foregut malformations that may be asymptomatic or present with symptoms. The gold-standard treatment is surgical excision. This study evaluates the outcomes of patients treated for bronchogenic or duplication cysts at our center.

Methods: A retrospective analysis was conducted on patients who underwent surgical exploration for mediastinal cysts between 2015 and 2025. Demographics, symptoms, imaging findings, surgical techniques, intraoperative observations, histopathology reports and follow-up data were reviewed.

Results: Eleven patients (7 males, 4 females) with a median age of 26 months (range 2–122) were included. Respiratory symptoms, such as dyspnea due to tracheal compression, frequent infections, and hemoptysis, were present in six patients (54%) with three detected prenatally. Five cases were incidentally diagnosed. The cyst was located on the left side in nine patients. One patient had a cervical paratracheal cyst, while another had a cyst with both thoracic and abdominal compartments, necessitating thoracotomy and laparotomy for total excision. Cervical cyst was resected via cervical incision. Five patients underwent thoracoscopic surgery without conversion to thoracotomy while four required direct open surgery. All cysts were centrally located, with a mean size of 38x27x22 mm. Partial excision and mucosal cauterization were required in two patients due to a shared wall with the trachea. Inflammation from previous cyst rupture was found in those two cases. No major complications occurred. Histopathology revealed bronchogenic cysts in eight patients and duplication cysts in three. No recurrences were observed over a median follow-up of 43 months (range 1–106).

Conclusion: Bronchogenic and duplication cysts can cause dyspnea in early infancy or be detected incidentally during childhood. When shared walls with the trachea or esophagus are suspected, partial cystectomy with mucosal cauterization is a safe and effective option.

Keywords: bronchogenic cyst, duplication cyst, congenital

OP - 13

DISC BATTERIES IN THE ESOPHAGUS IN CHILDREN: FIRE IN THE HOLE!

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Aim: Complications of the disc batteries impacted in the esophagus may be life-threatening. They should be extracted immediately when recognized. Our aim is to evaluate the patients who were admitted with disc batteries impacted in the esophagus.

Methods: The patient who were admitted to a single tertiary center with ingestion of disc batteries are included in the study. The patients were excluded if the battery is demonstrated to pass the esophagus at admittance. Age, gender, duration after battery ingestion to extraction, location of the battery, orientation of negative pole of the battery, intraoperative and postoperative complications were retrospectively evaluated.

Results: Eighteen patients (10 boys, 8 girls) are enrolled with a mean age of 3.7 years (1-8 years). Battery was at the 1st, 2nd and 3rd narrowing in 9, 6 and 3 patients, respectively. The median duration after battery ingestion was 8 hours (2-48). No intraoperative complication was encountered during extraction of batteries at the 1st narrowing, but a stricture develepped in1 patient and TEF in another. No peroperative complication or morbidity was encountered in patients with battery at the 2nd narrowing. However, close clinical and radiological follow up was performed in 4 patients in whom the negative pole of the battery was facing posterior esophagus with the fear of deadly aorto-esophageal fistula complication. An esophagus tamponade balloon was provided ready at the bedside for urgent intervention in case of aorto-esophageal fistula. Pneumothorax developped in 1 patient during extraction of the battery at the 3rd narrowing and managed successfully with tube thoracostomy.

Conclusion: Batteries stuck in the esophagus can be life-threatening and should be removed immediately once recognized. Adjacent organs where the negative pole of the battery faces are at significant risk for complications and aorto-esophageal fistula is the deadly one that we are aware but gratefully haven't experienced yet.

Keywords: esophagus, disc battery, ingestion, stenosis, tracheoesophageal fistula, aortoesophageal fistula

OP - 14

LONG-TERM OUTCOMES OF NISSEN FUNDOPLICATION IN CHILDREN: EFFICACY AND PATIENT SATISFACTION

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Introduction

Gastro-esophageal reflux (GOR) is one of the most prevalent foregut diseases in pediatric patients. When medical treatment fails, the surgical approach is considered as the treatment of choice

Aims

Evaluate the long term outcomes of fundoplication performed in our department

Materials and methods

We retrospectively analyzed all patients who underwent Nissen fundoplication in 6 consecutive years from 2014 to 2019 at our department of pediatric Surgery

Results

Over 6 years, 32 patients who consecutive underwent a Nissen fundoplication were included, for 40 procedures in total. There were 20 (62,5 %) males. At the time of first intervention, median age was 28 months and median weight was 11,5 kg. Overall comorbidities were 5, all neurological impairments and no neuromuscular disorders were reported. 30 patients underwent laparoscopic Nissen fundoplication. There was no operation-related death during the study period. No immediate postoperative complications were reported and all our patients were feed on the first day after surgery except for those with neurological impairment. Median hospital stay was 4,1 days. Incidence of dysphagia 3 months after surgery was 23%. 10% of patients had recurrent symptoms at 4 years. Severe dysphagia requiring endoscopy was observed in 2 patients. Overall, only one patient required a redo-fundoplication. The mean follow-up time was 24,4 months. Overall, after surgery, Patients' and parents' perspectives proved to be excellent (no symptoms) or good (mild occasional symptoms easily controlled) in 25 children (78,1 %)

Conclusion

Laparoscopic anti-reflux surgery is of value in children with gastroesophageal reflux disease and long-term results after surgical treatment of GERD by Nissen fundoplication are satisfactory with notably a progressive improvement of symptoms

OP - 15

THORACOSCOPIC SURGERY IN PEDIATRIC PATIENTS: EXPANDING INDICATIONS AND OUTCOMES IN A 15-YEAR EXPERIENCE

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Introduction:

Thoracoscopic surgery and other minimally invasive approaches in children has known an expansion to include several disciplines in the last decade because it is not only safe and efficient but also it reduces hospital stay in a significant way. The aim of this study is to report our experience with thoracoscopy with particular emphasis on indications and outcomes.

Materials and methods:

This is a retrospective study of charts of all patients undergoing thoracoscopic operation at the department of pediatric surgery of Fattouma Bourguiba Hospital in Monastir from 2005 to 2020.

Results:

Sixty-six thoracoscopic procedures were performed on patients aged 3 months to 16 years (mean age: 5.9 years). Among them, 40 cases of hydatic cyst were treated without conversion, though two required reintervention for emphysema, with no complications during follow-up. Thoracoscopy was also used for decortication in 8 empyema cases and for diagnostic purposes in 3 cases of recurrent pleurisy. Thoracoscopic lobectomy was performed in 5 cases, with one conversion. Five neonates underwent surgery for aortic abnormalities, and three for diaphragmatic hernia or eventration, all with uneventful recovery. A thoracoscopic metastasectomy was performed in an 18-month-old with nephroblastoma, and a 3-year-old with unresolved post-traumatic pneumothorax underwent thoracoscopy.

The average operative time was 92.5 minutes, chest tube drainage lasted 3.2 days, and hospital stays ranged from 3 to 15 days. No major intraoperative complications were reported, and early to mid-term outcomes were satisfactory.

Conclusion:

Thoracoscopy is preferred because it is associated with reduced tissue trauma, decreased pain, reduced hospital stay, and equal or even better clinical outcomes when compared to the standard surgical approaches.

OP - 16

FEES IN COMPLEX PEDIATRIC PATIENTS -INITIAL EXPERIENCE, INDICATIONS, AND OUTCOMES

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purpose

FEES (flexible/fiberoptic endoscopic evaluation of swallowing) is widely regarded as a safe and valid method to detect aspiration while eating and drinking. It is also used to classify dysphagia and grade of aspiration in children (Printza et al., 2022; Miller & Willging, 2020). In children with EA, precise assessment of swallowing is an essential element for distinction between oropharyngeal and oesophageal dysphagia. Nevertheless, in many countries, indications and practice of FEES differ widely, and no obligatory or standarized training is necessary (Pizzorni et al; 2024). In this presentation, we describe our experience of implementing FEES in a children's hospital and propose inclusion/exclusion criteria.

method

Eligible children were recruited among patients who presented with dysphagia. The cases were discussed in a multidicsciplinary team. If a consensus was reached on a reasonable indication, FEES was carried out. The findings were correlated with clinical information, other imaging findings and with published literature.

results: Until time of submission, a total of 14 children underwent FEES from February 2024 until November 2024. Main indications included unclear dysphagia and unknown risk of aspiration in children with EA (n=6), with syndromatic disease (n=2) and children with wet voice (n=2). An additional (laryngeal) diagnosis was established in 4 cases. There were no complications. Careful composition of "Pediatric-FEES-team" as well as patient communication in advance of FEES are determined as centerpieces for successful assessment.

conclusion

Pediatric FEES as a safe and valid assessment needs critical rethinking in case of children with complex medical conditions. In accordance with the scientific literature, team structure and professional experience in pediatric dysphagia as well as feeding issues should be considered. The benefits of FEES examination must be weighed against the stress/burden of the examination. FEES and potential consequences for all-daily-life should be considered in advance.

Keywords: FEES, pediatric dysphagia, instrumental dysphagia assessment

OP - 17

INVESTIGATION OF THE EFFECTS OF HYDROXYCHLOROQUINE ON RATS WITH PULMONARY CONTUSION CAUSED BY BLUNT THORACIC TRAUMA

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Purpose

Pulmonary contusion is a common and severe consequence of blunt chest trauma, leading to significant morbidity and mortality. It disrupts the alveolar-capillary barrier, resulting in pulmonary edema, hemorrhage, inflammation, and fibrosis. hydroxychloroquine is an immunomodulatory agent with anti-inflammatory and antifibrotic properties. This study aimed to evaluate the therapeutic effects of HCQ on inflammation, fibrosis, and apoptosis in an experimental rat model of PC.

Method

Thirty-five male Wistar albino rats were divided in five groups: Control, Pulmonary Contusion (3 and 10 days), hydroxychloroquine treated pulmonary contusion (3 and 10 days). The drop-weight technique used to create a pulmonary contusion. Hydroxychloroquine was administered orally at a dose of 100 mg/kg/day. Lung tissues were analyzed histopathologically and immunohistochemically for alveolar edema, congestion, leukocyte infiltration, fibrosis, and the expression of caspase-3, inducible nitric oxide synthase (iNOS), and endothelial nitric oxide synthase (eNOS).

Results

Hydroxychloroquine did not significantly reduce leukocyte infiltration or fibrosis scores in the short term (3 days). A slight decrease in leukocyte infiltration was observed over the extended period of 10 days, although fibrosis exhibited no notable alteration. The expression of caspase-3 was elevated in hydroxychloroquine-treated groups. iNOS levels were significantly elevated in all groups. eNOS expression remained elevated without notable differences across the groups.

Conclusion

Hydroxychloroquine shows restricted anti-inflammatory and antifibrotic properties in this lung contusion model. Although it had potential in regulating inflammatory responses, its effectiveness was inadequate for reducing apoptosis. Further studies are required to determine the best treatment durations and drug combinations.

Keywords: Pulmonary Contusion, Hydroxychloroquine, Inflammation, Fibrosis, Apoptosis, iNOS, eNOS, Caspase-3, Blunt Chest Trauma, Experimental Model.

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"All About Esophageal Atresia and Tracheoesophageal Fistula"

OP - 18

CHARACTERISATION OF UPPER OESOPHAGEAL FUNCTION IN ESOPHAGEAL ATRESIA PATIENTS WITH DYSPHAGIA

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Purpose: Using high resolution impedance manometry (HRIM) we characterised the upper esophageal sphincter (UES) dynamics in children with esophageal atresia (cwEA).

Methods: We retrospectively analysed esophageal HRIM from cwEA (aged 2-18 years) with dysphagia. Subjects performed 5-10ml liquid (IDDSI 0) and bread (IDDSI 7) swallows. UES metrics were analysed using Swallow Gateway.

Results: 14 cwEA with dysphagia were included (9/14 female; age 10.8y (4.8)). 10/14 had a distal tracheo-esophageal fistula, 4/14 had long-gap EA (LGEA), and 6/14 had clinical concerns for aspiration. Table 1 presents the UES metrics. UES relaxation time with bread swallows was: (i) shorter in cwEA with aspiration concerns vs. without, 0.44s (0.41-0.46) vs. 0.58s (0.49-0.63), p=0.03; (ii) shorter for LGEA vs. non-LGEA, 0.41s (0.40–0.41) vs. 0.54s (0.50-0.63), p=0.007; and (iii) shorter if oesophageal bolus transit failed vs. being incomplete, 0.46s (0.41-0.50) vs. 0.63s (0.62-0.70), p=0.008. In cwEA, UES integrated relaxation pressure (IRP) with bread swallows was: (i) higher if oesophageal bolus transit failed vs. being incomplete, -1.3 mmHg (5.5) vs. -7.7 mmHg (1.9), p=0.01; (ii) positively correlated with lower esophageal sphincter IRP-4s, r=0.64, p=0.02. No significant differences in UES metrics were identified in cwEA: (i) those requiring recent anastomotic stricture dilatation, and (ii) with and without a fundoplication.

Conclusion: UES function in cwEA warrants further exploration. HRIM may provide further insights into UES dysfunction, oesophageal dysfunction and aspiration.

UES Metric	Liquid Swallows	Bread Swallows	p-value
Integrated relaxation pressure	-0.5mmHg (6.0)	-3.4mmHg (5.3)	0.03
Relaxation time	0.55s (0.45-0.64)	0.50s (0.44-0.61)	0.002
Max admittance	3.3mS (2.6-4.2)	4.2mS (3.5-5.2)	0.3
Intra-bolus pressure	-2.2 mmHg (-2.9-3.1)	6.6 mmHg (-3.0-8.7)	0.5
Swallow risk index	1.0 (0.5-3.3)	1.3 (0.5-1.5)	0.4
Post deglutitive UES contractile integral	259 mmHg.s.cm (182-385)	261 mmHg.s.cm (160-358)	0.9

Table 1. UES metrics.

Keywords: Esophageal atresia; upper oesophageal sphincter; pharyngeal manometry

OP - 19

STRICTURE CLASSIFICATION OF PEDIATRIC ESOPHAGEAL STRICTURES (SCOPES): THE USE OF A NOVEL STRICTURE CLASSIFICATION SYSTEM TO PREDICT RESPONSE TO ENDOSCOPIC THERAPY

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Purpose:

Anastomotic stricture is a common pediatric complication following esophageal atresia (EA) repair, requiring endoscopic therapies such as dilation, intralesional steroid injection, and electrocautery incisional therapy (EIT). Stricture response to these interventions is unpredictable, often necessitating repeated procedures. Existing stricture classification tools focus solely on diameter and lack predictive capability for therapy response. We developed a novel stricture classification tool that considers multiple physical characteristics, and we evaluate its predictive capability in pediatric anastomotic strictures.

Methods:

An IRB-approved retrospective review at Boston Children's Hospital included 70 pediatric EA patients with at least two endoscopies. Before intervention, the stricture classification tool is used and the endoscopist scores the stricture at the beginning of each endoscopy according to its starting diameter, length, and degree of intrusion of the anastomotic scar band in 4 quadrants around the circumference of the anastomosis. Diameter changes (ΔD mm) between procedures were normalized to follow-up intervals and used to evaluate therapeutic effectiveness.

Results:

Mixed-effects regression analyses were performed. The study included 148 scored endoscopies. Multivariable analyses showed stricture symmetry and scar intrusion were significantly associated with therapeutic effectiveness. Both stricture symmetry and stricture intrusiveness correlated with larger gains in diameter over time ($p=0.03$, $p=0.02$, respectively). In an EIT subgroup univariate analysis, starting diameter, steroid injection treatment and symmetry were each associated with significant changes in diameter over time ($p=0.001$, $p=0.01$, $p<0.001$, respectively).

Conclusion:

Understanding the impact of readily ascertainable physical features of stricture on that stricture's behavior can help clinicians predict how a stricture will respond to endoscopic therapy. Symmetry and scar protuberance emerged as key predictors, highlighting the importance of tools that aid the endoscopist to create personalized treatment strategies for esophageal anastomotic stricture. Further large-scale, prospective randomized studies are needed to confirm these findings.

Keywords: anastomotic stricture, stricture classification, esophageal atresia, pediatrics

OP - 20

COMPARISON OF VIDEOFLEUROSCOPIC AND FIBEROPTIC ENDOSCOPIC EVALUATION OF SWALLOWING IN CHILDREN WITH ESOPHAGEAL ATRESIA

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Aim: Dysphagia is a common cause of long-term morbidity in children with esophageal atresia (EA). While both fiberoptic endoscopic evaluation of swallowing (FEES) and videofleuroscopic swallowing evaluation (VFSE) can be used to evaluate swallowing function, it is unclear whether of these techniques is better at assessing dysphagia in children with EA. A retrospective study was conducted to correlate the results of VFSE and FEES in children with EA.

Methods: Children with primary repair for Type-C EA were evaluated for age, gender, recurrent respiratory infections (RRI). VFSE and FEES results including penetration aspiration scores (PAS) and Dynamic Imaging Grade of Swallowing Toxicity Scale (DIGEST) were evaluated in liquid, semi-solid and solid consistencies. Bolus residual scores (BRS) in VFSE and Yale residual scores in FEES were evaluated at the level of vallecula and pyriform sinus. Murray secretion scales (MSS) and oral defense were also evaluated. The results of VFSE and FEES were correlated to compare the diagnostic efficacy of two methods in the diagnosis of dysphagia in patents with EA.

Results: Fifty patients with a median age of 16 months (3-120 months, 44% of them were boys) were included. PAS and DIGEST scores showed high correlation between in all constancies [r_s=0,974 (liquids), r_s=0.841 (semi-solids), r_s=0.875 (solids), p<0.01]. BRS scores showed moderate correlation with YALE scores at the level of vallecula (r_s=0,386 p=0.006 in semi-solids, r_s=0.286, p=0.044 in solids) and high correlation at pyriform sinus (r_s=0.888, p<0.01). A high correlation was found with MSS and PAS (r_s=0.755, liquids, p<0.01) and DIGEST evaluations [r_s=0,778 (safety), r_s=0,668 (efficacy), r_s=0.763 (total), p<0.01]. MSS has positive correlation with RRI (r_S=0,870, p<0.01) and patients with oral defense (n=20, 40%) had higher BRS scores compared (p=0,04).

Conclusion: VFSE and FEES results showed a significant correlation for PAS and DIGEST scores in all constancies. BRS and Yale scores were also well correlated in two methods depending on the anatomical level of evaluations.

Keywords: esophageal atresia, tracheoesophageal atresia, fiberoptic endoscopic evaluation of swallowing, videofleuroscopy

OP - 21

THE RELATIONSHIP BETWEEN NUTRITIONAL STATUS AND SURGICAL OUTCOMES IN PATIENTS WITH ESOPHAGEAL ATRESIA: FINDINGS FROM THE TURKISH ESOPHAGEAL ATRESIA REGISTRY

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Aim: To evaluate the relationship between nutritional status, associated anomalies and surgical outcomes in patients with esophageal atresia (EA) from the Turkish Esophageal Atresia Registry (TEAR) in the first year of life.

Methods: Between 2015-2024, 34 centers registered 1107 patients in TEAR. 713 patients with the complete data of neonatal period and first year-of life were included. Nutritional status of patients was assessed

with gestational age and birth weights according to FENTON growth charts and patients were grouped as small-for-gestational-age (SGA, z-scores<10 percentiles), medium-SGA (z-scores=10-20), appropriate-for-gestational-age (AGA, z-scores=20-90) and large-for-gestational-age (LGA, z-scores>90) at birth. The z-scores for height-for-weight were reevaluated at 6th and 12th month-of-age. Nutritional status at birth is compared with 6th and 12th month assessments to define the percent of cases with nutritional improvement, worsened and unchanged.

Results: Among 713 patients, 56% were boys. 23,7% of patients were SGA, 16,8% were medium-SGA, 54,6% were AGA and 4,9% were LGA. There was no difference between groups for demographic features, outcomes and mortality ($p>0.05$). However, patients with SGA had higher rate of karyotype anomalies (23.1%, $p<0.05$). At the 6th month, 20% of patients had improved nutritional status, 46,2% unchanged and 33,5% worsened. At the end of first-year-of-life, 31,6% of patients had improved nutritional status, 50,2% unchanged, 18,3% worsened. Patients with worsened nutritional status (10,2%) had a significantly higher rate of mortality ($p<0.05$). There was no statistical difference between nutritional status and outcomes at 6th and 12th month ($p>0.05$).

Conclusions: The incidence of SGA was significantly higher in EA patients with karyotype anomalies. While 20% of patients improved nutritional status at the 6th month, one third of patients improved nutritional status at the end of first year. Patients with worsened nutritional status had higher mortality rates.

Keywords: esophageal atresia, malnutrition, outcomes, tracheoesophageal fistula

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ESOPHAGEAL ATRESIA AND GENETIC STUDY: EXPERIENCE OF A SINGLE CENTER

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Introduction: Esophageal atresia (EA), with or without a tracheoesophageal fistula (TEF), is a rare congenital malformation, with the etiology remaining unknown in approximately 90% of cases. Around 50% of neonates with EA have associated malformations, commonly within the VACTERL association. Aneuploidies (trisomies 13, 18, and 21) have been reported in 6-10% of these patients, along with chromosomal microaberrations—specifically Copy Number Variants (CNVs)—associated with EA. CNVs occur in 5-12% of the human genome.

Methods: A retrospective study was conducted on neonates diagnosed with EA at the Bambino Gesù Pediatric Hospital (Rome) from 2009 to 2024. The aim was to define the genetic background of this population and assess potential correlations with clinical phenotype and etiology.

Results: Out of 281 neonates hospitalized during the study period, 67% had EA associated with additional malformations, with 46% involving congenital heart defects. Karyotyping was performed in 172 patients (61%), revealing trisomies (Down syndrome and Trisomy 18) in 3.4% of cases. Chromosomal Microarray (CMA) was conducted in 54% of patients, identifying microarrangements (deletions or duplications) in 21.7% of the cohort. Causative CNVs associated with EA included Del1q21.1q21.2, 22q deletion in George syndrome, 22q BD deletion, and 14q23.1q23.2.

Conclusions: Genetic testing, including karyotyping, SNP arrays, and Next-Generation Sequencing (NGS), should be routinely performed in patients with esophageal atresia to detect CNVs potentially containing genes involved in its embryological development. It is essential to consider all identified rearrangements, including those classified as “benign” or “non-significant,” as they may harbor causative genes for EA.

Keywords: Esophageal Atresia; Genetics; Copy Number Variations (CNV; Microarrangements; Chromosomal Microarray

OP - 23

CHARACTERIZATION OF EOSINOPHILIC ESOPHAGITIS IN PATIENTS WITH ESOPHAGEAL ATRESIA: A MULTICENTER INTERNATIONAL STUDY

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An increased prevalence of eosinophilic esophagitis (EoE) has been observed in patients with esophageal atresia (EA), but precise phenotyping is lacking. This study aimed to better understand this association by examining the clinical presentation and outcomes of EA patients with EoE, comparing them to those with isolated EoE and EA without EoE.

A dedicated database was created, including 264 cases of EoE in EA patients from 25 centers worldwide, with data on patient demographics and symptoms at diagnosis, and treatment. These patients were compared to 907 patients with isolated EoE from the pEEr registry, and to 361 EA patients without EoE from the COMAD6 cohort.

The EA/EoE cohort had a mean age of 4±4 years at diagnosis (66% boys, 54% allergic history). Fifty-eight percent were on PPIs at diagnosis, 61% had recurrent anastomotic strictures. Presenting symptoms included dysphagia (58%), feeding difficulties (55%), and vomiting (40%). Endoscopy showed abnormalities in 81% of cases, with strictures (54%) and edema (32%) being most common.

Treatment was initiated in 88% of cases, with PPIs (53%) and topical corticosteroids (27%). At follow-up, endoscopic improvements were noted ($p<0.001$), and eosinophil counts decreased ($p<0.001$). Thirty-three percent of patients had a complete histological response, 24% had a partial response. The mean annual number of strictures requiring dilation was significantly lower post-treatment ($p<0.001$).

Compared to patients with isolated EoE, those with EoE/EA were significantly younger, less often male, and had fewer allergies. The EoE/EA group also presented more long-gap EA and more frequent recurrent fistulas and gastrostomy placements.

This study highlights that EoE in EA patients has distinct characteristics, including early diagnosis, and a higher prevalence on long gap EA with a worse phenotype underscoring the importance of early diagnosis and treatment of EoE in the EA cohort.

Keywords: Eosinophilic esophagitis, Esophageal atresia

OP - 24

ARE AIRWAY MICROBIOTA AND INFLAMMATION IN CHILDREN WITH ESOPHAGEAL ATRESIA RELATED TO REFLUX ASPIRATION?

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Purpose

Respiratory complications are a common extra-intestinal manifestation of esophageal atresia (EA). This study aims to assess the degree of airway dysbiosis and inflammation present in children with EA compared to healthy controls (HC) and explore its association with reflux and respiratory outcomes.

Method

The sub-study within the Evaluating the Alimentary and Respiratory Tracts in Health and Disease program collected clinical data and oropharyngeal swabs from EA and HC aged 0 to 17 years. 16S rRNA sequencing (V4 region) was performed. S100A12 and pepsin were measured using enzyme linked immunosorbent assays. Targeted liquid chromatography mass spectrometry was utilized to measure bile acids. Associations between airway microbiota, inflammation, reflux markers and respiratory outcomes were analyzed.

Results

Forty-five EA participants (mean age 6.7, standard deviation (SD) 4.96) were age and sex matched with 45 HC participants (mean age 7.7, SD 4.84)**.** Richness and Shannon diversity were significantly lower in oropharyngeal samples of children with EA compared to age matched HC ($p<0.0001$ and $p=0.001$, respectively). Beta diversity analysis indicated differences in oropharyngeal bacterial composition between HC and EA cohorts. Median oropharyngeal S100A12 levels were higher in patients with EA compared to HC, 54.7 ng/ml vs 14.7 ng/ml, respectively ($p=0.02$). Pepsin was detected in all EA samples, median value (interquartile range) of 10.3 ng/ml (7.4 – 15.8). Pepsin was positively correlated with S100A12 levels in the EA cohort ($r=0.38$ $p=0.04$). Concentration of bile acids, were higher in patients with EA compared to HC.

Conclusions

Children with EA have an altered oropharyngeal microbiota and higher levels of inflammation compared to HC. Positive correlations of pepsin and S100A12 levels suggest a potential role of reflux in the development of airway inflammation in EA.

Keywords: esophageal atresia, dysbiosis, respiratory, S100A12, pepsin, bile acid

OP - 25

IS HEALTH-RELATED QUALITY OF LIFE IN CHILDREN BORN WITH ESOPHAGEAL ATRESIA-TRACHEOESOPHAGEAL FISTULA REDUCED COMPARED WITH GENERAL POPULATION NORMS AND WHAT ARE THE MAIN ASSOCIATED FACTORS? - A SYSTEMATIC LITERATURE REVIEW

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Purpose: to review the literature on health-related quality of life (HRQoL) in children born with esophageal atresia-tracheoesophageal fistula (EA-TEF) compared with general norms and the main associated factors.

Method: Utilizing a PRISMA-compliant protocol, a literature search of articles using valid and reliable generic HRQoL questionnaires in EA-TEF children was conducted in five databases (PubMed/CINAHL/PsychINFO/Embase/Cochrane) from inception to September 2024. A meta-analysis of overall HRQoL in EA-TEF children compared with general norms was performed using a random-effects model, Cohen's d for effect sizes (ESs) and I^2 statistics. Significant level was $p<0.05$.

Results: Sixteen articles (published 2010-2023) described generic HRQoL in 948 EA-TEF children (median 63/study, range 11-192). Five different HRQoL questionnaires were employed. Fourteen studies originated from Europe. 10/12 studies reported reduced levels of HRQoL in at least one domain (social/school/physical/psychological domains) and/or in overall HRQoL among EA-TEF children compared with general norms. In the metaanalysis, seven studies could be included. The pooled estimate showed that overall generic HRQoL scores were significantly lower in EA-TEF children compared with general norms in parent-reports (736 EA-TEF children vs 10513 controls, mean difference-3.34 [95%-CI -4.54;-2.14], I^2=18.4%, $p<0.01$) and child-reports

(460 EA-TEF children vs 6303 controls, mean difference -3.28 [95%-CI; -5.14; -1.23], I^2=38.9%, p<0.01), with small ES (Cohen's d<0.5). Concerning HRQoL domains, the children's school functioning was most frequently described as reduced (4/8 studies). The most common factors associated with worse HRQoL were gastro-esophageal reflux disease (GERD) in 5/5 studies investigating GERD, associated anomalies (3/4 studies) and prematurity (4/6 studies).

Conclusion: Generic HRQoL in EA-TEF children is significantly reduced compared with the general population, and associated with GERD, associated anomalies and prematurity. This needs consideration in clinical follow-up of children with EA-TEF.

Keywords: Quality of Life, Esophageal Atresia, Patient-Reported Outcomes

OP - 26

AMYLASE LEVELS IN CHEST TUBE OUTPUT: A BIOMARKER FOR EARLY DETECTION OF ESOPHAGEAL LEAKS IN CHILDREN

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Purpose:

Anastomotic leaks (AL) following esophageal anastomoses in children are common, and early identification is key to reducing morbidity. The use of chest tubes to detect AL varies, and it is unclear if chest tube output, quantity or composition can signal AL before clinical symptoms arise. Amylase levels in chest tube drainage may serve as a biomarker for early AL detection. We investigate the diagnostic accuracy of amylase levels in chest tube drainage as a biomarker for early detection of esophageal AL in children.

Methods:

This single-institution retrospective cohort study included children who underwent esophageal anastomoses between March 2023 and August 2024. ALs were classified as contained or uncontained, and as clinically significant or minimally symptomatic. Daily amylase levels were measured from chest tube output while the tubes remained in place. The relationship between amylase levels and AL presence was analyzed.

Results:

Sixty-eight children (median age 6 months [IQR 2-24.5], median weight 6.9 kg [4.1-11]) were included. One child (1.5%) had a clinically significant, uncontained AL requiring reoperation, and three (4.4%) had contained, minimally symptomatic leaks treated with antibiotics. Chest tubes remained for a median of 7 days (range 5-9). Amylase levels were significantly elevated in the child with a clinically significant leak (1776) compared to contained leaks (mean 20, range 9-26) and no leaks (mean 38.28, range 3-335), $p<0.001$. No correlation was found between output volume and amylase level, nor between post-operative day and amylase level. Amylase >1000 had 100% sensitivity and specificity for detecting clinically significant AL, but sensitivity dropped to 25% (95% CI 63-80%) for all ALs (including contained). Amylase elevation occurred a day before clinical symptoms in the child with the significant leak. Additionally, a delayed esophageal perforation after esophageal mobilization during a tracheopexy showed an amylase of 4098.

Conclusion:

Elevated amylase levels in chest tube output are a highly sensitive and specific marker for clinically significant esophageal AL in children, providing early detection before clinical symptoms. Postoperative amylase monitoring can streamline care by identifying patients at low risk for leak, leading to earlier chest tube removal, possibly avoiding esophagograms, and enabling earlier oral feeding.

Keywords: Esophageal anastomoses, anastomotic leaks, chest tube drainage, amylase levels, early detection, biomarker, pediatric surgery, contained leaks, clinical symptoms, postoperative monitoring

OP - 27

CLINICAL YIELD OF ESOPHAGOGASTRODUODENOSCOPY AND PH-IMPEDANCE TESTING IN ESOPHAGEAL ATRESIA PATIENTS PERFORMED ACCORDING TO INTERNATIONAL GUIDELINES

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Background: According to the ESPGHAN-NASPGHAN guideline, esophageal atresia (EA) patients should routinely undergo esophagogastroduodenoscopy with biopsies (EGD) and/or pH-impedance (pH-MII) for surveillance purposes. It is additionally recommended to perform these procedures when there is a clinical indication: symptoms suggestive of gastroesophageal reflux disease (GERD) or eosinophilic esophagitis (EoE).

Aim: To evaluate how often EGD/pH-MII outcomes change management decisions in EA children who come for surveillance and/or for clinical evaluation of their symptoms.

Methods: Retrospective chart review of all EA patients who were prospectively evaluated with EGD and/or pH-MII for routine surveillance or because of clinical indication according to the guidelines. For each procedure, we assessed whether outcomes changed management decisions.

Results: Between 2017-2020, 41 patients (median age 2,0 [1,0-17,5]yrs) underwent EGD/pH[1]MII for surveillance purposes and 64 (3,0 [0.1-15.8]yrs) for symptom evaluation. Of the 41 patients that underwent surveillance EGD/pH-MII, 18 (43.9%) were asymptomatic when interviewed. Eight of these 18 (44,4%) had results that changed management decisions. In total, 23/41 (56,1%) had results that changed management decisions. Sixty-four patients presented clinically with (a combination of) dysphagia (n=50; 78,1%), regurgitation (n=37; 57,8%), heartburn (n=18; 28,1%) and/or respiratory symptoms that were thought to have a gastrointestinal origin (n=24; 37,5%). Results changed management decisions in 34/64 (53,1%) patients that presented with symptoms.

Conclusion: There is a high clinical yield of EGD and pH-MII testing in EA patients. More than half of the patients, regardless of indication (routine surveillance or symptom evaluation), had EGD and/or pH-MII results that changed clinical management decisions.

Keywords: esophageal atresia, guideline, impedance, endoscopy, EGD

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HIGH RESOLUTION MANOMETRY IN PATIENTS WITH ESOPHAGEAL ATRESIA: CLASSIFICATION AND RELATION WITH CLINICAL SYMPTOMS

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Abstract

Background: Various abnormal motility patterns in children with esophageal atresia (EA) have been described using high-resolution manometry (HRM). This study aimed to analyze HRM patterns in EA patients, categorize them by dysmotility severity, and evaluate correlations between EA-related symptoms, comorbidities, and HRM parameters.

Methods: Medical records of EA patients who underwent HRM between 2016 and 2020 were retrospectively reviewed for EA-related symptoms and gastroesophageal reflux disease (GERD). HRM analysis classified the proximal, middle, and distal esophageal segments (defined as the upper 25%, middle 50%, and lower 25% of the esophagus, respectively) based on preserved peristalsis, absent contractions, or present contractions. HRM parameters were calculated using **www.swallowgateway.com**. Esophageal dysmotility was categorized into four groups based on preserved motility and contraction strength. Spearman's correlation coefficient (rs) was used to assess associations between HRM findings and EA symptoms.

Results: HRM data from 25 children (median age: 1.9 years) were analyzed. Dysmotility correlated with regurgitation (rs=0.524, p=0.007) and dysphagia (rs=0.437, p=0.029). Negative correlations were observed between proximal motility and regurgitation (rs=-0.506, p=0.010) and dysphagia (rs=-0.646, p=0.000), as well as between distal motility and chest pain (rs=-0.417, p=0.038) and regurgitation (rs=-0.436, p=0.001). Additionally, pharyngeal contractile integral and esophagogastric junction resting pressure negatively correlated with dysphagia (rs=-0.422, p=0.036 and rs=-0.423, p=0.044, respectively).

Conclusions: Dysphagia, chest pain, and regurgitation are associated with specific HRM findings in EA patients. Further prospective studies are needed to explore the clinical implications of these motility patterns.

Keywords: Esophageal atresia, High-resolution manometry, Esophageal dysmotility, Dysphagia

OP - 29

ENVIRONMENTAL EXPOSURE HISTORY AND ITS CONTRIBUTION TO ESOPHAGEAL ATRESIA: A CASE-CONTROL STUDY

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Purpose:

Our aim was to investigate the association between periconceptional (three months before conception and the first trimester) history of exposure to environmental risk factors and the development of esophageal atresia (EA) in children.

Method:

A 43-item survey was used to collect data on the sociodemographic characteristics of children and parents, and environmental factors to which parents may have been exposed in the periconceptional period. EA and healthy groups were compared with independent t-test, chi-square test. Multiple logistic regression analysis performed to detect the factors associated with EA.

Results:

We included 70 EA cases and 118 healthy controls in the study. The birth order, history of sibling death or miscarriage, infant gender, and maternal age, mother's working status, maternal hypothroidism, thyroid drug use, asthma, diabetes, urinary tract infection, folic acid supplementation, parental smoking, father's chronic disease, residential characteristics (type of residence, type of heating - coal, wood, electricity), painting the house, and pesticide use in the garden during the periconceptional period were similar in groups. The mean gestational period was significantly shorter in EA cases than controls ($p<0.001$). Paternal age ≥35 years at conception, first-trimester maternal hyperemesis, and maternal periconceptional sex hormone use were significantly more frequent in EA cases compared to controls ($p=0.001$, $p=0.009$, $p=0.006$). In EA cases, season of conception was found to be significantly highest in spring and lowest in autumn ($p=0.039$). In logistic regression analyses, it was found that paternal age ≥35 years at conception increased the odds of EA development 7.15-fold, maternal periconceptional sex hormone use 6.41-fold, and first-trimester hyperemesis 2.84-fold.

Conclusion:

We found that EA in children is significantly associated with the season of conception, paternal age, maternal periconceptional sex hormone use, and hyperemesis in the first trimester.

Keywords: environment, esophageal atresia, exposure, periconceptional, risk

OP - 30

THE IMPACT OF OA/TOF ASSOCIATED FEEDING DIFFICULTIES ON PARENT WELL-BEING

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Background: Approximately 25% of children with OA/TOF experience feeding difficulties. However, their impact on parent QOL has received limited attention.

Aim: To investigate the impact of OA/TOF-associated feeding difficulties on parental anxiety, trauma and QOL.

Method: A cross-sectional study was conducted using online and postal questionnaires. Parents of children with OA/TOF aged 6 months-11 years were recruited from a support group and specialist hospital. Demographic and medical information were collected from parent report. Validated measures assessed feeding (Montreal children's hospital feeding scale (MCHFS)), feeding-related QOL (feeding-swallowing impact survey (FSIS)), parent anxiety (GAD-7), post-traumatic stress disorder (PTSD-8) and personal resilience (brief resilience scale). Satisfaction with healthcare was evaluated using a parent-reported experience measure. Multiple linear regression models were developed to determine predictor variables for feeding-related QOL, parent anxiety and PTSD. Significance was determined as p=<.05.

Results: 175 parents (162, 94.2% mothers) of children with a (median age of 3 years (IQR 1 year) participated. 47 (27.2%) had moderate/severe feeding difficulties. 129 (74.1%) participants scored >95th centile on the FSIS. 60 (34.7%) parents presented with moderate/severe anxiety. 64 (38.1%) parents met the diagnostic threshold for PTSD.

Parent anxiety was significantly associated with prematurity, dyspnoea, severe feeding difficulty, parent age <30, lower personal resilience, and lower satisfaction with healthcare support. Parent PTSD was associated with dyspnoea, moderate or severe feeding difficulties, parent age under 30 years or 30-39 years and lower personal resilience. Lower feeding-related QOL was associated with younger child age, dyspnoea, mild, moderate or severe feeding difficulties, parent anxiety or PTSD and lower satisfaction with healthcare support.

Conclusions: OA/TOF related feeding difficulties impact on parental well-being. Parent anxiety and trauma should be explicitly assessed and managed to optimise child and family outcomes.

Keywords: oesophageal atresia, tracheo-oesophageal fistula, feeding difficulties, QOL, parent anxiety, PTSD.

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KEY FACTORS LINKED TO THE DEVELOPMENT OF RESTRICTIVE LUNG SYNDROME IN CHILDREN FOLLOWING SURGERY FOR TYPE III ESOPHAGEAL ATRESIA.

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Purpose: To evaluate the incidence of restrictive lung syndrome in children after type III esophageal atresia (EA) surgery and to identify potential associated factors.

Method: After local institution review board approval, a multicenter retrospective study was conducted using data from 216 patients with type III EA included in a population-based registry between 2008 and 2013. Restrictive lung syndrome was defined based on the Z-score of forced vital capacity measured during pulmonary function tests conducted between 6 and 9 years of age. (ClinicalTrial NCT04136795)

Results: At follow-up (7.5 ± 1.5 years), 58 (27%) had pure restrictive syndrome and 137 (63%) had normal respiratory function. Patients with restrictive syndrome were more often premature (52% vs. 30%, p = 0.0005) and had more associated cardiac malformations (36% vs. 12%, p = 0.0003). Surgically, these patients more frequently required delayed anastomosis (8.6% vs. 1.5%, p = 0.03), gastrostomy (17% vs. 1.5%, p = 0.0001), or other thoracic surgeries (17% vs. 5%, p = 0.01). At age 6, they had a lower body mass index and more respiratory history (85% vs. 63%, p = 0.002) but no significant increase in thoracic wall sequelae (73% vs. 69%, p = 0.84). Multivariate analysis showed that restrictive syndrome was associated with Caucasian origins (Odds ratio OR = 4.3 [1.2 – 15.4]), a history of tracheomalacia (OR 4.06 [1.62-10.20]), cardiac anomalies (OR 5.75 [1.95-16.95]), and gastroesophageal reflux (OR 3.06 [1.26-7.41]). On the contrary, neither surgical factors nor chest-wall sequelae were associated with a restrictive pattern.

Conclusion: These findings suggest that restrictive lung syndrome affects more than a quater of children with type III EA and is linked to patient-associated anomalies rather than surgical or health care-associated factors.

Keywords: Esophageal atresia, restrictive lung syndrome, pulmonary function tests, surgery-induced morbidity

OP - 32

HIGH PREVALENCE OF PULMONARY ABNORMALITIES ON CHEST CT AND CHANGES IN PULMONARY FUNCTION IN ADULT PATIENTS BORN WITH ESOPHAGEAL ATRESIA: FOLLOW-UP IN ADULTHOOD IS NEEDED.

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Purpose: Respiratory comorbidities are frequent in patients born with esophageal atresia (EA). Standardized pulmonary follow-up, including pulmonary function tests and chest computed tomography (CT) scans, is mentioned in guidelines and consensus statements, however it is still not routine practice. This study aims to prove the need for pulmonary long-term care in EA patients by analyzing findings from the structured Erasmus Medical Center follow-up program in adults in Rotterdam.

Method: Since 2019, the existing structured adult follow-up program for EA-patients was expanded to include pulmonology consultations, pulmonary function tests and chest CT scans. Patients who completed these examinations between January 2019 and October 2022 were included in this retrospective study.

Results: Among 182 included patients, 17 (9%) had EA type A and 154 (85%) had EA type C. The mean age at consultation was 33±11 years. Relevant chest CT abnormalities were observed in 128 patients (71%), including tracheomalacia (n=67, 39%), tracheal diverticulum (n=130, 79%), bronchiectasis (n=22, 12%) and osseous abnormalities (n=74, 41%). Pulmonary complaints were reported by 83 patients (46%), most frequently shortness of breath (n=56, 31%), frequent coughing (n=48, 27%) and sputum production (n=20, 11%). Pulmonary function test pre-bronchodilator showed a mean ± SD of SDS for TLC of -1.34 (±1.32), FEV1 of -1.74 (±1.33) and FEV1/FVC of -0.66 (±1.15). Pulmonary symptoms had a positive mild correlation with chest CT abnormalities (Pearson correlation coefficient 0.211, p=0.004), but abnormalities were also found in asymptomatic patients.

Conclusion: Given the high prevalence of respiratory complaints and CT abnormalities, a structured standardized follow-up program with pulmonology consultations is recommended for EA-patients. This program should include pulmonary function tests and chest CT-scans, since clinical symptoms do not consistently predict radiological findings.

Keywords: Esophageal Atresia, Adult, Pulmonology, Follow-up, Bronchiectasis.

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NUTRITIONAL STATUS AT THE AGE OF 6 YEARS OF CHILDREN OPERATED AT BIRTH FOR OESOPHAGEAL ATRESIA

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Objectives and study

Due to motility abnormalities and digestive complications, oesophageal atresia (OA) affects food intake and possibly nutritional status. Undernutrition has been shown to affect about 15% of the patients at the age of one year, but the long-term nutritional outcome of these patients remains poorly studied. Our objective was to assess the prevalence and predictive factors of undernutrition and stunting of patients at 6 years old.

Methods

We conducted a prospective, multicentric, nested cohort study. Data of every consecutive patient born in France with OA between 2010 and 2012 were recorded and merged with data collected at birth and 1 year of age in our national registry of OA. Undernutrition and stunting were defined by z-scores of BMI and height-for-age ratio less than -2 standard deviations, respectively. Uni- and multivariate analyses were performed thanks to the imputation of missing data.

Results

We included 449 of the 468 eligible patients (92%). Prevalence of undernutrition and stunting at 6 years was respectively 9.0% and 11.1%. Undernutrition at one year of age was the only independent factor predictive for undernutrition at the age of 6 (OR 4.37 (IC95% 1.77 to 10.77), p=0.002), while being small for gestational age, a congenital heart malformation and preexisting stunting at one year were independent factors predictive for stunting at 6 years (OR 2.32 (IC95% 1.01 to 5.33),p = 0.048, OR 1.99 (IC95% 1.00 to 3.93), p = 0.049; and OR 5.51 (IC95% 2.31 to 13.18), p=0.0002, respectively).

Conclusion

Our study highlights that undernutrition and stunting remain frequent in the middle-term follow-up in OA and originate mainly during the first year of life.

Keywords: esophageal atresia, undernutrition, stunting

OP - 34

TRANSCERVICAL INNOMINATE ARTERY SUSPENSION IN EA/TEF PATIENTS

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Introduction:

Tracheomalacia and vascular compression can cause significant obstructive symptoms in esophageal atresia and tracheoesophageal fistula (EA/TEF) patients. Innominate artery compression may be a focal area of compression that can be responsible for the severity of symptoms. In this case series, we aim to report the outcomes of a transcervical approach to innominate artery suspension in the EA/TEF population.

Methods:

Cases of transcervical innominate artery suspension at our institution with EA/TEF were reviewed. Computerized Tomography (CT) scans of the neck and chest were reviewed, and anterior-posterior thoracic outlet (TO) distance, thymic thickness, and sternum-innominate artery distance (SID) were measured. Surgical outcomes as verified by follow-up bronchoscopy and clinical course were obtained from the medical record. Success was defined as having both visual and symptomatic improvement in obstruction.

Results:

Eleven cases of transcervical innominate artery suspension were included in our review. This included nine female and two male patients, with an average age of 4.2 years (+/- 4.2). Eight patients (72%) showed improvement in their symptoms. The average anterior-posterior TO diameter was larger in patients with symptomatic improvement following innominate artery suspension than in those without improvement (38.19 mm vs. 28.63 mm, p-value 0.04, 95% CI 0.05 – 0.90). Age at the time of the surgery, operative time, thickness of the thymus, SID, and the ratio between SID and TO were all found to be non-significant factors impacting post-operative success. Three patients had complications including one death unrelated to surgery.

Conclusion:

Transcervical innominate artery suspension is effective for prominent anterior tracheal compression in EA/TEF patients. Success in this population closely mirrors that in the general population previously described by our group. A greater thoracic outlet diameter is associated with improvement in symptoms. Pre-operative CT evaluation is essential in surgical candidate selection.

Keywords: Vascular compression, Innominate Artery, Tracheomalacia

OP - 35

PULMONARY FUNCTION IN CHILDHOOD AFTER THORACOSCOPIC ESOPHAGEAL ATRESIA REPAIR

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Purpose

Respiratory morbidity and pulmonary function impairment (PFI) are common after esophageal atresia (EA) repair. Pulmonary function has not been extensively evaluated in large cohorts following thoracoscopic EA repair. This study aims to assess pulmonary function during childhood in patients who underwent thoracoscopic EA repair.

Methods

A retrospective observational study was conducted at our center, including patients who underwent thoracoscopic EA repair between 2006 and 2018 and were able to perform pulmonary function testing. Assessments were conducted at ages 5 years, 8 years, 11 years, and 14 years. Results were compared to the 2021 and 2022 Global Lung Function Initiative reference equations.

Results

A total of 82 patients were included. The median Z-scores for FEV1/FVC (forced expiratory volume in the first second of expiration/forced vital capacity) were 0.05, 0.83, -0.21, and -1.27 at ages 5, 8, 11, and 14 years. For TLC (total lung capacity), the median Z-scores were 0.34, -0.59, and -0.66 at ages 8, 11, and 14 years. PFI was classified as obstructive or restrictive. Obstructive PFI was observed in 8.2%, 10.0%, 10.8%, and 15.0% at ages 5, 8, 11, and 14 years. Restrictive PFI was observed in 0.0%, 13.8%, and 5.9% at ages 8, 11, and 14 years.

Conclusion

After thoracoscopic EA repair, obstructive PFI is more common than restrictive PFI. FEV1/FVC, indicative of obstructive PFI, was not significantly lower than in the reference population. TLC, indicative of restrictive PFI, declined with age and was significantly lower than in the reference population. Compared to open EA repair, thoracoscopic EA repair appears to result in fewer PFIs, though this is not based on meta-analysis. PFI following EA repair remains common, underscoring the need for multidisciplinary follow-up to optimize outcomes.

Keywords: Pulmonary function, Esophageal atresia, thoracoscopy, minimally invasive surgery

OP - 36

PREVALENCE AND PREDICTORS OF MENTAL HEALTH DIFFICULTIES IN ADOLESCENTS BORN WITH ESOPHAGEAL ATRESIA IN CONJUNCTION WITH TRANSFER FROM PEDIATRIC TO ADULT CARE - A NATIONWIDE PROSPECTIVE OBSERVATIONAL STUDY IN SWEDEN

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Purpose: To identify the prevalence and predictors of mental health difficulties (MHD) in adolescents with esophageal atresia (EA) in conjunction with transfer from pediatric to adult care.

Method: An ongoing prospective study including all four teaching hospitals in Sweden providing follow-up care to adolescents with EA aged 15-16, i.e. prior to transfer to adult care, was established (Ethical approval 2021-04051). Over 3-years, these adolescents and one of their parents completed a validated screening instrument for MHD (Strength and Difficulties Questionnaire, SDQ). Mental health status was determined using validated norms; abnormal (90thpercentile), borderline (80thpercentile), normal. Higher scores indicate more MHD. Elevated levels were considered borderline/abnormal. Clinical data was collected via medical records. Data was analyzed using descriptive statistics and linear regression. Significance level was $p<0.05$.

Results: Ninety-two participants; 46 dyads of adolescents with EA and their parents completed SDQ. Elevated levels of MHD in self-/parent-reports were: peer relationship problems 33%/18%; hyperactivity/inattention 9%/16%; emotional symptoms 13%/13%; conduct problems 4%/9%; total difficulties 7%/9%. The peer problems scores increased with associated anomalies (self-report, p=0.027; parent-report, p=0.046) and "Apparent Life-Threatening Events" ≤1year of age (self-report, p=0.042). The hyperactivity/inattention scores decreased with a primary anastomosis (parent-report, p=0.003) and increased with a gastrostomy at 1 year of age (parent-report, p=0.006). The total difficulties scores increased with associated anomalies (self-report, p=0.046) and VACTERL association (self-report, p=0.024), but decreased with higher gestational age at birth (parent-report, p=0.033).

Conclusion: Our preliminary results suggest a subgroup of adolescents with EA has MHD, most commonly peer problems. Adolescents born preterm, with associated anomalies and with gastrostomy at one year of age are at higher risk. This information can help optimize transition from pediatric to adult care.

Keywords: Mental health difficulties, Esophageal Atresia, Follow-up, Rare Disease

OP - 37

ARE NATIONAL GUIDELINES FOR THE CARE PATHWAY OF ESOPHAGEAL ATRESIA BEING FOLLOWED DURING THE FIRST YEAR OF LIFE ?

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Purpose: As part of the National Rare Disease Plan, a formal surveillance and care pathway was established in 2008 and updated in 2018 within the national network of the 33 expert centers for esophageal atresia (EA). This study aimed to evaluate the practical implementation of the updated care pathway during the first year of life and to identify the challenges and factors associated with non-compliance.

Method: We conducted a multicenter, retrospective study using data from the French National Esophageal Atresia Registry (RENATO). Children undergoing EA surgery between January 1, 2016, and December 31, 2021, were included, excluding those who died within their first year. Patients born before and after January 1, 2019 were compared regarding adherence to key recommendations: prenatal evaluation (e.g., fetal MRI, amniocentesis, digestive enzyme assays) and antenatal consultation, preoperative tracheoscopy, systematic proton pump inhibitor (PPI) during the first year, systematic follow up visit at 6 and 12 months, tailored nutritional management and influenza vaccination.

Results: A total of 947 children were included: 480 born before and 467 after January 1, 2019. Among the seven main recommendations analysed, only preoperative tracheoscopy showed significant improvement after the update (50.2% before vs 65.8% after, $p < 0.001$). Adherence to PPI prescriptions was consistently high (95.7% before vs 98.5% after, $p = 0.013$). A case-load effect was observed, with hospital managing fewer cases annually (≤10 cases/year) showing poorer adherence compared to high-volume centers (>10 cases). Discrepancies affected preoperative tracheoscopy, prenatal evaluation, and follow-up visits at 6 and 12 months.

Conclusion: The updates care pathway moderately improved adherence to EA care guidelines, particularly for preoperative tracheoscopy. However, other recommendations remain insufficiently implemented, especially in low-volume centers. The observed disparities underline the importance of addressing caseload effects to improve care consistency, and optimize follow-up in this vulnerable population.

Keywords: esophageal atresia , National Rare Disease Plan , care pathway , case-load

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TRACHEOSTOMIES FOR INFANTS WITH ESOPHAGEAL ATRESIA WITH/WITHOUT TRACHEOESOPHAGEAL FISTULA (EA/TEF)- A CANADIAN MULTI-CENTRE STUDY.

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Background: Infants with esophageal atresia with or without tracheoesophageal fistula (EA/TEF) may encounter life-threatening airway complications. Tracheostomy is used if other interventions are ineffective. This multi-centre review assessed the use of tracheostomies among EA/TEF patients.

Methods: An REB approved multi-centre retrospective chart review of EA/TEF patients repaired from Jan. 1, 2000 to Nov. 30, 2024 was performed. Indications for tracheostomy and prior surgical efforts to manage airway complications were obtained.

Results: In total, over 781 EA/TEF patients were included. Of these, 7 patients required tracheostomy for their airway complications. Two long gap EA patients had airway obstruction from tracheomalacia (TM) requiring tracheostomy- one at age 4.8 months after failed airway pexies, the second required tracheostomy at age 4 months without prior airway pexy. Three patients had tracheostomies for vocal cord (VC) paralysis- one had tracheostomy at age 5.9 months and subsequently decannulated at age 3 years, the second had bilateral VC paralysis, anastomotic stricture and severe TM while the third required tracheostomy at age 10 months after failed airway pexy in the setting of VC paralysis and CHARGE syndrome. The latter 2 patients have not yet been decannulated. One patient who was prenatally diagnosed with micrognathia due to Pierre-Robin sequence had tracheostomy at birth, was subsequently found to have EA/TEF and remains with the airway at the time of transition to adult care. One patient with type 3 laryngeal cleft had tracheostomy at age 2.6 months prior to EA/TEF repair to manage airway secretions safely. This patient remains with the airway while undergoing further operative procedures for VACTERL associated anomalies.

Conclusion: Tracheostomy for definitive airway management is rare among EA/TEF patients. Indications include associated congenital abnormalities or progressive conditions (TM, VC paralysis). Tracheostomy may be unavoidable for a subset of EA/TEF patients who encounter airway complications refractory to other interventions.

Keywords: airway obstruction, tracheostomy, esophageal atresia, tracheoesophageal fistula, vocal cord paralysis

OP - 39

PILOT STUDY: THE ROLE OF BODY SURFACE GASTRIC MAPPING IN EVALUATING GASTRIC FUNCTION IN CHILDREN WITH OESOPHAGEAL ATRESIA

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Background. Oesophageal atresia (OA) is a rare congenital gastrointestinal malformation where patients also have impaired vagal function. Despite gastroduodenal symptoms and feeding difficulties, data on gastric dysfunction is limited. Body surface gastric mapping (BSGM), a novel tool for recording gastric myoelectrical activity, was reviewed in six OA patients to explore pathophysiologies.

Methods: BSGM testing involves a 6-hour fast, 4.5-hour recording (30-minute baseline, 482kCal standard meal and 4-hour postprandial), and continuous symptom monitoring. Data collected includes demographics, anthropometrics, OA type, surgeries, medications, recent investigations and questionnaires. Spectral metrics were referenced *a priori* to normative adult reference intervals.[1]

Results: Six patients (4 female, median age 13, median BMI 17.1) were recruited. 4 cases had Type C OA and 2 cases had Type A OA, all primary repairs. Meal completion was median 70%. Compared to normative reference intervals, BSGM spectral analysis revealed abnormalities in 5/6 cases: low BMI-adjusted amplitude and/or Gastric Alimetry Rhythm Index (n=2; indicative of gastric neuromuscular dysfunction), delayed gastric activity with transient frequency abnormalities (n=2), and high BMI-adjusted amplitude and high principal gastric frequency (n=1; indicative of possible vagal nerve injury). On the day, symptoms showed mixed profiles: meal-responsive (n=5) and no symptoms (n=1).

Conclusion: BSGM found 5 of 6 OA cases had abnormal gastric activity, either a delay in gastric activity post-meal, neuromuscular abnormality, or vagal nerve injury. Identifying these abnormalities with BSGM can enable tailored treatment, thus improving clinical outcomes.

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Keywords: Body Surface Gastric Mapping, myoelectrical activity, gastric neuromuscular dysfunction, delayed gastric activity

OP - 40

PURE ESOPHAGEAL ATRESIA: COMPARISON OF THORACOTOMY VS. THORACOSCOPY

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Purpose:

This study compares outcomes of thoracotomy and thoracoscopy in the treatment of pure esophageal atresia (EA).

Method:

A retrospective analysis of perinatal characteristics, surgical procedures and complications comparing thoracotomy and thoracoscopy for pure EA performed between 2011-2022. Thoracoscopy was the preferred surgical procedure from 2018. Statistical calculations were done using Mann-Whitney and Fisher's exact tests with significance level <0.05.

Results:

Of 264 patients operated for EA in the 12-year period, 22 patients were treated for pure EA (Gross type A). All patients underwent gastrostomy insertion after birth. Gastric interposition was performed in four patients (18%) as the final procedure and they were excluded from further analysis. Eighteen patients underwent a staged repair via thoracotomy (n=9) or thoracoscopy (n=9). Techniques used in the thoracotomy group included delayed primary repair, Foker procedure and internal traction, and in the thoracoscopy group, internal traction. Thoracotomy required less procedures to anastomosis (median [2; 3], p=0.0213) and shorter total operative time (median [169mins; 326mins], p=0.0007). Leakage was more frequent in the thoracotomy group (33%, 0%, p=0.2059), but stricture formation, number of dilatations and future fundoplication were comparable in both groups (66%, 66%, p>0.9999; median [0; 1], p=0.518; 11% and 0%, p>0.9999). Musculoskeletal deformities were more common in the thoracotomy group (38%, 0%, p=0.0824), however their follow-up was longer (median [92months; 52months], p=0.0206). Weight and height at one year were comparable in both groups (median [8000g; 8060g], p=0.559; median [68.5cm; 72cm], p=0.3312).

Conclusion:

In our study, thoracotomy required less operations and shorter total operative time to anastomosis creation but led to more postoperative and long-term complications. Thoracoscopy had a longer operative time but was safe in all other analysed parameters.

Keywords: pure esophageal atresia, long gap, thoracotomy, thoracoscopy

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QUALITY OF LIFE AND BURDEN OF DISEASE IN PARENTS OF CHILDREN BORN WITH ESOPHAGEAL ATRESIA – A REVIEW

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Background: Esophageal atresia (EA) is a rare congenital malformation often linked to long-term health challenges, including dysphagia, significantly impacting the quality of life (QoL) of affected individuals. Despite surgical advancements improving survival rates, children with EA frequently experience chronic health issues, placing substantial demands on their caregivers. Notably, the QoL of parents remains understudied, despite their critical role in long-term management and support. The absence of specific tools to measure parental QoL in this context highlights the need for a comprehensive understanding of their experiences and burdens. This work aims to address this gap by systematically reviewing the existing literature on the QoL and burden of disease (BoD) of parents caring for children with EA.

Materials and Methods: A systematic literature review was performed using PubMed and Web of Science databases in November 2020, with an updated search in February 2023. Predefined inclusion and exclusion criteria guided the selection of studies focusing on parental QoL and BoD in the context of EA. The review aimed to identify common stressors, health concerns, and mental health challenges among parents, including anxiety and post-traumatic stress disorder (PTSD).

Results: The review revealed limited research explicitly addressing parental QoL in the context of EA. Studies examining parental well-being often employed various Patient-Reported Outcomes Measures (PROMs), leading to inconsistent findings. However, most studies consistently indicated significant psychological distress among parents, including PTSD symptoms, anxiety, reduced mental health, and overall impaired QoL. These findings highlight the substantial emotional and physical toll on parents as they manage complex medical needs and navigate healthcare systems.

Conclusion: This review underscores a significant research gap concerning the QoL and BoD of parents caring for children with EA. The emotional and physical strain experienced by these parents necessitates further research and the development of disease-specific measurement tools. A deeper understanding of these unique challenges can guide targeted interventions and enhance care for both parents and their children. Future studies should prioritize standardized PROMs and more detailed examinations of parental QoL to ensure comprehensive psychosocial support for caregivers.

Keywords: Quality of Life, Esophageal Atresia, Parents, Patient-Reported Outcome Measures

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RISK FACTORS INFLUENCING THE OUTCOMES OF TREATMENT OF ESOPHAGEAL ATRESIA TYPE C IN ASTANA

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Introduction. Oesophageal atresia is a complex congenital anomaly requiring surgical intervention in the neonatal period. After Kazakhstan adopted the WHO criteria for determining the viability of newborns in 2008, the number of prematurity cases requiring specialized care increased significantly.

Purpose of the study. To identify the influence of risk factors on postoperative complications, mortality and the possibility of primary anastomosis for oesophageal atresia with type C in newborns.

Materials and Methods. The study analysed clinical outcomes of 140 newborns with oesophageal atresia who were treated at University Medical Center and Municipal Multidisciplinary Hospital No. 2 in Astana, Kazakhstan, for the period 2012-2024, of which 113 patients had type C (oesophageal atresia with distal tracheo-oesophageal fistula (TEF)). To assess the impact of prematurity on mortality, severe CHD (AVSD, LHHS, etc.) and syndromes (Edwards syndrome) that directly affected mortality were excluded. After exclusion, data from 106 patients were included in the analysis. Among them 47 children were premature and 59 were preterm.

Results. Preterm infants had a 23.4% risk of death, while preterm infants had an 8.5% rate of death. Logistic regression showed that prematurity increased the risk of mortality by 3.3 times (Odds Ratio: 3.3, p=0.040), which was statistically significant ($p < 0.05$). Among the operated patients who underwent esophago-esophagoanastomosis (n=82), the incidence of complications (recanalisation of TEF, anastomosis leakage, stenosis of anastomosis) was similar in the groups of premature and preterm patients (7 cases in each group). Statistical analysis revealed no statistically significant influence of prematurity on the risk of complications (Odds Ratio: 2.1, p=0.214). Among 109 operated patients, oesophageal anastomosis was possible in 59% of premature (29 of 49) and 88% of preterm (53 of 60) patients. Prematurity significantly reduced the possibility of primary anastomosis ($p <0.05$).

Conclusions. Prematurity is a significant factor affecting the probability of mortality and the possibility of primary anastomosis, but has no statistically significant effect on the incidence of complications. This highlights the need for increased monitoring and a specialised approach to the management of premature neonates with oesophageal atresia.

Keywords: esophageal atresia, newborn, premature, risk facrors

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COMPARISON OF PROACTIVE VS REACTIVE ENDOSCOPIC APPROACHES FOR SURVEILLANCE IN PATIENTS POST-ESOPHAGEAL ATRESIA REPAIR

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Objectives

The advantage of routine endoscopic surveillance and dilatation in esophageal atresia (EA) patients, compared to selective endoscopy and dilatation for symptomatic patients remais controversial. This study aims to evaluate the outcomes of these two approaches in our patient population.

Methods

We analyzed two groups of patients followed for up to 36 months post-EA repair (n=24). The *proactive group* (n=13) underwent routine and symptom-driven endoscopic surveillance from February 2016 to February 2019, with dilatations performed as needed. The *reactive group* (n=11), managed from February 2020 to February 2023, received selective endoscopies only when symptomatic. Follow-up strategies were determined based on the year of treatment. Variables (type of EA, age, lenght of gap, presence of strictures and number of endoscopies/dilatations) were studied.

Results

In the proactive group, 78 endoscopies were performed with 59 required dilatations (75.64%). In the reactive group, we had 47 endoscopies, with 46 dilatations (97.87%). The mean number of endoscopic interventions per patient was 6 in the proactive group and 4.27 in the reactive group, with similar mean numbers of dilatations per patient: 4.53 in the proactive group and 4.18 in the reactive group. The odds ratio (OR) for comparing the effectiveness of endoscopies in detecting patients requiring dilatations between the reactive and proactive groups was approximately 14.81. This difference suggests the increased likelihood in the reactive group of requiring dilatations compared to the proactive approach. The most common finding in both groups was stricture. There were two complications (leakages) in the proactive group.

Conclusions

The reactive approach reduced the number of endoscopic procedures needed in our population. Patients who had a reactive follow-up were more likely to require dilatation therapy. This small study suggests that a reactive strategy can decrease the frequency of anesthetic exposure, risk and procedural costs by reducing the number of endoscopic events in patients who do not require dilatation.

Keywords: esophageal atresia, endoscopy, dilatation

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THORACOSCOPIC MOBILIZATION AND INTRAOPERATIVE INTERNAL TRACTION: A NOVEL APPROACH FOR MANAGING LONG-GAP TYPE C ESOPHAGEAL ATRESIA WITH DISTAL CARINAL FISTULA

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Purpose

The classification and management of long-gap esophageal atresia (LGEA) vary in literature, particularly when the distal esophagus is short and involves a carinal fistula. We hypothesize similar feasibility of early primary anastomosis in type C esophageal atresia with carinal fistula (TEFC) versus cases with a distal tracheoesophageal fistula located higher on the tracheal wall (TEFT) when using a novel thoracoscopic mobilization and intraoperative internal traction approach in TEFC patients.

Method

We retrospectively reviewed 134 patients (25 TEFC, 109 TEFT) treated thoracoscopically at our center between 2012-2024. Primary outcomes analyzed were native esophagus preservation and anastomotic leakage rates. Secondary outcomes included short- and long-term clinical results up to 12 years and growth patterns from 6 months to 5 years.

Results

All patients underwent successful repair within the first two weeks after birth without requiring esophageal replacement. In the TEFC cohort, 23 patients achieved single-surgery anastomosis using intraoperative traction, while two required external traction and a second surgery for anastomosis one week later. Although TEFC patients experienced higher anastomotic leakage rates (40% vs. 20.2%), median postoperative hospital stay was comparable (23 vs. 20 days). During outpatient follow-up, TEFC patients had higher rates of recurrent stenosis (24% vs. 10.1%) and indication for anti-reflux surgery (26.1% vs. 11.3%). However, revision surgery rates for recurrent fistula (0% vs. 11.5%) and stenosis (0% vs. 1.8%) were lower in TEFC patients. Long-term growth outcomes showed no significant differences between groups.

Conclusion

Treatment of TEFC patients was more complex than that of TEFT patients, with higher postoperative complication rates. However, the native esophagus was preserved in all 25 patients without major revision surgeries, facilitated by thoracoscopic mobilization and intraoperative traction techniques. These findings highlight the short- and long-term benefits of managing TEFC patients in specialized centers with expertise in thoracoscopic treatment of LGEA.

Keywords: Long gap esophageal atresia, Carinal fistula, Thoracoscopic traction elongation

VIDEO PRESENTATIONS

VP - 1

THORACOSCOPIC DIVISION OF AN INCOMPLETE DOUBLE AORTIC ARCH

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Introduction

Thoracoscopic division of vascular rings has been described but more often these are approached via thoracotomy. We present a case of an incomplete double aortic arch with right dominance and tracheal compression. This case was approached thoracoscopically and we would like to highlight the feasibility of this approach.

Case

The patient is a 15 year old female with a chief complaint of shortness of breath. CT angiography demonstrated a double aortic arch with right sided dominance. The patient was placed in right lateral decubitus. Two 12 mm and two 5 mm trocars were inserted. We incised the pleura from the left subclavian artery to the descending aorta. The ligamentum arteriosum was dissection and divided with clips once the recurrent nerve was identified and protected. The left (non-dominant) arch was dissected circumferentially and divided with a vascular load stapler. Pleural drainage was performed.

Conclusion

The patient dismissed on postoperative day 1 and is two months symptom free.

Permission to upload video and images obtained from parent/guardian.

Keywords: vascular ring, MIS, thoracoscopy

VP - 2

USE OF ENDOVAC UNDER 1000 GRAMS BABIES WITH ESOPHAGEAL ATRESIA

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Describe the case of a 900 gram premature baby, with a postnatal diagnosis of type III esophageal atresia. The correction was performed at 5 days of life through conventional surgery and the esophagus was approximated without tension, achieving an end-to-end anastomosis.On the 5th postoperative day, bile and air flow was noted through the pleural drainage, with clinical and radiological worsening. She was re-entered the OR. A videobronchoscopy and esophagram were performed, leading to the diagnosis of esophagopleural fistula and then a pleural toilet, esophageal repair, endovac placement were performed and gastrostomy and new pleural drainage.15 days later, a new contrast study was performed through the endovac, no leaks were observed, the endovac was removed and enteral feeding was started through gastrostomy

Keywords: esophageal atresia, preterm baby, esophageal fistula, endovac

VP - 3

LEFT-SIDED THORACOSCOPIC REDO ESOPHAGEAL ANASTOMOSIS FOR INTRACTABLE POST-EA STRICTURE: EXPERIENCE AT CAIRO UNIVERSITY

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Introduction: Redo surgeries for esophageal atresia (EA) are challenging due to adhesions within the pleural cavity, particularly when re-accessing the esophagus via the right side (1). This video illustrates the left-sided thoracoscopic approach for managing intractable post-EA esophageal stricture.

Patients and Methods: A male infant born on March 2, 2022, was diagnosed with EA/tracheoesophageal fistula (TEF, type C) and underwent right thoracoscopic primary repair on day 13 of life. Postoperatively, a minor anastomotic leak was managed conservatively, and the infant was discharged on full oral feeds after 25 days.

Subsequently, the patient experienced recurrent choking and aspiration, necessitating multiple admissions. Investigations revealed a tight anastomotic stricture, refractory to eight sessions of endoscopic dilation and mitomycin-C application. To support caloric intake, a feeding gastrostomy was laparoscopically inserted.

Surgical resection and redo esophageal anastomosis were indicated due to the stricture's persistence. Considering the likelihood of dense right thoracic adhesions, a left-sided thoracoscopic approach was chosen.

On March 7, 2023, the procedure was successfully performed under general inhalational anesthesia. The child was positioned prone, and four 5 mm ports were utilized. The optical port was inserted just below the tip of the scapula. The left working port was placed in the 3rd intercostal space along the mid-axillary line, while the right working port was positioned in the 6th intercostal space, midway between the posterior axillary line and the vertebral spine. The assistant port was located in the 8th intercostal space along the posterior axillary line.

A minor anastomotic leak, noted on postoperative day seven, was managed conservatively. The child was discharged after 36 days of hospitalization.

During follow-up, a single endoscopic dilation was required one-year post-discharge. At the latest follow-up in November 2024, the child remained well, with no evidence of recurrent stricture or gastroesophageal reflux disease (GERD) on esophagogram and endoscopy.

Results and Conclusions: The left-sided thoracoscopic approach provides a feasible option for managing resilient post-EA strictures. Further studies with larger case series are needed to establish its efficacy and safety definitively.

Keywords: Thoracoscopic Repair, Esophageal Atresia, Redo, Left-sided, Esophageal Stricture, Aortic Arch.

VP - 4

EFFICACY OF ENDOSCOPIC VACUUM THERAPY IN TREATING LARGE ESOPHAGEAL PERFORATION IN A PEDIATRIC PATIENT

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Purpose: This study aims to demonstrate the potential of endoscopic vacuum therapy (E-vac) as an effective treatment for large esophageal perforations in a pediatric patient.

Methods: We present the case of a 7-year-old girl with a history of repaired esophageal atresia and tracheoesophageal fistula (type C), complicated by recurrent respiratory illnesses due to severe mid-to-distal tracheomalacia. She underwent rotational esophagoplasty and posterior tracheobronchopexy, during which an esophageal injury occurred. A primary repair of the esophageal perforation was performed, with a negative intraoperative leak test. Chest tubes were placed, along with broad-spectrum antibiotics; nothing by mouth and parenteral nutrition was started. An extraluminal leak was observed on the esophagram by postoperative day (POD) 5. On POD 10, the Gastroenterology team initiated E-vac therapy to facilitate healing.

Endoscopy revealed a 2x3 cm perforation at the proximal esophagus. An E-vac system, comprising a cylinder sponge sutured to a suction tube, was introduced nasally or via the gastrostomy site and positioned at the perforation site. The system was connected to continuous suction and exchanged every 3-7 days while the patient received parenteral nutrition, broad-spectrum antibiotics, chest tube drainage, and respiratory support. Additional procedures included endoscopic brushing, argon plasma coagulation (APC), and the application of PuraStat® to address persistent esophagopleural fistulae.

Results: Following 2.5 months of E-vac therapy and adjunctive interventions, the patient achieved oral intake with supplemental gastrostomy tube feeds and had significant clinical improvement. A follow-up endoscopy showed complete healing of the esophageal perforation.

Conclusion: E-vac therapy is an effective treatment option for esophageal perforations, in addition to brushing, APC, and PuraStat® application for esophagopleural fistulae.

Keywords: Esophageal perforation, vacuum, endoscopic, fistula, argon plasma coagulation,

POSTER PRESENTATIONS

P - 1

THORACIC OUTLET SYNDROME FROM ANOMALOUS 8TH CERVICAL VERTEBRAE RIBS: A RARE PEDIATRIC DIAGNOSIS

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Introduction:

Thoracic outlet syndrome (TOS) is extremely rare in pediatric patients, with only a few reported cases. By presenting a rare case of TOS caused by a cervical rib in a child, we emphasize the importance of considering this diagnosis in pediatric practice.

Case presentation:

We report the case of an 11-year-old boy, who presented with complaints of intermittent upper left limb numbness and pain when moving the left shoulder. The symptoms appeared over 3 years with observation of swelling in the left supraclavicular fossa. He didn't have any obvious precipitating trauma and was otherwise well. Clinical examination revealed firm swelling of the left supraclavicular fossa, without signs of vascular compression, as confirmed by doppler ultrasound. Standard radiography identified bilateral cervical ribs. A CT angiography with three-dimensional reconstruction visualized an abnormal neo-articulation on the left between the anterior end of the cervical rib and the superior edge of the anterior arch of the first rib, which appears to cause partial stenosis of the subclavian artery. Surgical intervention was indicated and performed via a supraclavicular approach. After identifying the subclavian artery, the lower trunk of the brachial plexus, and the phrenic nerve, the neo-articulation and most of the cervical rib were resected. The postoperative course was uneventful, with complete resolution of pain and clinical symptoms.

Conclusion:

TOS is rare in children, and cervical ribs are an uncommon cause. When articulated with the first rib, they can become symptomatic. This case prompted a literature review on this rare pediatric condition, highlighting the importance of recognizing it when surgery may offer symptom relief. A thorough clinical and radiological assessment, supported by vascular specialists, is crucial to guide therapeutic decisions. The resection of a supernumerary cervical rib via a supraclavicular approach can lead to complete symptom resolution and rapid recovery.

P - 2

THORACOABDOMINAL CYSTIC FOREGUT DUPLICATION: UNUSUAL PRESENTATION

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Introduction:

Duplication cysts of the gastrointestinal tract (GIT) are rare congenital anomalies, typically diagnosed in childhood but occasionally detected antenatally. These cysts can occur anywhere along the GIT, with thoracoabdominal duplication cysts being particularly rare. This report presents the case of an antenatally diagnosed thoracoabdominal duplication cyst, detailing diagnosis, treatment, and follow-up.

Case Presentation:

A 2-year-old boy, diagnosed antenatally with an intra-abdominal cyst, presented with constipation and new-onset dyspnea. Physical examination revealed mild abdominal tenderness and distension. Radiography showed bowel gas, feces, and a left-sided pneumothorax. Thoracentesis and tube thoracostomy drained dark-colored, likely hemorrhagic pleural effusion. CT imaging identified a tubule-cystic structure in the left hemithorax, adjacent to the esophagus, extending toward the stomach. Esophagography and esophagoscopy confirmed no direct connection to the esophagus.

Laboratory tests indicated pneumonia and fungal empyema. Following prolonged antibiotic and antifungal therapy, a two-stage surgical plan was developed. The thoracic component was prioritized due to cyst perforation and recurrent pleural infections. Left lateral thoracotomy allowed complete resection of the ruptured cyst despite extensive adhesions. Two months later, laparoscopic exploration of the abdominal component was converted to laparotomy due to unclear cyst extension near the pancreatic duct. Gastric (shared wall), splenic, diaphragmatic, and pancreatic dissections enabled complete excision without diversion surgery. Histopathology confirmed a cystic foregut duplication. The patient resumed oral feeding by postoperative day three and was discharged on day seven. He remains on routine outpatient follow-up.

Conclusion:

This case highlights the complex presentation of thoracoabdominal duplication cysts, emphasizing the importance of patient-specific, multi-staged surgical approaches for optimal outcomes. Early detection and appropriate management can prevent complications and improve long-term prognosis.

Keywords: duplication cyst, thoracoabdominal, foregut

P - 3

LIFE-THREATENING MEDIASTINAL TERATOMA OF A NEWBORN

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Introduction: Mediastinal teratomas are rare congenital tumors typically diagnosed in early childhood. When visible on antenatal ultrasonography, they may grow rapidly, causing complications like hydrops or respiratory and cardiac failure. This report discusses the management of a newborn with a mediastinal teratoma that was not detected on antenatal ultrasonography.

Case Presentation: A 4950g term male neonate, delivered via C-section, developed respiratory distress 40 minutes after birth and required positive pressure ventilation. Chest X-ray revealed mediastinal opacity, leading to the initiation of antibiotic therapy for suspected neonatal pneumonia. With worsening CO_2 levels, the baby was intubated, and bilateral thorax tubes were inserted due to suspected pleural effusion. Only the left tube drained 100ml of clear serous fluid. MRI indicated a mediastinal cystic and solid heterogeneous lesion, which was suggestive of lymphangioma or teratoma. CT imaging showed a 42x74x54mm septate, mostly cystic tumor with high-density soft tissue components. The patient was referred to our center for further management.

Total tumor excision via median sternotomy was planned, with the cardiovascular and pediatric surgery teams involved. On the 20th day of life, bronchoscopy confirmed tracheal compression caused by the tumor. A full-length sternotomy allowed for optimal exposure, revealing thymic tissue anterior to the tumor. The tumor, primarily cystic with some solid components, was successfully resected from the pericardium and pulmonary vessels without major hemorrhage. Postoperatively, NG feeding was started on day 1, but extubation was delayed until day 7. By postoperative day 15, the infant was feeding orally and tolerated room air. Histopathology confirmed a mature teratoma. The patient remains under routine follow-up with pediatric surgery.

Conclusion: Mediastinal teratomas can cause severe respiratory distress in neonates. Early, detailed imaging facilitates safer, less invasive management, minimizing the risk of complications.

Keywords: sternotomy, teratoma, newborn

P - 4

MANAGEMENT OF NEONATAL DUODENAL OBSTRUCTION BY OPEN APPROACH.

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Purpose: Congenital duodenal obstruction (CDO) is the most common cause of neonatal small bowel obstruction. The aim of this study was to present our experience in term of clinical spectrum and outcomes in neonates with CDO at our center.

METHOD: It was a descriptive retrospective single center study including all the neonates operated on for CDO in the department of paediatric surgery A over a period of 12 years from January 2006 to December 2018.

RESULTS: A total of 9 patients were admitted. Polyhydramnios was detected in 55.5% of the patients. Thirty-three percent had low birth weight (<2500 g). The mean age at presentation was 2,5 days (from 1 day to 4 days of live). The most common presentation feature was bilious vomiting in 66,6% . The full abdominal x-ray was the most commonly used investigation to confirm the diagnosis showing double-gas shadows in 88.8%. Down syndrome was the most common associated anomaly found in 44,4%. The most common cause was duodenal atresia in 66,67%, followed by annular pancreas in 11,11%. All cases were managed surgically by open laparotomy. Diamond shaped duodeno-duodenostomy was performed in 100%. The average time of oral feeding was 10 days. The morbidity was high (55,6%) dominated by septic complications in 44,4%. The average time of discharge was 18 days. The median follow-up period was 20 months.

CONCLUSION : Prenatal diagnosis and early surgical intervention hold the key in achieving good results. Associated anomalies, prematurity, sepsis and delayed diagnosis are main risk factors for post-operative morbidity and mortality.

Keywords: duodenal atresia, prenatal diagnosis, duodenoplasty, prematurity

P - 5

A RARE PRESENTATION: DUODENAL OBSTRUCTION SECONDARY TO LYMPHADENOPATHY IN PEDIATRICS

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Aim:

This study highlights the challenges of diagnosing and managing duodenal obstruction in pediatric patients and emphasizes that it can arise from various causes.

Case:

A 12-year-old girl with a history of tuberculosis treatment from ages 9 months to 4 years presented with worsening postprandial abdominal pain, bilious vomiting, and weight loss over the past two months. Clinical examination revealed severe cachexia and epigastric fullness. An upright abdominal X-ray and upper gastrointestinal contrast studies indicated dilation of the stomach and the first two parts of the duodenum, with a sudden cutoff at the third part. Contrast-enhanced abdominal CT showed significant lymphadenopathy compressing the third part of the duodenum without other notable pathology. Endoscopy confirmed fluid and food retention in the dilated stomach and second part of the duodenum but could not advance due to external compression. The patient was consulted regarding tuberculosis, and necessary tests were performed. Following failed multidisciplinary conservative treatment, laparotomy was planned. This revealed conglomerate lymph nodes encasing the third part of the duodenum, making dissection impossible. A duodenojejunostomy was performed using a linear stapler, and the passage continuity was confirmed. A nasojejunal tube was placed, and an incisional biopsy of the lymph nodes was conducted. The pathology result showed lymph nodes with immunoreactivity with CD3, CD20, bcl2, and CD138. The patient was early mobilized and started feeding via the nasojejunal tube on postoperative day one. The patient was discharged on postoperative day 21, able to tolerate oral feeding.

Conclusions:

This case underscores that duodenal obstruction can have various causes in children, making a thorough patient history and preoperative assessment crucial and multidisciplinary collaboration is necessary for complicated cases.

Keywords: DUODENAL OBSTRUCTION, LYMPHADENOPATHY, INTESTINAL TUBERCULOSIS

P - 6

MANAGEMENT AND OUTCOMES OF ESOPHAGEAL PERFORATION DUE TO FOREIGN BODY INGESTION.

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Purpose:

Esophageal perforation caused by a foreign body is a rare but serious condition in children. It often results from accidental ingestion and can lead to severe complications such as mediastinitis or sepsis. Early recognition and prompt management are essential to prevent life-threatening outcomes. This study explores the diagnosis and treatment of esophageal perforation in pediatric cases, caused by foreign body ingestion.

Method:

This is a retrospective study of patients who were treated for esophageal perforation caused by a foreign body in the department of pediatric surgery of Monastir over a period of 7 years.

Results:

This case series presents three pediatric patients (two males, one female) with a mean age of 19 months who were treated for esophageal perforation caused by foreign body ingestion, specifically batteries (two cases) and candy (one case). All patients developed severe infectious syndrome and dyspnea, with diagnostic imaging confirming mediastinitis characterized by pneumomediastinum and diffuse pneumonia. Treatment approaches varied, with two patients receiving conservative management using broad-spectrum antibiotics and nasopharyngeal aspiration, while one patient underwent thoracotomy and thoracic drainage of the mediastinal collection but tragically died from severe sepsis. The two others patients demonstrated favorable healing with esophageal wall breach sealing, and one patient required three esophageal dilation sessions due to subsequent stenosis. Notably, the two surviving patients exhibited good psychomotor development and appropriate weight gain during follow-up.

Conclusion:

Esophageal perforation due to foreign body is a critical condition that requires prompt diagnosis and intervention. Timely management, including imaging studies and appropriate conservative or surgical treatment, is essential to prevent complications.

Keywords: Esophageal perforation, foreign body, mediastinitis, thoracic drainage, conservative management.

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AN OBSERVATIONAL STUDY COMPARING TWO ANALGESIC REGIMES FOR CHILDREN FOLLOWING OUTPATIENT SURGERY

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Introduction: In recent years, the number of outpatient surgical procedures in both adults and children has steadily increased worldwide. Studies show that 30% to 40% of patients experience moderate to severe pain during the first 48 hours.

The aim of this observational study is to compare the percentage of moderate to severe pain, side effects and use of rescue medication in the two analgesic protocols after ambulatory surgery in the pediatric population.

Methods: In our study,children who had ambulatory surgery during the period January 2024 to December 2024, were followed for 48 hours postoperatively by telephone. The Flacc score was assessed before the child was discharged from hospital (for 6 hours postoperatively), then the parents' satisfaction score was assessed by telephone, and the time of first paracetamol administration. The two analgesic protocols were: Sufentanil group (general anesthesia with Sufentanil at 0.2 µg/kg and Paracetamol at 15 mg/kg at the end of the procedure), ALR group (morphine-free general anesthesia with analgesic block with Ropivacaine 2% at 0. 3ml/kg and 15 mg Paracetamol/kg at the end of the procedure).

Results: A total of 575 patients took part in the study, including 220 in Grp 1 and 355 in Grp 2. The percentage of children with a Flacc score ≥ 3 was higher in the Sufentanil group than in the ALR group (23% / 41%). In both groups, an equal percentage of children experienced postoperative nausea and vomiting (PONV).Regarding the parent satisfaction score, it was noted that in the Sufentanil group, the score was low compared to the ALR group. However, the timing of the first administration of Paracetamol at home was comparable.

Conclusion: Postoperative pain management should be multimodal, with systemic analgesics combined, if possible, with locoregional anesthesia.

Keywords: pain; postoperative; surgical procedures ; ambulatory; multimodal analgesia

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ENDOSCOPİC APPROACHES TO MANAGING SECONDARY DUODENAL STRICTURES IN CHILDREN: A CASE REPORT

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Aim:

This study aims to demonstrate that endoscopic dilatation is a beneficial minimally invasive method for managing duodenal obstruction due to peptic ulcer-related strictures in pediatric patients.

Case:
A 14-year-old girl presented with vomiting 2-3 times daily and failure to gain weight. Upon admission, her weight was below the 3rd percentile. The patient had a history of chronic epigastric pain and vomiting since age 7. Multiple endoscopies were performed at another facility, revealing a lesion causing obstruction 1-2 cm distal to the pylorus, with H. pylori identified in biopsies. After eradication therapies, patients remained symptom-free for three years, but intermittent vomiting resumed. Upper gastrointestinal imaging showed significant gastric dilation and narrowing in the first part of the duodenum. Endoscopy demonstrated a lesion causing near-complete obstruction at the pylorus. During the first endoscopy, a nasoduodenal tube was placed for feeding. The patient was fed through the tube to facilitate weight gain. The second endoscopy involved endoscopic balloon dilatation and after this procedure, the patient continued to receive nutrition via the nasoduodenal tube while starting oral feeding. After the second dilatation, the nasoduodenal tube was removed, and the patient transitioned to full oral feeding. She has shown regular weight gain without recurrence of vomiting and is now regularly followed in outpatient clinics, using PPI as part of her treatment.

Conclusions:

Although frequently seen in adults, peptic ulcer-related secondary duodenal strictures are quite rare in children. Following appropriate medical treatment, endoscopic dilatation should be attempted in experienced centers before considering surgical intervention.

Keywords: endoscopic dilatation, duodenal obstruction, duodenal ulcer

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SPONTANEOUS EXPULSION OF INTACT MEMBRANE OF LIVER HYDATID CYST : ABOUT TWO CASES

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PURPOSE

Rupture of hydatid cyst (HC) of the liver may be secondary to trauma or occur spontaneously.

We present two cases of spontaneous expulsion of intact germinative membrane, as a differential diagnosis of abdominal cystic masses that must be considered in endemic areas.

CASE 1

A 4 year-old girl presented abdominal pain, fever and a tenderness in the right upper quadrant. Abdominal US showed a 4cm cystic mass localized in under hepatic region with a digestive sturcture suggestive of a ruptured appendix. It also showed a 5cm heterogenic irregular lesion in the right lobe of the liver. The exact origin of this giant cyst could not be determined preoperatively.

At laparoscopy a turbid fluid and 5 cm cystic mass were observed under the liver. Parenchymal cavity in the right lobe of the liver was suggestive of an expulsed hydatid cyst. Laparotomy was performed, the intact germinative membrane was removed. Peritoneal cavity was irrigated with hypertonic saline solution. Albendazol and antibiotics were given.

CASE 2

A 9-year-old girl presented with fever and abdominal pain and a marked tenderness in the right iliac fossa. An ultrasound concluded an appendiceal abscess. An appendectomy via the McBurney incision was performed. Intraoperatively, we found an inflammatory appendix, as well as a cystic mass with an intact membrane in the hypogastrium. Appendicectomy was performed. The cystic mass was removed intact. Exploration of the liver revealed a parenchymal cavity in the left lobe, which was drained. Peritoneal lavage with hypertonic saline solution was performed. Albendazol and antibiotics were prescribed.

CONCLUSION

Expulsion of an intact germinative membrane is an extremely rare entity in cases of hydatid cyst of the liver. The intact free cyst should not be punctured or ruptured to avoid dissemination of cystic contents. Antiparasitic treatment should be given to prevent recurrence of the disease.

Keywords: Hydatid cyst, expulsion, children, endemic area

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SURGICAL MANAGEMENT OF SEVERE COMPLICATIONS FROM BUTTON BATTERY INGESTION IN CHILDREN: TIMING AND OUTCOMES

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Introduction

Button battery ingestion is a pediatric emergency associated with severe complications, including tracheoesophageal fistulas and esophageal perforations.

Objective

This study aims to evaluate the role of surgery in managing these complications and to determine the optimal timing for surgical intervention.

Methods

A retrospective analysis was conducted on cases of button battery ingestion complicated by tracheoesophageal fistulas or esophageal perforations. The study focused on:

The surgical interventions performed.

Postoperative outcomes.

Factors influencing the timing of surgery.

Results

Key findings include:

- **Urgent surgical interventions**: Patients presenting with respiratory distress or hemodynamic instability required immediate surgical intervention.
- **Stable patients**: The timing of surgery was determined by:
  - The presence of persistent symptoms.
  - Imaging findings (e.g., CT scans, radiographs).
  - Failure of medical and instrumental treatments.
  - Availability of surgical resources.

Postoperative outcomes were generally favorable, with a significant reduction in complications following surgical management.

Discussion

Surgery plays a crucial role in managing complications of button battery ingestion in children. However, the timing of the intervention depends on:

The severity of clinical symptoms.

Careful assessment of the patient's respiratory and hemodynamic stability.

A multidisciplinary approach and available resources.

An individualized management plan is essential to optimize clinical outcomes while minimizing postoperative risks.

Conclusion

Timely surgical intervention is critical in managing complications of button battery ingestion in children. Close collaboration between medical and surgical teams is necessary to determine the optimal timing for surgery and improve clinical outcomes.

Keywords: Button battery,,Foreign body ingestion,Corrosive esophageal injury,Esophageal perforation

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CONGENITAL DIAPHRAGMATIC HERNIA IN A DEVELOPING COUNTRY: SHORT-TERM OUTCOMES AND PREDICTORS OF SURVIVAL

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Background: Neonates with congenital diaphragmatic hernia (CDH) experience significant morbidity and mortality. The treatment methods, along with prenatal and postnatal factors, are believed to impact outcomes. However, data from developing countries are scarce.

Aim: This study aimed to examine the management and outcomes of CDH and identify prenatal and postnatal factors that affect survival.

Material and Methods: A retrospective review was conducted on neonates with CDH admitted to Fattouma Bourguiba University Hospital from January 2010 to December 2023. The study included demographic data, prenatal and postnatal factors, birth details, management strategies, and outcomes. Survival rates were the primary outcome measure.

Results: A total of 51 patients with CDH were included in the study. Fifty-two percent were male, and 13.2% were premature. Antenatal diagnosis was made in 39.2% of cases at a mean gestational age of 29.1 weeks using ultrasound, with MRI in 29.4%. Hydramnios was present in 7 cases, and additional anomalies were found in 7 patients. All patients developed respiratory distress, and 57.9% required intubation. Right-sided CDH occurred in 21.6%, and left-sided in 78.4%. The diagnosis was established at a mean age of 9.6 hours. Eleven percent of patients died before surgery. Post-operative complications included nosocomial infections (69.7%), pneumothorax (42.4%), and pulmonary arterial hypertension (33.3%). The mortality rate was 39.2%. Six deaths occurred within the first 72 hours of life. A favorable Apgar score at 5 minutes ($p = 0.02$) and FiO_2 <50% at 24 hours ($p = 0.01$) were significantly associated with survival.

Conclusion: The study highlights the high morbidity and mortality associated with CDH in neonates. Early diagnosis, favorable Apgar scores, and oxygen management significantly improve survival outcomes.

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RETROGRADE TRACHEAL INTUBATION FOR A GIANT FETAL NECK MASS

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We describe 35 years old patient with polyhydramnios and prenatal diagnosis of a 9 cm multicystic neck tumor with a significant airway displacement

At 34 weeks of gestation there was a preterm labor. We started an emergency EXIT procedure with an Endoscopic airway assessment. The oral anatomy was deformed and the airway closed so an emergency surgical approach was performed.

We dissected the tumor and we exposed the trachea. The tracheostomy was not an option due to the position and shape of the tumor so a retrograde intubation through the tumor was done.

Endoscopic assessment of cervical masses is mandatory to evaluate if antegrade intubation is possible, saving valuable EXIT time. If the Bronchoscopy shows a total collapsed airway and the tracheostomy is not possible, retrograde intubation is a quick and easy alternative.

Keywords: Giant fetal neck mass, retrograde tracheal intubation, EXIT

P - 13

ESOPHAGEAL PERFORATION, MEDIASTINITIS, AND DELAYED HEMORRHAGE DUE TO A PSEUDOANEURYSM OF AN ABERRANT RIGHT SUBCLAVIAN ARTERY FOLLOWING BUTTON BATTERY INGESTION: MANAGEMENT OF A COMPLEX CASE WITH AN ESOPHAGEAL STENT AND AN ENDOVASCULAR STENT GRAFT.

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Background: The ingestion of button batteries constitutes a significant medical issue in children. We present the case of a 3.5-year-old boy with mediastinitis caused by esophageal perforation following button battery ingestion, managed with an esophageal stent, and subsequent bleeding due to a pseudoaneurysm of an aberrant right subclavian artery (arteria lusoria), treated with an endovascular stent graft.

Case: A 3.5-year-old boy underwent esophagoscopy for the extraction of a button battery 24 hours after ingestion at an external facility. Four days after the procedure, he began to exhibit signs of fever. Thoracic computed tomography (CT) scans indicated mediastinitis and esophageal perforation. A 3-centimeter pleural effusion was identified in the left hemithorax, requiring chest tube insertion. On the sixth day, the patient was referred to our facility.

Upon arrival, he was hemodynamically stable, with laboratory results indicating a hemoglobin concentration of 11.6 g/dL, a white blood cell count of 11,530/mm³, and a C-reactive protein level of 107 mg/L. Broad-spectrum antibiotic therapy was initiated. A bedside oral contrast esophagogram demonstrated a leak from the upper esophagus into the left hemithorax. Esophagoscopy revealed a 2 cm perforation in the upper esophagus. A fully covered esophageal stent was placed. A follow-up esophagogram on post-stenting day 5 revealed no leakage. He was transitioned to oral feeding and discharged on the nineteenth day.

The patient was scheduled for stent removal after one month. However, he presented to the emergency department exhibiting hematemesis. CT angiography revealed a pseudoaneurysm at the site where the aberrant right subclavian artery traversed the esophagus. His hemoglobin concentration decreased to 5.5 g/dL. Due to ongoing hematemesis, an emergency endovascular procedure was performed, resulting in the placement of a 4.00×21mm balloon-expandable stent graft (Bentley BeGraft, Hechingen, Germany) in the aberrant right subclavian artery pseudoaneurysm, effectively controlling the hemorrhage. The esophageal stent was successfully removed in the sixth week post-implantation without complications.

Conclusion: In cases of mediastinitis, esophageal stent placement should be considered a reliable treatment option compared to surgical intervention. It is also crucial to recognize the significant risk of severe vascular complications following button battery ingestion, which can potentially lead to life-threatening situations.

Keywords: Button battery ingestion, esophageal perforation, mediastinitis, pleural effusion, subclavian artery aneurysm.

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KAPOSI'S SARCOMA AFTER PEDIATRIC LIVER TRANSPLANTATION: A CASE REPORT

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Introduction:

The increased incidence of Kaposi sarcoma is one of the major complications of immunosuppression following liver transplantation. Human herpesvirus 8 (HHV-8), also known as Kaposi's sarcoma (KS)–associated herpesvirus, is the etiologic agent responsible for all types of KS. It is increasingly important for clinicians to recognize Kaposi's sarcoma in a wide variety of clinical contexts.

Case report:

A 12-year-old Tunisian boy underwent a living donor left lateral segment liver transplant in September 2019 for primary biliary atresia. Five months post-transplant, the patient developed gingival swelling, erratic fever, and night sweats. Biopsy of the mucosal lesion and immunohistochemistry (IHC) studies confirmed the diagnosis of Kaposi sarcoma. A CT body scan revealed nonspecific lymph nodes, and an esophago-gastroduodenal endoscopy was normal. The hospital did not have access to HHV-8 PCR, but HIV 1 and 2 DNA tests were negative, and CMV and EBV were undetectable in the child's serum. The diagnosis of purely mucosal Kaposi sarcoma was made. Tacrolimus was gradually reduced, and Sirolimus was introduced, leading to partial regression of the gingival lesions.

Conclusion:

Conversion to Sirolimus appears to be effective in halting the proliferation of purely mucosal Kaposi sarcoma following liver transplantation.

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CHOLEDOCHOCELE IN CHILDREN MISTAKEN FOR DUODENAL DUPLICATION: TWO CASE REPORTS ON DIAGNOSIS AND TREATMENT

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Introduction:

Choledochocele, or Type III choledochal cyst, is the rarest form of choledochal cyst, particularly in the

pediatric population, accounting for only 1.5% of cases. Its clinical and radiological resemblance to duodenal duplication makes preoperative diagnosis challenging. Histopathological examination remains the definitive diagnostic tool.

Case Report:

A five-year-old girl with recurrent urinary tract infections underwent imaging, revealing anintraabdominal cyst suspected to be duodenal duplication. Laparoscopic exploration followed by laparotomy identified an intraluminal duodenal mass communicating with the bile duct, confirming c holedochocele. A transduodenal marsupialization was performed. After nine years of follow-up, the patient remained asymptomatic.
A five-year-old boy presented with recurrent abdominal pain and vomiting. Imaging suggested duodenal duplication, leading to surgical intervention. Intraoperative findings revealed a cystic dilation in the duodenum filled with biliary fluid and lithiasis. The cyst was flattened, and a partial excision was performed. Histopathological examination confirmed choledochocele. The patient recoveredwell postoperatively.

Conclusion:

Choledochocele remains a diagnostic challenge due to its overlap with duodenal duplication. Endoscopic retrograde cholangiopancreatography (ERCP) is the gold standard for diagnosis and treatment, though its use in pediatric cases is limited. While surgical management remains the primary approach, increasing awareness of choledochocele can facilitate early diagnosis and the adoption of less invasive endoscopic techniques when appropriate.

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NEONATAL GASTRIC PERFORATION: A BI-CENTRIC STUDY

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Neonatal gastric perforation (GP) is a rare and serious condition. It constitutes a neonatal surgical emergency. These facts prompted us to review observations of New born babies operated on for gastric perforation from 1990 to 2022.

Results:

Twenty-seven observations were described, a male predominance was found including 18 boys and 9 girls,

Risk factors included prematurity, hypotrophy, fetal or perinatal distress, twin pregnancies, gestational diabetes and maternal or obstetric anomalies. Lung maturation was performed in only one case and a retroperitoneal hematoma was found in one other case.

Birth weight ranged from 1200 to 3650g with an average of 2400 g.

GP is evoked in any new born presenting with abdominal distension associated or not with respiratory distress associated with pneumoperitoneum on standing unprepared abdominal film. Time to onset of symptoms ranged from 1 to 23 days, with an average of 5 days

Treatment is essentially surgical, with suturing of the edges with or without drainage. Gastrostomy was instaurated in 5 cases. In 25 cases the perforation was unique.

Fourteen new born survived with a good evolution after 3 years post operation.

Conclusion:

GP is a rare and serious entity. Several etiopathogenic hypotheses have been put forward: gastric ischemia, muscle defect, gastric distension and Cajal cell deficiency.

The prognosis of this condition remains poor, with a high mortality rate.

Pre- and postoperative neonatal resuscitation plays a key role in EP.

Keywords: gastric-perforation-new born

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NERVE INJURY AND VOCAL CORD PARALYSIS AFTER ESOPHAGEAL ATRESIA AND TRACHEOESOPHAGEAL FISTULA: SYSTEMATIC REVIEW AND META-ANALYSIS

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Aim: Vocal cord paralysis (VCP) and recurrent laryngeal nerve injury may be either congenital or acquired due to surgical trauma in patients with esophageal atresia and tracheoesophageal fistula (EA-TEF). A systematic review and meta-analysis were performed to define the risk factors for developing VCP and other nerve injuries.

Methods: Systematic literature search was conducted for the period 2000 (Jan) to 2024 (Jan) under the PRISMA guidelines. The study protocol was registered on PROSPERO (CRD42024532277). EMBASE, MEDLINE and Pubmed databases were searched and qualitative and quantitative data were extracted relating to VCP, recurrent laryngeal and phrenic nerve injury in patients with EA-TEF. Statistical analysis was performed with CMA-V4 software.

Results: Among 1421 articles, 851 abstracts were screened for inclusion criteria. Full texts of 125 articles were assessed for eligibility. The subgroup analysis was performed in 8 articles for type of EA-TEF and 4 articles for type of surgery. The risk of VCP occurrence was increased 1.58 times in Type-A, 2,38 times in Type-B and 6,96 times in Type -E when compared to Type-C EA [95%CI: (0,95-2,63, p=0.08), (08-5,26, p=0.032), (3,57-13,57, p<0,05), respectively]. There was no significant correlation between thoracotomy and thoracoscopy to risk of VCP occurrence [OR:1.74, (95% CI 0,69-4,37), p=0.24]. Kendal's Tau test and Egger's tests were performed revealing that there was no publication bias for all data.

Conclusions: This systematic review reveals that the occurrence of VCP significantly increases in rare types (A, B and E) of EA-TEF compared to Type-C. Whereas, the type of the surgery seems to be non-correlated with the VCP occurrence risk.

Keywords: esophageal atresia, tracheoesophageal atresia, recurrent laryngeal nerve, vocal cord injury, children

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REVISITING THE TURKISH ESOPHAGEAL ATRESIA REGISTRY FOR QUALITY INDICATORS

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Aim: The Turkish Esophageal Atresia Registry (TEAR) data revisited for quality indicators (QI) to evaluate quality care of patients with esophageal atresia (EA).

Methods: Among 36 centers registering data in the TEAR database, centers with more than 4 patients per year were invited. According to defined QI, each centers data was evaluated for structural indicators (use of bronchoscopy, having multidisciplinary team and transition to adulthood facilities) and outcome indicators (percent of anastomosis leaks, strictures, refistulization, reoperation, diagnosed gastroesophageal reflux (GER), postoperative and intraoperative complications). The mean percent of each indicator was defined and centers with lower-than-average percentages were determined as 'meeting that quality indicator', while those with higher percentages were determined as 'not meeting' for outcome indicators.

Results: Fifteen centers invited to study including data of 713 patients. 80% of centers have multidisciplinary teams, 33% of them had follow-up program for transition to adulthood. The mean percent of the QI was; preoperative bronchoscopy 29.9%, intraoperative complications 4.6%, anastomotic leaks 7.7%, strictures 39%, reoperation 5.2%, refistulizaiton 4.3%, defined GER 16,2%, postoperative complications 2.8% and mortality 9.4%. One center met the 91% of the QI, whereas, 2 centers met the 82% of them and 3 of them met 73% of QI. Two centers met only 36% of the indicators. The most met QI was multidisciplinary teams and intraoperative complications (n=12, 80%) whereas anastomotic strictures was the least (n=6, 40%). No correlation was found between the number of patients in the centers and the number of QI met ($p>0.05$).

Conclusions: QI allow centers providing insight to their EA care and compare it with other centers.

Keywords: esophageal atresia, tracheoesophageal atresia, registry, quality indicators

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MANAGEMENT AND SURGICAL OUTCOMES IN ESOPHAGEAL ATRESIA WITH PROXIMAL FISTULA (GROSS TYPES B/D): INSIGHTS FROM THE TURKISH ESOPHAGEAL ATRESIA REGISTRY (TEAR)

Ü Çeltik [1], Ç Ulukaya Durakbaşa [2], G Şalcı [3], T Soyer [4], SA Bostancı [5], A Karaman [6], AE Hakalmaz [7], İ Çiftçi [8], A Parlak [9], D Demirel [10], G Göllü [11], B Çığşar Kuzu [12], İ Akkoyun [13], H İlhan [14], ŞS Kılıç [15], O Uzunlu [16], A Süzen [17]

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Aim: Proximal fistula with esophageal atresia (PTEF-EA) is rare and often misdiagnosed, posing significant challenges in management. We aimed to analyze clinical features, diagnostic methods, treatment strategies, and surgical outcomes for PTEF-EA using data from the TEAR.

Methods: PTEF-EA patients in TEAR between 2015-2023 were evaluated in terms of demographics, diagnostic methods, surgical treatment, and complication

Results: Of 998 cases, 3.4% (n=34 M/F:21/13) had PTEF-EA. Median gestational age was 36.5 weeks, and median birth weight was 2390 grams. 13 were Type D and 21 were Type B. Diagnosis was made by bronchoscopy in 20 and by pouchography in 9 patients. In two cases, the fistula was identified intraoperatively. PTEF ligation was performed via thoracotomy in 10 patients, cervical approach in 6, and thoracoscopy in 5. In Type D, ligation was performed via thoracotomy in 12 cases and thoracoscopy in 1. When comparing Type B-D, groups were similar in terms of gestational age (p=0.255) and birth weight (p=0.507). However, primary anastomosis was significantly more common in Type D. Surgical methods are summarized in Table 1. During follow-up, 5 patients died due to various reasons. Among the 23 patients with one-year follow-up data, 2 (8.7%) experienced recurrent PTEF, 11 (47.8%) developed strictures, and 6 (26.1%) had gastroesophageal reflux.

Conclusion: In PTEF cases, variable treatment approaches were performed depending on patient's anomaly and experience of surgeons. The presence of a distal fistula in PTEF increases the likelihood of primary anastomosis. Management of Type B cases can be more challenging compared to Type D.

Table 1

	Type B	**Type D**	**p**
Patients number	21	13	
Median gap length(vertebrae)	**4 (2-7)**	**2 (1-2)**	**<0.001**
Primary repair	**3**	**12**	**<0.001**
Delayed repair	3	0	0.154
Traction techniques	**7**	**0**	**0.019**
Replacement surgery	6	1	0.143

Keywords: long gap esophageal atresia, proximal fistula

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SLEEP-DISORDERED BREATHING AND DYSPHAGIA IN CHILDREN WITH ESOPHAGEAL ATRESIA AND/OR TRACHEOESOPHAGEAL FISTULA

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Background

Esophageal atresia–tracheoesophageal fistula (EA-TEF) occurs in 1 in 2,400-4,500 births worldwide. A significant number of children with repaired EA-TEF suffer from dysphagia related to esophageal dysfunction. Esophageal dysphagia occurs secondary to abnormal esophageal motility and oropharyngeal dysphagia. Impaired oropharyngeal muscle function may contribute to oropharyngeal dysphagia and is also important in sleep-disordered breathing, particularly obstructive sleep apnoea (OSA). At present, there is no literature regarding children with repaired EA-TEF and sleep-disordered breathing. Given the role of oropharyngeal muscle dysfunction in both dysphagia and OSA, determining if an association exists would allow for timely sleep assessments, early intervention and overall improvement in quality of life.

Methods

Single centre retrospective study of children with repaired EA-TEF who underwent polysomnography between 2011-2024. Data includes demographic parameters, patient symptoms (including dysphagia, aspiration) and polysomnography (PSG).

Results

A total of 29 children with repaired EA-TEF were identified (Median age 4.5 years, IQR 2.5, 7.5). The cohort included 86.5% Type C (n=25), 10.3% Type A (n=3) and 3.4% Type D (n=1). Statistical analysis was performed using the Fisher Exact test. Ten children had confirmed OSA on PSG. Seven children with OSA also had dysphagia (OR 3.208, 95% CI 0.67-13.65; p=0.245). Two children (n=3) at risk of aspiration were diagnosed with OSA (OR 4.5, 95% CI 0.45-68.13; p=0.267). Nine children (n=19) with strictures had OSA (OR 8.10, 95% CI 0.98-97.32; p 0.098). These results highlight patients with dysphagia, aspiration and strictures may be at higher risk of OSA. This study is limited by its small cohort size and retrospective nature.

Conclusion

There is a high incidence of dysphagia and sleep-disordered breathing in children with repaired EA-TEF. Our results suggest further studies in a larger cohort is required to evaluate the relationship between dysphagia and sleep-disordered breathing in this at-risk patient group.

Keywords: Obstructive sleep apnoea, Sleep-disordered breathing, dysphagia, EA-TEF, oesophageal atresia

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PREVALENCE OF ATTENTION DEFICIT HYPERACTIVITY DISORDER IN SCHOOL-AGED CHILDREN AND ADOLESCENTS BORN WITH ESOPHAGEAL ATRESIA - PRELIMINARY RESULTS FROM A NATIONWIDE FOLLOW-UP STUDY IN SWEDEN

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Purpose: A Swedish national registry study have shown that individuals with esophageal atresia (EA) have a higher risk of autism-spectrum disorder (ASD) and intellectual disability (ID) than individuals without the exposure. The aim of this study was to identify the prevalence and clinical predictors of symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD) in school-aged children (7-8 years) and adolescents (15-16 years) born with esophageal atresia (EA).

Method: A prospective national study including the four Swedish pediatric surgical hospitals, has been ongoing over the past 3 years (Ethical approval 2021-04051). The study is a collaboration between the four Swedish pediatric surgical hospitals. Parents of children aged 7-8 and 15-16 years completed a validated rating scale, SNAP-IV, covering symptoms of inattention, hyperactivity/impulsivity (criteria for ADHD from DSM-IV), and Oppositional Defiant Disorder (ODD) according to DSM-IV criteria. Norm values for SNAP-IV were used. Clinical data was collected via medical records. Data were analyzed using descriptive statistics and linear regression analysis was used to identify possible contributory factors. Significance level was $p<0.05$.

Results: Altogether, 104 parents completed the SNAP-IV; 58 parents of children aged 7-8 and 46 parents of adolescents aged 15-16. In the younger population 14% scored over in the at-risk range for inattention and 13% for hyperactivity/impulsivity. Regarding opposition/defiance the vast majority, 96%, scored within the normal range. In the adolescent group the vast majority scored under the cut-off on all subscales (inattention 98%, hyperactivity/impulsivity 98%, and opposition/defiance 100%). Birth, neonatal or clinical factors at one year of age failed to explain ADHD symptoms in children at follow-up.

Conclusion: ADHD symptoms found in the younger age population were not found in adolescents born with EA and were not associated with clinical factors. This information is important to identify school-aged children with EA in need of extra support in school.

Keywords: esophageal atresia, ADHD, School, SNAP IV

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PHYSICAL ACTIVITY ENJOYMENT AND PHYSICAL SELF-CONCEPT POSITIVITY AMONG TEENAGERS WITH ESOPHAGEAL ATRESIA: A COMPARATIVE SURVEY

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Purpose

In the past, our study group showed that esophageal atresia (EA) patients, especially females, are less physically active than healthy peers. With age, the gap widens even further. In this subgroup analysis we further explore possible underlying reasons.

Method

A survey was performed among EA patients of the participating centers and members of KEKS e.V. (a national support group) In this subgroup analysis, only patients aged 11-17 years without congenital heart disease were included. Physical self-concept (subjective strength, endurance, athleticism, flexibility, speed, coordination) and enjoyment of physical activity were assed using standardized and validated instruments (PSK 36-144 points; PACES, 16-80 points). Patients were matched for gender and age with healthy controls (Motorik-Modul study n=6233). Descriptive analysis and Mann-Whitney-U test were performed.

Results

Out of 104 EA patients, 28 (14 male, 14 female, median age 13,5 years) were included and matched to 140 controls. Most were born with Gross type C (n=23) or A (n=3) esophageal atresia, and five had thoracoscopic repair. The median PSK score in EA was 104 (male 106, female 93, p=0.25), and 105 in controls. Of all dimensions, median scores for endurance (EA 2.4, controls 2.7, p=0.03) and athleticism (EA 2,8, controls 3.0, p=0.02) were significantly lower in EA patients. The median PACES score was 46.5 in the EA (male 48.5, female 46, p=0.37) and 44 in the control group (p=0.44). There was a statistically significant association between symptoms during exercise (n= 9, mostly respiratory, n=8) and both, PSK (p=0.01) and PACES score (p=0.01).

Conclusion

Overall, EA patients had similar scores for physical self-concept positivity and fun participating in physical activity compared to healthy peers. However, there was an association between symptoms during exercise and both scores. Better respiratory symptom control might be key to improve endurance, athleticism and enjoyment in affected subjects and vice versa.

Keywords: physical activity, enjoyment, physical self-concept, endurance

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QUALITY OF LIFE AT THE AGE OF 6 YEARS IN CHILDREN OPERATED AT BIRTH FOR ESOPHAGEAL ATRESIA

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Since esophageal atresia (EA) is a lifelong chronic condition, it may impact on the daily life. This study aimed to assess the quality of life (QoL) at age 6 years in children with EA as reported by children and their parents. Secondary objectives were to evaluate the concordance between child and parent responses, compare QoL in children with pure EA versus other EA types, and identify predictors of impaired QoL.

This prospective, population-based nested-cohort study included data at 6 years of children born between 2010 and 2012 within our national EA registry. QoL was prospectively assessed for both parents and children using the generic PedsQL 4.0 scale.

A total of 230 children were included. At age 6, the median overall QoL score assessed by children was 80/100 (IQR: 69.7–89.2) while the median parental score was 78.4/100 (IQR: 65.0–88.3), with a moderate but significant concordance (intraclass correlation coefficient: 0.47, $p<0.05$). QoL in children with pure EA was not significantly different from that of other EA types ($p=0.52$ for children, $p=0.75$ for parents). Long-term respiratory treatment at age 1 was the only factor significantly associated with impaired QoL ($p=0.045$). At age 6, respiratory symptoms and at least one respiratory exacerbation in the preceding year were strongly associated with poorer QoL in children ($p=0.007$ and $p=0.017$, respectively). Parental assessments further identified respiratory symptoms, exacerbations and orthopedic abnormalities as significant predictors of impaired QoL ($p=0.001$, $p=0.009$, and $p=0.026$, respectively).

Our findings reveal a good overall QoL at age 6 in children with EA, highlighting the effectiveness of adaptive coping strategies developed in the context of a chronic condition from birth. However, respiratory and orthopedic complications remain critical factors influencing QoL and warrant targeted interventions.

Keywords: esophageal atresia, quality of life, coping strategies

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DEVELOPING A CORE DATA SET FOR ESOPHAGEAL ATRESIA CARE AND RESEARCH

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Introduction

With technological advances making health data collection easier than ever, there has been an increase in health data being collected for various purposes. However, this has led to considerable heterogeneity of collected variables, resulting in suboptimal comparability and usability. This is especially problematic in rare conditions such as esophageal atresia, where patient data is scarce. Additionally, minimizing administrative burden of professionals is essential. To address these challenges, this study developed a core data set comprising the minimum essential data points for evaluating and studying esophageal atresia care.

Methods

Previously, two Delphi studies were conducted. The first established a core indicator set standardizing EA care quality evaluation in Europe, while the second established a core outcome set to standardize research outcomes with a more global panel of stakeholders. These sets were combined and translated to data points, and measurement timings were determined. Joint expert reviews further refined the data points, which were then completed with the corresponding international Snomed terminology where possible. Comparability of postoperative complication data was enhanced by adding the Clavien-Madadi classification.

Results

The final core data set includes nine sections with 247 data points, covering patient variables, birth data, diagnostics, surgical details and follow-ups at one and two years. 71 variables apply to all patients. Out of these 247 variables, 131 are critical to capture the core indicator and outcome sets.

Conclusion

This EA core data exemplifies how rare disease data collection can be standardized, improving usability and comparability. Using international coding terminology assures compatibility across IT systems, paving the way for automated data extraction. This EA core data set will be implemented in the European Pediatric Surgical Audit (EPSA), a clinical audit to evaluate and improve quality of care. It will be regularly evaluated and updated, as part of the data quality cycle.

Keywords: Data, outcomes, data collection, care evaluation, clinical audit

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PERIPHERAL AIRWAY FUNCTION IN ADOLESCENTS OPERATED FOR ESOPHAGEAL ATRESIA

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Introduction: Pulmonary function might be affected in patients operated for esophageal atresia (EA). Little is known about the effects on the peripheral airways among adolescents operated for EA. We wanted to describe the prevalence of peripheral airway pathology in adolescents with EA.

Method: An 8 year prospective data collection of pulmonary function at 15-16 years in patients born with EA operated at a tertiary center between 2001-08 was undertaken as part of the local follow up program. Patients primary operated outside the geographical catchment area as well as patients with genetic deviations were excluded. The peripheral airway pathology was determined using multiple breath washout (MBW) with SF6 measuring the lung clearence index (LCI). The Global Lung Function Initiative reference values were used for calculating z-scores. The study was approved by the Swedish Ethical Review Authority (refnr 408-16).

Result: A total of 61 patients, 32 boys, were included. Mean gestational age was 37 weeks, mean birthweight 2640 g. Forty-nine had EA Gross type C, 6 type A, 3 type B and 3 type E. Fifty-one (84%) of the patients underwent a MBW with SF6 at a mean age of 15,2 (SD 0,4) year. LCI was mean 6,72 (SD 0,77) and 12/51 (24%) had a z-score > 2, of whom 10 had Gross type C and two had type A.

Conclusion: This study suggests that a subgroup of adolescents aged 15-16 years with EA have peripheral airway dysfunction. The reason is not known but will be further investigated. Such further studies will be important to raise awareness of the issue and hopefully find ways to optimize the pulmonary function in patients operated for EA.

Keywords: Esophageal atresia, pulmonary function, multiple breath washout

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TRACHEOMALACIA AND AIRWAY OBSTRUCTION AMONG INFANTS WITH ESOPHAGEAL ATRESIA WITH/ WITHOUT TRACHEOESOPHAGEAL FISTULA.

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Background: Infants with esophageal atresia with/without tracheoesophageal fistula (EA/TEF) may develop significant upper airway obstruction from tracheomalacia (TM) necessitating surgical intervention such as aortopexy, tracheopexy and, in rare cases, tracheostomy. This review is to assess airway procedures and outcomes of symptomatic TM for EA/TEF patients.

Methods: Single centre REB approved retrospective chart review of EA/TEF patients repaired from Jan. 1, 2000 to Nov. 30, 2024 was performed. Airway obstruction was defined as clinically documented respiratory distress, desaturation with stridor and/or brief resolved unexplained event. TM and severity of airway obstruction were confirmed by imaging and/or bronchoscopy. Patient demographics including gestational age, EA/TEF type and surgical procedures were collected. Statistical analyses were performed using SPSS® 2.0.

Results: In total, 49 of the 423 (11.6%) EA/TEF patients had airway obstruction with 45 due to TM. Patients who were premature (<37 weeks' gestation at birth) were more likely to have airway obstruction (p = 0.004, Fisher's exact test). Of the 45 patients, 19 required airway procedures: 1 had airway stent deployment that was removed 5 years later, 10 had aortopexies, 7 patients required combined aortopexy and posterior tracheopexy and 1 required aortopexy and descending aortopexy. Of the 10 aortopexy patients, 6 also required additional fundoplication procedure for complete resolution of their symptoms. One of the 7 aortopexy and posterior tracheopexy patients required re-do aortopexy; another had re-do aortopexy/tracheopexy without improvement, resulting in tracheostomy at 4.8 months of age. One patient had aortopexy with resolution of all respiratory symptoms but died at home 10 months post-aortopexy- post mortem did not reveal airway obstruction as cause of death. There were no other deaths in this cohort.

Conclusion: Airway obstruction is a challenging condition to treat among EA/TEF infants. A multi-disciplinary approach to the interventions to definitively relieve symptomatic obstruction is required.

Keywords: tracheomalacia, airway obstruction, esophageal atresia, tracheoesophageal fistula

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OPTIMIZING LONG-GAP ESOPHAGEAL ATRESIA REPAIR: A MULTICENTER RETROSPECTIVE STUDY

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Introduction: The surgical management of long-gap esophageal atresia (LGEA) remains complex and challenging. This study compares management strategies and clinical outcomes in LGEA patients treated at three high-volume centers.

Methods: A retrospective analysis was conducted on LGEA patients (type A and B) treated between 2008 and 2024. Demographics, surgical treatment, timing of definitive repair and outcomes were collected and analyzed.

Results: A total of 138 patients were included. The surgical approaches involved: thoracoscopic in 111/138 (80.4%) patients (for five patients was open for final procedure), open in 24/138 (17.4%) patients and conversion from thoracoscopic to open in 2/111 (1.8%) patients. The surgical strategies consisted of: primary esophageal anastomosis – 11/138 (8%) patients, esophageal lengthening using internal traction – 40/138 (29%) patients (in 38 patients a full anastomosis was achieved: in 35 using only internal traction technique, while 3 patient required Collis/ Collis-Nissen procedure as definitive management), esophageal lengthening using external traction – 33/138 (23.9%) patients (1 patient required gastric pull-up as the final management), delayed primary anastomosis – 39/138 (28.3%) patients, and esophageal reconstruction – 19/138 (13.8%) patients. Median age at esophageal continuity and median time between the initial procedure and esophageal anastomosis was reduced for esophageal lengthening procedures. There was no surgery-related mortality. 4 patients died before the anastomosis due to concomitant malformations. Postoperative complications included anastomotic leakage, recurrent strictures, and fundoplication requirement. The native esophagus was preserved in 112/133 (84.2%).

Conclusions: Management at high-volume, experienced centers is crucial for optimizing outcomes and preserving the native esophagus in LGEA patients. Thoracoscopic staged esophageal lengthening using either external or internal traction, effectively reduces time to achieve esophageal continuity and the need for esophageal substitution, when primary esophageal anastomosis is not feasible. Early postoperative complications were comparably infrequent across centers, irrespective of the surgical strategy.

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DEVELOPING A DISEASE-SPECIFIC QUESTIONNAIRE FOR ASSESSING QUALITY OF LIFE AND BURDEN OF DISEASE IN PARENTS WITH CHILDREN BORN WITH ESOPHAGEAL ATRESIA

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Background: Patient-Reported Outcome Measures (PROMs) and Patient-Reported Experience Measures (PREMs) are crucial tools in healthcare, providing insights into the well-being and experiences of patients and their caregivers. For families of children with rare conditions like esophageal atresia (EA), these measures are vital for understanding the broader impacts of chronic health issues and optimizing healthcare support systems. Despite medical advancements, children with EA often experience persistent health complications, affecting both their own and their caregivers' quality of life (QoL). However, no disease-specific tool currently exists to measure the QoL and burden of disease (BoD) of parents caring for children with EA. This research aimed to develop a PROM specifically for these parents, improving healthcare support and outcomes for families.

Materials and Methods: The item development phase involved focus group discussions with parents (n=21) of children with EA in Germany, aged 2 to 17 years. These discussions identified key stressors and concerns, informing the creation of a disease-specific questionnaire. Using Kuckartz's qualitative data analysis method, responses were categorized into themes that guided the first draft of the PROM tailored to parents of children with EA.

Results: Analysis of focus group discussions highlighted critical dimensions of parental QoL and BoD, including emotional distress, healthcare experiences, family dynamics, and financial concerns. Parents described challenges managing their child's diagnosis, daily care complexities, feeding issues, and navigating healthcare systems. These findings informed the development of a 115-item disease-specific questionnaire (pilot-test) covering domains such as diagnosis management, healthcare experiences, nutrition and feeding, family relationships, caregiving support, financial strains, mental and physical health, and social interactions.

Conclusion: Developing this disease-specific questionnaire is a key step in addressing the unique needs of parents caring for children with EA. The PROM will undergo pilot testing, cognitive debriefing, and further validation through psychometric testing. Once validated, it will be a valuable tool for research and clinical practice, enabling healthcare providers to offer more personalized support and improving care outcomes for families.

Keywords: Quality of Life, Esophageal Atresia, Parents, Patient-Reported Outcome Measures, Patient-Reported Experience Measures

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UNDERSTANDING THE EMOTIONAL JOURNEY OF PARENTS OF YOUNG CHILDREN BORN WITH ESOPHAGEAL ATRESIA: INSIGHTS FROM A FOCUS GROUP STUDY

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Purpose: Children with esophageal atresia (EA) often experience chronic aerodigestive morbidities. This study explored **the emotional journey of parents during their child's early years**-an under-researched area.

Method: Following ethical approval (P00048407), 22 parents of EA children treated at a tertiary U.S. surgical center participated in five focus groups (FGs) stratified by child age (0-2 years: n=9 parents; 3-7 years: n=13 parents/primary anastomosis or complex repair: n=17 parents; esophageal replacement: n=5 parents). A trained facilitator moderated the FGs, which were audio-recorded, transcribed, and descriptively analyzed (content analysis).

Results: Twenty-two parents described **181 emotional experiences** across these categories:

· **Concerns, worries, and fears** (19 parents/n=62 experiences)

· **Hard, tough, and brutal** (15 parents/n=55 experiences)

· **Stress, trauma, and panic** (13 parents/n=28 experiences)

· **Frustration, anger, and hate** (12 parents/n=17 experiences)

· **Letdowns, dissatisfaction, and sadness** (4 parents/n=4 experiences)

· **Feeling different, awkward, and horrible** (4 parents/n=4 experiences)

· **Need for mental health support** (3 parents/n=4 experiences)

· **Guilt and feeling bad** (3 parents/n=4 experiences)

· **Isolation and resignation** (2 parents/n=3 experiences)

These emotions stemmed from transitioning to parenthood (n=43), feeding difficulties(n=28), healthcare providers(n=19), respiratory infections(n=13), breathing difficulties (n=12), swallowing difficulties (n=12), daycare/school (n=12) and developmental concerns (n=11). Additional situations were reported <10 times.

21/22 parents also **described a journey** (n=170 experiences) involving uncertainty, milestones, and setbacks, which over time helped them develop resilience, gratitude, and personal growth.

Conclusion: Parents of young children with EA face significant emotional challenges, especially during early transition to parenthood. Family-centered interventions are essential to prevent long-term maladaptation.

Keywords: Esophageal atresia, family impact, focus group study, parenthood

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PARENTAL PERSPECTIVES OF DISEASE BURDEN AND HEALTHCARE EXPERIENCES IN YOUNG CHILDREN WITH ESOPHAGEAL ATRESIA

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Purpose: Children born with esophageal atresia (EA) may experience swallowing difficulties, gastroesophageal reflux, and respiratory disease. This study aimed to describe parental perspectives on disease burden and healthcare experiences in their everyday lives.

Method: Five focus groups (FGs) were conducted with 22 parents of children aged 0–2 years (n=2 FGs/9 parents) and 3–7 years (n=3 FGs/13 parents) treated for EA at a tertiary U.S. surgical center. A trained moderator facilitated the discussions which were audio-recorded, transcribed, and analyzed using descriptive content analysis.

Results: Parents reported 401 statements summarized into seven categories:

- **Disease burden (144 statements):**

1. **Time, activities, and challenges around nutritional intake** (22 parents, n=103): Managing their child's eating abilities, achieving milestones, preventing and managing food impaction.

2. **Dealing with respiratory symptoms and needs** (12 parents, n=24): Recurring respiratory infections and efforts to reduce illness.

3. **Living with vomiting problems** (10 parents, n=17): Coping with frequent daytime and nighttime vomiting episodes.

- **Healthcare experiences (257 statements):**

4. **Managing medical treatment and hospital care** (20 parents, n=89): Navigating their child's complex medical care.

5. **Parents' need to become advocates for their children** (16 parents, n=52): Ensuring appropriate care and acting in their child's best interest.

6. **Perceived insufficiencies of healthcare providers outside specialized care** (20 parents, n=63): Challenges with non-specialist providers.

7. **Appreciation for multidisciplinary specialized care teams** (18 parents, n=53): Positive experiences with comprehensive care teams.

Conclusion: This study highlights the multifaceted challenges of disease burden parents face when caring for children with EA. Key challenges include managing nutritional and respiratory needs, advocating for appropriate care, and navigating healthcare systems. These findings emphasize the need for accessible, multidisciplinary specialized care to effectively support these families.

Keywords: Esophageal atresia, disease burden, healthcare experiences, parental perspectives, nutritional intake, respiratory symptoms, vomiting, medical care, multidisciplinary care, pediatric care

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IMPORTANCE OF HEALTH-RELATED QUALITY OF LIFE IN PSYCHOLOGICAL SUPPORT DURING TRANSITION OF CHILDREN WITH OESOPHAGEAL ATRESIA TO ADULT CARE

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Aim of the Study: Transition period to adult care is challenging, therefore psychological support is necessary for both patients born with oesophageal atresia (OA) and their parents.

Aim of study is to determine features of psychological support during management of OA patients during transition period according to the assessment of health-related quality of life (HRQoL).

Methods: Pediatric Quality of Life Inventory 4.0 Generic Core Scale was applied to assess HRQoL by patient self-reports (SR) and proxy-parent reports (PR) and compared with healthy controls. OA patients aged 11-17 years and the same number of healthy controls were included in the study.

Main Results: Twenty-one OA patients with parents and 21 healthy counterparts participated in the study. OA patients had significantly higher scores for psychosocial functioning than healthy controls (mean: 88 vs. 79 respectively, p=0.007). PR of EA patients had significantly lower quality in physical functioning than PR of healthy controls (mean:74 vs. 91 respectively, p=0.018). In the group of OA patients significant difference was found in psychosocial functioning between SR and PR (mean: 88 vs. 80 respectively, p=0.047).

Conclusions: OA patients perceive better psychosocial functioning for themselves in the transition period than their parents and healthy controls. It is imperative to take into consideration perception of OA patients' HRQoL throughout the transition period, whereas parents need support and counselling to understand and take into account the child's level of perception of HRQoL for optimal medical management.

Keywords: Oesophageal Atresia, Transition to Adult Care, Psychological Support, Health- Related Quality of Life

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IRON DEFICIENCY ANEMIA IS FREQUENT IN CHILDREN WITH ESOPHAGEAL ATRESIA

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Children with esophageal atresia (EA/TEF) can develop iron deficiency anemia due to feeding disorders, esophagitis, and long-term use of proton pump inhibitors (PPIs).We hypothesized that children who undergo surgery for EA/TEF are prone to developing anemia.

Methods Cross-sectional study conducted in a cohort of EA/TEF children followed from 9/2001 to 12/2024. All patients who had a complete blood count at the time of an upper GI endoscopy were included. Age, prematurity, presence of esophagitis (macroscopic or microscopic), and other histological anomalies (eosinophilic esophagitis [EoE], microscopic esophagitis, Barrett's esophagus) were recorded, along with antacid treatment (PPI). Blood samples collected within 3 months following major surgery were excluded.

Results A total of 222 blood samples were collected from 119 children (67 boys) at a median (range) age of 56 months (3–226). Anemia (as defined by the WHO) was found in 50 children (22%) at a median age of 52 months (range: 3–158), which was significantly higher than the 7% expected in Canadian children (WHO Global Database on Anaemia). Type C EA was reported in 84% of the anemia group versus 83% in the non-anemia group, while Type A was found in 16% versus 17%, respectively. In the anemia group, 41% were premature compared to 50% in the non-anemia group. PPI use was more frequent in the anemia group (89% vs. 63%, p=0.01, Chi-square test). Peptic esophagitis was observed in 8% of the anemia group versus 4% of the non-anemia group, Barrett's esophagus with gastric metaplasia in 14% versus 10%, and EoE in 18% versus 12% (p=NS).

Conclusion Anemia is common in EA/TEF patients at any age. No clear risk factors related to the malformation itself or to esophageal histological anomalies were identified. However, PPI treatment appears to be a risk factor.

Keywords: EA/TEF, anemia, PPIs, Follow-up

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LARYNGOTRACHEAL ANOMALIES IN PATIENTS WITH ESOPHAGEAL ATRESIA

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Aim:

Report the incidence, morbidity and mortality related to laryngotracheal anomalies (LTA) in patients with esophageal atresia (EA)

Materials:

Retrospective study of patients diagnosed with EA evaluated at the Hospital Italiano de Buenos Aires from 2014 to 2024. The type of EA, the association with other syndromes and the subsequent evolution were reviewed.

An evaluation of the airway, type of laryngotracheal anomalies, the need for mechanical ventilation and dependence on tracheostomy was performed.

Results:

54 patients with EA were evaluated, 14 patients were referred to our Hospital for surgical complications.

74% of patients had the first respiratory endoscopy at the time of the correction of esophageal atresia.

48% of patients had some type of genetic syndrome, 44% had heart disease.

Endoscopic findings were tracheomalacia (40%), laryngomalacia (10%), congenital subglottic stenosis (10%), bilateral vocal cord paralysis (6%), bronchogenic cyst (4%), congenital tracheal stenosis (4%) and cleft III A/B (4%).

41% of patients with LTA required a tracheostomy and of this group 40% required long-term mechanical ventilation. 4 patients died in the first year of life and 3 of them had LTA.

Conclusions:

Laryngotracheal anomalies in patients with esophageal atresia are often associated with genetic syndromes and/or heart disease, so in our population they will temporarily require a tracheostomy and even home mechanical ventilation.

The association EA + LTA + Genetic Syndrome/Heart Disease + trachesotomy/dependence on home ventilation is a high risk factor for death.

Keywords: Laryngotracheal anomalies, esophageal atresia,

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SUPPORT OF EA CHILDREN THROUGH A NETWORK OF SPEECH-LANGUAGE PROFESSIONALS. THE NEST PROJECT.

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Purpose

Esophageal atresia (EA) patients should be treated in centers that offer specialized care in pediatric surgery, gastroenterology and pulmonology. At the same time, it is important for the patient and families to receive appropriate local care. This is particularly important for dysphagia therapy. While there are many outpatient dysphagia therapists practicing in the community, only few have specific expertise in treating EA patients. NEST was founded to bridge this gap. The Network for Eating and Swallowing Therapy (NEST) offers online meetings 4 times a year. The purpose is to disseminate specific EA knowledge among those who treat EA patients, and to discuss cases and questions on this topic. For asynchronous learning, case discussions are archived in an online repository. As a result, outpatient and close-to-home dysphagia therapists can become qualified and encouraged in treating EA children by self-learning, with professional back-up as needed.

Method

An overview is given on the NEST (Network of Eating and Swallowing Therapy) initiative. Structure and aims of the network are discussed, and the feedback from participants is presented. Future perspectives and further developments of the network are proposed.

Conclusion

NEST, currently a network based in the German speaking area, will be introduced at INoEA as an example for quality management in EA treatment through support and coaching of local dysphagia therapists. This patient driven initiative has gained overwhelmingly positive acceptance, and should encourage other healthcare professionals to join, build up similar structures in other fields, and role out NEST networks in other countries as well.

Keywords: dysphagia therapy, eating therapy, outpatient support, network,

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COLONIC INTERPOSITION: A 10-YEAR INSTITUTION EXPERIENCE

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Purpose: Esophageal reconstruction in children is a challenge and no consensus exists for the best approach. Colonic interposition can provide a robust conduit to correct long defects. As patients with esophageal anomalies often have concomitant airway and pulmonary comorbidities, an interdisciplinary collaborative approach is beneficial. This study reports clinically relevant outcomes of colonic interposition in pediatric and adolescent patients.

Methods: A retrospective cohort study was performed from 2015 to 2024 of patients who underwent colonic interposition (CI) at our institution. Medical records were reviewed to extract patient demographics, clinical course, and operative outcomes.

Results: Fifty-five patients underwent CI in the study period. The mean age of patients was 46 months (range 2 months to 16.9 years). All had at least one procedure prior to CI. Thirty-seven (67%) patients had esophageal atresia and fifteen (27%) had a history of caustic ingestion. Other reasons for CI included esophageal leiomyomatosis, end-stage achalasia, and necrotizing esophagitis. Indication for surgery included recalcitrant strictures and residual long gap. Completion esophagectomy was performed by Pediatric Surgery using a transhiatal or thoracotomy approach, while the neck dissection was performed by Otolaryngology. The CI was routinely placed substernal or via the posterior mediastinum. One was placed through the left chest. Post operative complications included leak (23.6%), cervical coloesophageal anastomotic stricture (30.9%), graft loss (1.8%), and reoperation for recalcitrant stricture (1.8%). Following CI, 25% of patients were fed entirely by mouth while another 36% were fed by combination oral and enteral feeds.

Conclusions: Colonic interposition can be safely performed to reconstruct the esophagus for recalcitrant strictures or long gap esophageal atresia with good functional results and manageable complications in pediatric and adolescent patients. Long-term outcome studies are needed to further evaluate durability of the conduit and quality of life after CI.

Keywords: Esophageal atresia, colonic interposition, caustic ingestion, esophageal reconstruction

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THE LONG-TERM OUTCOMES AND QUALITY OF LIFE OF PATIENTS WITH LONG GAP ESOPHAGEAL ATRESIA

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Aim: This study evaluated health-related quality of life (HRQoL), including digestive, respiratory, and feeding outcomes, comparing children with long-gap esophageal atresia (LGEA) to those with Type C and D. The study included children who underwent EA repair between 2005 and 2021 at the University of Wroclaw's Pediatric Surgery Department.

Material and Methods: A total of 90 patients were divided into two age groups: 2–7 years (n=47, M=4.0) and 8–17 years (n=43, M=12.0). The Polish version of EA-QOL questionnaires was used for assessment.

Results: No statistically significant differences were found in mean domain scores between LGEA and Type C/D patients ($p>0.05$). However, the total HRQoL score was higher in LGEA (M=74.7; SD=16.4). The highest mean domain score for both groups was in "social isolation and stress" (Type C/D: M=75.7; SD=21.6; LGEA: M=78.4; SD=16.6). In LGEA, "social relationships" scored highest (M=85.2; SD=18.6), while "eating" had the lowest score (M=66.5; SD=23.7), similar to Type C/D. LGEA patients required significantly more esophageal dilatations ($p<0.044$). They also had greater difficulties with eating, requiring small portions ($p=0.041$), energy-enriched food ($p=0.014$), over 30 minutes to finish a large meal ($p<0.001$), increased fluid intake for swallowing ($p=0.019$), and adult assistance during meals ($p=0.001$).

Conclusion: Children with LGEA operated on using the internal traction technique had comparable digestive, respiratory, and HRQoL outcomes to those with Type C/D. Future studies should further compare QoL outcomes between EA patients with and without LGEA.

Keywords: esophageal atresia, child , long gap, quality of life

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VERY LOW BIRTH WEIGHT NEONATES AND ESOPHAGEAL ATRESIA: PRIMARY OR DELAYED ESOPHAGEAL-ESOPHAGEAL ANASTOMOSIS? A SINGLE CENTER EXPERIENCE

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Introduction:

The correction of esophageal atresia in very low birthweight (VLBW) neonates (<1500 g) is debated: immediate primary esophageal-esophageal anastomosis or ligation of the tracheoesophageal fistula with subsequent esophageal continuity reconstruction. This study compares the outcomes of the two strategies by analyzing clinical data from VLBW patients with EA in our center.

Methods:

A retrospective study of admissions from 2009 to 2024, divided into group "A": immediate primary anastomosis; and "B": ligation of the TEF followed by subsequent anastomosis. We analyzed auxological parameters, fistula and gap characteristics, associated malformations, survival, and short- and long-term postoperative complications. Data were analyzed using the Fisher exact test and T-test where appropriate.

Results:

23 VLBW neonates out of 280: 8/23 [group A], 15/23 [group B]. No significant differences for heart defects, gap size, or birth weight. SGA in 13/23. Two deaths in group "A" (sepsis and trisomy 18), with hospital stay in group "A" shorter than in group "B". The frequency of postoperative complications in group "B" was higher, but not statistically significant. In the 12-month follow-up, group "B" patients required endoscopic dilation for esophageal stenosis more frequently than group "A" [p=0.0394].

Conclusions:

Immediate primary anastomosis is a safe and effective technique for VLBW neonates. Further research is needed to confirm these results in a broader clinical developmental context.

Keywords: Esophageal Atresia; Very Low Birth Weight (VLBW); Tracheoesophageal Fistula (TEF); Esophageal Anastomosis

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LONG-TERM OUTCOME OF ESOPHAGEAL ATRESIA AND DISTAL TRACHEOESOPHAGEAL FISTULA REPAIRED THROUGH MINIMAL AND EXTENSIVE MOBILIZATION OF UPPER POUCH

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Aim- To evaluate the long-term outcome after primary repair of esophageal atresia with distal tracheoesophageal (EA-DTEF) operated through minimal and extensive mobilization of upper pouch.

Materials and Methods- a retrospective analysis of consecutive cases of EA-TEF from Jun 2012 through Jun 2020. Study parameters analyzed were demographics, associated anomalies, dysphagia, recurrent respiratory tract infections, repeated food bolus impaction, gastroesophageal reflux disease, stricture and poor weight gain. Gap measurement between upper and undivided lower pouch was done by placement of no 8 red rubber catheter in the upper pouch after anterior and lateral mobilization of upper pouch with slight stretching. Minimal mobilization [group A (distal 1 cm of the upper pouch)] was done if the gap was up to 2cm and upper pouch stretching was used to complete primary repair. Extensive mobilization (group B) was done if the gap was more than 2cm for primary repair.

Result- out of 64 cases (38 male, 26 female) operated, 42 (65%) survived. Complete follow-up data of 25 patients (group A-15, group B-10) were available. Group A had mean weight of2.2 Kg (range1.8-2.4kg), operated within 48 hr (range16-72 hrs), a cardiac anomaly in 5(4ASD, 1TOF), mean follow-up 70.53 months (range 48-92 month). 2 pt had frequent URI (mostly within 2 yrs of operation), 2 pts had an episode of food bolus impaction and 1 required dilatation under GA.GER was found in none. In group B mean weight was 2.3 kg (range 1.6-3 kg), operated within 42 hr (range20-72 hrs), no cardiac anomaly, mean follow-up 63.1 months (range 46-87 months). 5 pt had frequent URI (mostly within 2 yr of operation), 5 pt had an episode of food bolus impaction and 3 required dilatation under GA. Poor weight gain was noted in 2, recurrent fistula in 1and GER in 4 pts.

Conclusion- Primary repair of EA-TEF with Minimal mobilization of the upper pouch is a feasible option with better long term outcome as compare to extensive mobilization

Keywords: Esophageal atresia, Tracheo-esophageal fistula, Upper respiratory tract infection, GER

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RIGHT-SIDED THORACOSCOPIC REPAIR OF ESOPHAGEAL ATRESIA AND TRACHEOESOPHAGEAL FISTULA: FEASIBILITY AND OUTCOMES IN PATIENTS WITH ACCOMPANYING CONGENITAL VASCULAR ANOMALIES

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Introduction: This study aims to analyze the occurrence of congenital vascular anomalies (CVAs) in patients with esophageal atresia and tracheoesophageal fistula (EA/TEF), assessing their impact on clinical presentation, surgical management, and outcomes.

Methods: A retrospective review of type C or D EA/TEF patients treated between 2005 and 2023 was conducted. Demographics, clinical characteristics, CVA presence and type, associated major cardiac defects, surgical treatment and outcomes were compared.

Results: Among 161 patients with type C or D EA/TEF we identified 22 patients (13.7%) with congenital vascular anomalies (CVAs), including: right aortic arch–11/161 (6.8%), hypoplastic/absent azygos vein–8/161 (5%), additional aortic arch vessel–3/161 (1.9%), aortic coarctation–2/161 (1.2%), persistent left superior vena cava–2/161 (1.2%). Patients with CVAs had a significantly higher prevalence of associated anomalies (16/22, 72.7%), particularly major cardiac defects (8/22, 36.4%). The entire population underwent a preoperative echocardiography. All consecutive patients were treated only thoracoscopically as primary esophageal anastomosis. Right-sided thoracoscopic approach was performed in all newborns except for two cases (situs inversus with hypoplastic right chest cavity and right lung agenesis). There was no surgery-related mortality. Early mortality in patients with CVAs was related to more frequent associated malformations. Anastomotic leakage concerned 4/22 (18.2%) patients and was treated conservatively in all cases. There was no recurrent TEF among the analyzed population. Native esophagus was preserved in all patients.

Conclusions: Right-sided thoracoscopic approach for EA/TEF patients with congenital vascular anomalies is feasible. This approach enables safe esophageal anastomosis. Preoperative diagnostic imaging did not influence the choice of surgical approach. Right aortic arch should not be considered a contraindication to right-sided thoracoscopy.

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EVALUATION OF THE RESULTS OF MULTIDISCIPLINARY ESOPHAGEAL ATRESIA OUTPATIENT CLINIC

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Purpose: To evaluate the results of multidisciplinary outpatient clinical visits for the patients with esophageal atresia (EA) by all involved disciplines provided on the same day.

Method: Patients with EA who are on follow up were contacted by phone, an announcement was broadcasted on social media and by the TROAD association. The patients were evaluated by pediatric surgery, gastroenterology, pulmonology specialists, swallowing physiotherapist and dietician within the same day.

Results: 29 patients admitted with a median age of 5years (0.58-14years). Male/female ratio was 19/10 and 24 had TypeC and 5 had TypeA EA. Antireflux treatment was discontinued in 3 of 11 and started in 2 patients. Ph-meter was not deemed necessary in any patient. Enteral nutrition initiated in 4 patients with low percentiles. Inhaled bronchodilator treatment was initiated in 3 patients. Thorax CT was ordered in 2 patients and 1 diagnosed as bronchiectasis. Antibiotic prophylaxis due to recurrent respiratory tract infections was initiated in 2 patients. All patients received education and support for appropriate nutritional recommendations. Clinical evaluation by the swallowing physiotherapist (Pedi-EAT10) revealed high risk for dysphagia in 7 patients. Esophagography was performed in 7 patients with a sensation of getting stuck during feeding or with doubtfull food trial. Routine dilatation was initiated in three patients (Type C) with anastomotic stenosis, and 2 patients (1 TypeC and 1 TypeA) with motility disorder.

Conclusion: A multidisciplinary structered follow-up of patients with EA will have positive impact on the management of patients and improve their quality of life. Depending on the feedback from the participated clinicians, the necessity to include a Physical Therapy Rehabilitation specialist in the multidisciplinary team was revealed to evaluate the bone density loss in patients using long-term proton pump inhibitors, and to evaluate scoliosis due to the thoracic surgery.

Keywords: Esophageal atresia, esophagus, gastroesophageal reflux, multidisciplinary team

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DEVELOPMENT OF A PATIENT-REPORTED OUTCOME MEASURE FOR SYMPTOMS OF RESPIRATORY DISEASE IN ESOPHAGEAL ATRESIA: EXPERIENCES REPORTED IN YOUNG CHILDREN

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Purpose: A patient-reported outcome measure (PROM) should reflect items reported as important to patients and parents in their own words. Currently, no such PROM for symptoms of respiratory disease in children with esophageal atresia (EA) is reported in the literature. This study aimed to identify parental perspectives on respiratory symptoms in young EA children to inform PROM development.

Method: Following PROM development standards, this project included:

- A literature review of existing PROMs.
- Analysis of 10 focus groups (FGs) with families of children with EA (n=30) in Sweden.
- Input from a multidisciplinary committee, including representatives from an international EA support group.

This formed the development of a standardized FG manual. To explore in-depth parental perspective, this was applied in five new FGs with 22 parents of EA children (aged 0–7) from a U.S. tertiary surgical center. Discussions were audio-recorded, transcribed and analyzed using predefined symptom definitions and content analysis. (Ethical approval P00048407)

Results: The five FGs generated **167 parent statements**, consolidated into **86 unique expressions**, categorized as:

- **Breathing difficulties** (n=22)
- **Mucus problems** (n=21)
- **Prone to respiratory infections** (n=20)
- **Cough** (n=14)
- **Breathing sounds** (n=6)
- **Reduced energy** (n=3)

These symptoms experiences occurred during:

- **Respiratory infections** (n=29)

- **Feeding** (n=22)
- **Baseline conditions** (n=18)
- **Exertion** (n=17)
- **Sleep** (n=13)

Symptoms were linked to parental distress (e.g., worry, fear, frustration) and child distress (e.g., struggle, crying, sleep disturbance).

Conclusion: The parent-reported symptoms expressions and distress highlight a significant burden and provide a strong foundation for PROM development in young EA children. Ongoing research will ensure this PROM is reliable for use across childhood.

Keywords: Patient-Reported Outcome Measures, Respiratory Disease, Esophageal Atresia

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THORACOSCOPIC SALVAGE SURGERY FOR OESOPHAGEAL ATRESIA IS FEASIBLE AFTER PREVIOUS THORACOTOMY.

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Aim: to describe the collective experience of six international tertiary paediatric surgery centres performing thoracoscopic salvage surgery for oesophageal atresia.

Methods: retrospective review of all neonates undergoing thoracoscopic repair of oesophageal atresia following a previous failed repair via thoracotomy, from September 2018 - May 2024, at 6 international tertiary paediatric surgery centres. Data collected included demographics, co-morbidities, operative details and post-operative clinical course.

Results: 24 babies included. Median gestational age 34 (26-40), birthweight 1858g (780-3300). 11 (46%) had associated cardiac anomalies. 19 type C (79%), 4 type B (17%), 1 type A (4%). 7/24 (29%) had thoracoscopic traction sutures, and 2/24 (8%) had a cervical oesophagostomy formed prior to thoracoscopic repair. Definitive thoracoscopic repair was undertaken at median 23 weeks (7-23) after initial thoracotomy, at median age of 6 months (1-26) and weight of 5340g (1050-1100). Median operative time was 245 minutes (120-585). 23/24 (96%) were completed thoracoscopically. Follow-up was 36 months (7-130). 17/24 (71%) developed an oesophageal stricture requiring a median of 5 dilatations (1-45). 1 patient had a recalcitrant stricture resected thoracoscopically a year after definitive thoracoscopic repair. 2/24 (8%) developed a fistula to the airway. 1 patient developed a recurrent TOF requiring 3 bronchoscopic applications of TCA. A second patient developed a fistula to the right upper lobe bronchus requiring a thoracotomy for repair. 2/24 (8%) developed significant gastro-oesophageal reflux disease requiring a fundoplication. One patient required an aortopexy and re-do aortopexy for management of tracheomalacia. 1 death at 11 months of age (2 months post definitive repair) in a patient with complex congenital cardiac disease. 22/23 (96%) patients are feeding exclusively orally. 1 patient born at 26 weeks is feeding orally with gastric top-ups.

Conclusion: thoracoscopic salvage surgery in oesophageal atresia when undertaken by experienced surgeons is feasible, safe and with good clinical outcomes.

Keywords: thoracoscopy, oesophageal atresia, salvage surgery,

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ISOLATED TRACHEO-ESOPHAGEAL OR BRONCHO/ESOPHAGEAL FISTULA: SHOULD WE PREFER AN INDIVIDUALIZED MULTIDISCIPLINARY OR A STANDARDIZED APPROACH?

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Purpose: Isolated tracheo-esophageal fistula (TEF) and broncho-esophageal fistula (BEF), whether congenital (H-type), recurrent (post esophageal atresia repair), or acquired (post traumatic) represent infrequent and challenging conditions. The management strategies range from endoscopic to open surgical techniques, with an individualised multidisciplinary or a standardized approach. This study aims to retrospectively evaluate our approach and outcome.

Method: We reviewed all isolated TEF treated at our Institution over the past 10 years, analysing fistula location, clinical data, surgical approach, and outcome.

Results: 19 cases were treated (aged 11 days to 15.4 years), 15 of them referred after complications of other Centers. We adopted a multidisciplinary approach. 8 patients had a recurrent TEF that was treated endoscopically with trichloroacetic (TCA) chemocauterization, with a success rate of 75% (6 cases) after an average of 3.5 treatments. In 2 patients with failed endoscopic treatment (after 5 and 7 essays), open surgery was performed (one via thoracotomy, the other via sternotomy). Congenital H-type TEF (5 cases) underwent successful surgical ligation and division of the fistula in 4 cases (3 via cervical approach, 1 thoracoscopically), while a TCA chemocauterization was unsuccessful. Three post-traumatic large TEF (2 battery ingestion and 1 complicated tracheostomy) were treated with tracheal resection, through anterior cervicotomy or sternotomy. Three patients had a BEF due to sequelae of complicated EA repair: they underwent esophagostomy; esophagectomy (followed by laparo-assisted gastric pull up); fistula closure through right thoracotomy. None of the patients experienced recurrence of the TEF.

Conclusion: Our findings support an individualized treatment approach, a "one-fit-all" approach for isolated TEF or BEF was not an option. A multidisciplinary approach helped to achieve good results, with endoscopic treatment being effective for recurrent TEF in most cases, and open surgery reserved for post-traumatic and congenital H type TEF, as well as in cases of failure of endoscopic treatment.

Keywords: Tracheo-esophageal fistula; esophageal atresia

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IMPROVING MEDICAL CARE FOR CHILDREN WITH ESOPHAGEAL ATRESIA THROUGH TELEMENTORING – FINAL RESULTS OF THE TIC-PEA STUDY

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Aim of the Study: Treatment of esophageal atresia (EA) is decentralized and not standardized in certain countries including Germany. The TIC-PEA study provides a resource for professionals to discuss findings, treatment plan and follow-up during their patients' first year of life via video conference. The aim of this study was to determine the impact of telementoring on patient outcome, using the number of esophageal dilatations as surrogate variable.

Methods: In this controlled, not-randomized multicenter interventional study, patients were compared to controls from the national patient support group registry. Patients born 09/20 through 01/24 were included. Patient characteristics and the mean number of esophageal dilatations during the first year of life were analyzed.

Main results: Overall, 97 patients and 121 controls were included. The mean number of video conferences was 3.6 per patient (mean duration 10.6 minutes). Compared to controls, despite a similar mean gestational age, TIC-PEA patients trended to have a lower birth weight compared to controls. Furthermore, the TIC-PEA group had a larger portion of patients with Gross Type A, or congenital heart disease and every other patient had VACTERL association (Table 1). The dilatation rate was similar in both groups (Table).

Conclusions: Telementoring was frequented especially in complicated cases. Still, the outcome in terms of need for esophageal dilatations was comparable. Telementoring might have the potential to improve patient outcome at a low operating expense and should be reimbursed by health insurance.

Keywords: esophageal atresia, telementoring, esophageal dilation

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REVERSED GASTRIC TUBE ESOPHAGOPLASTY IN LONG GAP ESOPHAGEAL ATRESIA : SHORT AND LONG-TERM POST OPERATIVE COMPLICATIONS

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Background :

Esophagoplasty with reversed gastric tube can be performed in children with long gap esophageal atresia. In view of the paucity of studies on the results of this type of surgery in children, we conducted this study to describe the postoperative results of patients who were operated.

Methods :

We conducted a retrospective descriptive monocentric study over a 10-year period (December 2010 to December 2020). We included children who had esophagoplasty by reversedgastric tube for long gap esophageal atresia (LGEA) in the Pediatric Surgery Department “B” at Children Hospital Bechir Hamza of Tunis.

Results :

We included 10 patients in our study. There were 6 males and 4 females, with a mean age of 17,7 years. The average follow-up in our study was 5 years. An anastomotic fistula was noted in 5 cases and an anastomotic stricture was reported in 5 cases. Supra-anastomotic reflux was identified in 7 cases. After a minimum of 2 years post-operatively, All patients were exclusively on oral feeding. 4 patients have experienced dysphagia, due to a tight stricture, and required endoscopic dilations. Growth and weight gain were normal in 9 patients.

Conclusion :

EGP using Gavriliu procedure may be used safely in children who require esophageal substitution. The resulting long-term quality of life is acceptable and patients mostly have good functional outcome. However, digestive tract symptoms like dysphagia may last during the whole postoperative period and alter the functional prognosis.

Keywords: Reversed gastric tube, long gap esophageal atresia, esophagoplasty

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SURGICALSTRATEGIESANDOUTCOMESINNEWBORNSWITHESOPHAGEALATRESIAANDTRACHEOESOPHAGEAL FISTULA ASSOCIATED WITH DUODENAL ATRESIA

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Introduction: This study aims to review the management and outcomes of esophageal atresia and tracheoesophageal fistula (EA/TEF) associated with duodenal atresia (DA) and to determine the optimal surgical strategy.

Methods: A retrospective analysis was conducted on EA/TEF patients treated between 2005 and 2023 at high-volume center. Demographic data, clinical characteristics, surgical interventions and outcomes were collected and compared.

Results: A total of 11 patients with EA/TEF and accompanying DA were included. All patients presented with type C EA/TEF. Median birth weight was 1850 g. All patients were diagnosed preoperatively with EA/TEF and DA. 2/11 patients had VACTERL association. EA/TEF repair was performed thoracoscopically in all cases. DA repair was performed laparoscopically in 9/11 patients and as open approach in 2/11 newborns. Surgical management strategies included:

1. One-stage EA/TEF and DA repair in 2/11
2. A multi-stage approach in 9/11 patients, which involved:
    - Strategy 1: TEF closure and esophageal anastomosis in the first stage, followed by laparoscopic duodenal anastomosis in the second stage (7/11)
    - Strategy 2: TEF closure and open duodenal anastomosis in the first stage, followed by esophageal anastomosis in the second stage (2/11).

Gastrostomy was performed in 2/11 patients: in one later due to feeding difficulties and in another low-birth-weight newborn during the initial surgery to facilitate early enteral feeding. The median interval between stages was 4,5 days. There was no surgery-related mortality. There were no duodenal and esophageal leakage and no need for fundoplication among the analyzed patients

Conclusions: Staged minimally invasive repair appears to be a safe, feasible and preferred surgical strategy for neonates with EA/TEF and associated DA.

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SOME EPIDEMIOLOGICAL ASPECTS OF GERD IN A GROUP OF CHILDREN WITH ESOPHAGEAL ATRESIA

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Purpose: To highlight the epidemiological features of patients with EA and GERD in the Republic of Belarus.

Methods: Since 2017, all patients operated on for EA using primary repair have undergone upper gastrointestinal endoscopy with multiple esophageal biopsies and pH-impedancemetry to monitor the esophageal condition. By December 2023, 84 patients were included. 81/84 (96,4%) children had type 3 EA, and 3/84 (3,6%) had type 5 atresia. Cases with incomplete data, children under 1 year of age, patients with eosinophilic esophagitis were excluded from the analysis. Two groups were identified: 12/84 (14,28%) children who underwent Nissen fundoplication and 72/84 (85,71%) non-operated patients.

Results: pH-impedancemetry was performed in 84 patients aged 4,35 (1,55-8,67) years, of whom 42/84 (50%) were boys. Among all subjects, 7/84 (8,33%) children aged 10,48 (8,22-13,04) years had undergone surgery before pH-metry, 4/7 (57,14%) of them were boys. In the primary study, GERD was diagnosed in 26/84 (30,95%) cases. In the group where fundoplication was performed, GERD was diagnosed in 2/12 (31,3%) patients aged 8,38 (3,74-12,8) years, 4/12 (33,3%) patients were boys. GERD was detected in 1/7 (14,28%) patients operated before pH-metry. In patients without fundoplication, GERD was detected in 24/72 (33,3%) patients with an average age of 4,11 (1,48-7,28) years, 38/72 (52,78%) children - boys. In 23/26 (88,5%) cases, GERD was diagnosed based on RI, and in 3/26 (11,5%) cases - based on NR. In the operated group, GERD was diagnosed based on RI in 2/2 (100%) cases, in the non-operated group in 21/24 (87,5%) based on RI and in 3/24 (12,5%) based on NR.

Conclusion: The gender ratio of patients with GERD in the national cohort of operated patients is 1:3. Our study shows an atypical GERD ratio of 1:1. In 87,5% of cases, GERD was diagnosed based on RI and in 3/24 (12,5%) based on NR.

Keywords: Esophageal atresia, GERD, Nissen fundoplication

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METHOD OF INTERNAL TRACTION IN THE MANAGEMENT LONG GAP ESOPHAGEAL ATRESIA: OUR EXPERIENCE

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Esophageal atresia (EA) with a long gap is the most severe form of this malformation. A considerable number of esophageal elongation techniques have been proposed, but in our opinion, the most promising and effective is the technique proposed in 2015 by Dariusz Patkowski.

Method: Analysis of efficiency of thoracoscopic internal traction in long gap EA.

Results: From 2021 to 2024 Internal traction was performed in 8 children.

The average gestational age was 36 1/7 weeks (29 5/7 – 38 4/7) and birth weight was 2095 g (1200–2820). They were 5 children with EA type A by Gross and 3 children with type C. In all children, the gap of 6 and more vertebral bodies was determined intraoperatively. The age at the start of treatment was 23 days (6–90). The first stage of treatment consisted of 2 elongations with 3-5 days between them for type A and 1 elongation for type C. Anastomosis was performed 3-5 days after the last elongation. The average duration of the operation was 117 minutes (45-210). In all cases staged repair and direct anastomosis were performed.

Postoperative complications occurred in 5 of 8 patients. Anastomotic leakage was detected in one case. Two children died at a period of more than 2 months after the operation from causes not related to the postoperative course of this disease (assotiated malformations). In one case developed gastroesophageal reflux requiring surgical correction. One patient required staged balloon dilation of the esophagus, with further observation without signs of recurrence. In three cases, we did not observe any complications.

Conclusion: In our experience the method of internal traction of the esophagus with subsequent formation of anastomosis is effective in children with long gap EA and allows in most cases to preserve the native esophagus.

Keywords: Esophageal atresia, newborn, long gap, internal traction

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ESOPHAGEAL STENOSIS: IS HOME CATHETER BALLOON DILATION A SOLUTION FOR AN UNSOLVED PROBLEM?

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Purpose

In this retrospective clinical study, children were treated with balloon catheter home dilation (BHD) as an alternative to surgical procedures.

Methods

The stenosis width and length were measured using a standard esophagoscopy.

From the baseline value, balloon dilation was then performed in 1-mm increments with a maximum of 2 mm/session.

When the target diameter was reached, a corresponding home catheter was inserted.

BHD was performed twice a day and left for 1 minute. After each dilation, the balloon catheter home dilator was completely emptied.

BHD was set at 2x 1 block of 4 weeks. 4 weeks was the maximum period for which the catheter could be used. During the entire period of BHD, children were able to eat and drink.

Results

Patients with refractory esophageal stenosis were treated with BHD.

There were no cases of catheter dislocation.

All children were able to eat and drink normally during the therapy.

Eight children tolerated BHD without difficulty. The need for analgesia was reduced or discontinued over time.

Seven children had been treated sufficiently so that they did not require further dilation.

Two children still require balloon dilation at varying time intervals.

In one patient, the therapy had to be discontinued because the child showed desaturations.

In 5 patients, the parents discontinued the treatment. 3 of these parents resumed the treatment one month later and were highly satisfied with BHD.

No life-threatening complications occurred at any time.

Conclusion

BHD is an alternative method to existing therapeutic methods of refractory esophageal stenosis of all causes. It can be performed well and safely, but requires good parental compliance and continuous care by the clinic.

Keywords: balloon catheter, home dilation, esophageal stenosis

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UNUSUAL PRESENTATION OF ESOPHAGEAL PERFORATION FOLLOWING ESOPHAGEAL ELONGATION PROCEDURE: A CASE STUDY

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Introduction

Esophageal dilation is frequently performed as after E.A or corrosive strictures. The standard procedure involves a balloon or a bougie dilation by endoscopy under flouroscopy. However, this approach can lead to some complications. here we present a rare complication with unusual presentation.

Case Presentation:

A 3-year-old girl with a gastrostomy and cervical esophagostomy due to long-gap E.A. She underwent thoracoscopic proximal esophageal elongation using the Kimura technique, alongside distal esophageal lengthening via the Foker technique. An esophageal anastomosis was performed through thoracotomy. Following the procedure, the child remained on a ventilator for 21 days before successful weaning. NGT was in place for 1.5 months post-surgery. A barium swallow confirmed no stenosis or fistula, and the child was able to feed without complications for six weeks. Subsequently, symptoms refer to esophageal stenosis. During an endoscopy, significant stenosis was identified, guide wire position was confirmed at stomach level using fluoroscopy. After hours of 9 mm bougei dilation was done, the patient reported abdominal pain. X-ray revealed free air (4) in the abdomen but no effusion. Upon laparotomy at another facility, no perforation was detected; however, a bruise was noted on the greater curvature near the fundus. The patient was admitted for a weekwith icreasing free air in the abdomen, leading to another laparotomy. This time, damage was identified below and medial to the esophagus, where the wire had penetrated through the esophageal wall into the abdominal cavity. TAT was placed through the esophagus to bypass the injury and extended to the pylorus for feeding. After one week of recovery and plans for discharge, the child developed severe bronchospasm requiring ventilatory support but did not respond to treatment. Tragically, she dead within 24 hours, with suspected bronchospasm attributed to a drug allergy.

Conclusion:

Esophageal surgeries modify normal anatomy, increasing risks during subsequent dilation procedures. Perforation is a critical complication where a guide wire may inadvertently enter pre-existing holes in the esophagus. Dilation under these circumstances can worsen existing perforations, leading to severe complications like mediastinitis or leakage into surrounding tissues. So it is important to be aware in the specially cases that is beginning to increase with development this surgery

Keywords: esophagus, dilation, complication, children, perfoation

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LONG GAP OESOPHAGUS ATRESIA, A CHALLENGING PRIMARY REPAIR.

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Introduction

Esophageal atresia with or without tracheoesophageal fistula , is a rare congenital anomaly with incidence of approximately 1 in 3500 to 1 to 4000 births. Type B is the rarest with a prevalence of 1%.

Case presentation

We present a case of a 35 neonate with birth weight 2130 g with type B atresia. In the prenatal imaging there were two findings associated with esophageal atresia (non-visualization of the stomach and polyhydramnios)

The neonate due to respiratory distress was intubated and admitted to NICU. The insertion of a feeding tube was unsuccessful and the XRAY showed a gasless abdomen and the catheter stopping at the third thoracic vertebra. The neonatal screening didn't show any other congenital anomalies. The catheter remained to suction oropharyngeal secretions. The infant was NPO , with TPN.

A delayed primary repair of the esophagus was decided.. On the 64th day of life an open gastrostomy was performed and full enteral nutrition started in the 78 days of life.This delay was due to hospital acquired infections. In the 98 days of life a contrast study showed the upper part of the esophagus at the fifth thoracic vertebra and the lower part at the 9th thoracic vertebra. On the 140th day of life primary anastomosis was performed without tension. The postoperative evolution was uneventful, the neonate was intubated for 13 days and started oral feeding on the 14th day. Two months after surgery the esophagogram identified no leak , but stenosis which was treated with four endoscopic balloon dilation sessions with good results. The patient now is 1,5 years old, well thrived with no feeding problems.

Conclusion

Long gap esophageal atresia remains a challenge for pediatric surgeons. Delayed primary anastomosis at approximately 3 months of age , has been widely accepted as the preferred treatment option.

Keywords: Long gap atresia, delayed primary repair

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USABILITY AND EFFECTIVENESS OF THE PEDIATRIC PATIENT-GENERATED INDEX (PPGI) FOR ESOPHAGEAL ATRESIA FOLLOW-UP: INSIGHTS FROM CHILDREN AND CLINICIANS

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Purpose

The Patient-Generated Index (PGI), unlike standard patient-reported outcome measures (PROMs), is an individualized measure that enables patients to define their own quality of life (QoL) domains. This study examines the usability and effectiveness of the pediatric Patient-Generated Index (pPGI), a recently adapted version of the adult PGI, in capturing QoL outcomes specific to children who have undergone esophageal atresia (EA) repair. We aim to determine if the pPGI can effectively capture the unique experiences and priorities of these patients, complementing insights from established QoL measures.

Methods

This cross-sectional study analyzed three PROMs: the pPGI, the EuroQol-5D Youth (EQ-5D-Y), and the Patient-Reported Outcome Measurement Information System (PROMIS) Life Satisfaction Short Form-8a. Children (ages 0-17) with repaired EA completed all three measures. Cognitive interviews with children and their parents explored the pPGI's completion process, while clinician interviews provided perspectives on EA outcome measures.

Results

Across 25 interviews with 45 child-parent dyads, the pPGI generated 104 text responses covering various QoL domains, with "looking after one's health" emerging as the most common. Weak correlations were observed between pPGI scores and EQ-5D-Y (r = 0.33) and PROMIS (r = 0.19), reflecting the individualized nature of the pPGI. Cognitive interviews revealed generally positive feedback, with three of six clinicians preferring the pPGI.

Conclusion

The pPGI effectively captures individualized QoL domains for children post-EA repair, aligning with patient-defined priorities. Initial construct validity and positive feedback support its use in evaluating health-related QoL following pediatric surgery.

Keywords: Patient-generated Index, pediatric, esophageal atresia, outcome, quality of life

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BENEFIT OF PHARYNGOSTOMY IN LONG GAP AND/OR COMPLICATED ESOPHAGEAL ATRESIA

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Long gap esophageal atresia (EA) still a challenge with controversies and heterogeneity in its management. Delayed primary anastomosis still the most used technique with necessity of a gastrostomy and managing the saliva outflow of the upper pouch. A diverting pharyngostomy can be sufficient to assure saliva outflow leading the upper pouch aspiration not necessary and permit the return of the child at home. The aim of this study is to review our experience in long gap EA with this new technique.

Methods:

From May 2013 to December 2023, we performed a pharyngostomy in 8 patients with EA (5 type A, 2 type C, 1 type D, table 1). In the same period this technique was used in 3 patients with caustic injuries 2 patients with recurrent oesotracheal fistula, 1 patient with associated complex laryngeal abnormalities and 1 patient with severe refractory anastomotic stenosis.

Results :

Table 1

Type EA	Gap size (v)	Age pharyngostomy (d)	Issue	Age of esophageal reconstruction (d)
A	5	84	CR	284
A	5	111	Not Yet	-
A	3.5	124	DPA	289
A	6.5	102	CR	738
A	5.5	70	Not Yet	-
C	5	195	DPA	423
C	4	312	DPA	503
D	4	89	Not Yet	-

V: number of vertebrae, d: days, CR: colonic replacement, DPA: delayed primary anastomosis

Commentaries:

Pharyngostomy, in our experience, allow us to manage the long gap EA cases, without any hurry due to initial long admission. It's main advantage is to preserve the upper pouch from any mobilisation or dissection. Delayed primary anastomosis was succesfull in 3 cases in this series at 289, 423 and 503 days respectively. Colonic replacement was decided when pouch's growth was absent or insufficient. Closure of the pharyngostomy can be spontaneaous after the esophageal construction.

Keywords: Esophageal atresia, long gap, delayed primary anastomosis

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CHILDREN AND YOUNG PEOPLE WITH OESOPHAGEAL ATRESIA AND/OR TRACHEOESOPHAGEAL FISTULA HAVE A HIGH BURDEN OF CARE AND SIGNIFICANT RESPIRATORY COMPLICATIONS: A 20 YEAR EXPERIENCE IN A TERTIARY PAEDIATRIC CENTRE

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Purpose: Oesophageal atresia (OA) and tracheoesophageal fistula (TOF) are congenital malformations that can affect lung development and subsequently respiratory health.

The aim of this study was to define the burden of care and respiratory complications as experienced by children and young people with oesophageal atresia and/or tracheoesophageal fistula (OA/TOF) seen in our regional paediatric centre.

Method: Search criteria for all patients with a diagnosis of OA/TOF attending the hospital over the past 20 years was used to identify patients. Electronic health records, including medical notes, clinic letters, lung function data and radiology reports were identified and used to gain retrospective data.

Results: We identified a total of 219 patients with a diagnosis of oesophageal atresia/tracheoesophageal fistula.

50% of patients had other congenital structural abnormalities and required input from multiple clinical teams.

Oesophageal dilatations were frequently required in our patient group. Patients required between 0 and 24 dilatations throughout their childhood, with a median of 3, and 8% of patients required 10 or more.

Approximately 50% patients are seen in our joint respiratory / surgical TOF MDT for respiratory symptoms. 23% of patients had required hospitalisation for lower respiratory tract infection.

Tracheobronchomalacia requiring surgical treatment was seen in 9 patients with 6 (2.7%) requiring aortopexy, and 4 (1.8%) requiring tracheostomy.

60 patients (27%) had documented spirometry results with 17 (8%) having reduced lung function (FEV1 <75% predicted) and 4 (1.8%) having severely reduced lung function (FEV1 <50% predicted). The most common pattern found in those with abnormal spirometry results was a restrictive pattern.

Conclusions: We present a 20 year experience of OA/TOF and its associated burden of care and respiratory complications in these patients. Respiratory symptoms are common in these children and a small but significant number have reduced lung function.

Keywords: tracheoesophageal fistula, oesophageal atresia, spirometry, burden of care

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SURGICAL APPROACHES AND MORTALITY OUTCOMES IN VERY LOW BIRTH WEIGHT INFANTS WITH ESOPHAGEAL ATRESIA

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Objective:

This study aimed to evaluate the clinical data and survival outcomes of very low birth weight (VLBW) infants with esophageal atresia (EA). The differences in outcomes between patients who underwent staged repair and those who had primary repair were analyzed in relation to surgical planning.

Methods:

A retrospective analysis was conducted on 15 neonates with EA who were born at or below 1500 grams between 2020 and 2024. Data on gestational age, birth weight, EA type, associated major cardiac anomalies, surgical approach (staged or primary repair), hospital length of stay, and mortality causes were collected. The primary outcome measure was survival, which was compared based on surgical strategy.

Results:

Among the patients, 66.7% were female. The mean birth weight was 1182 grams (range: 585–1500 g). Regarding EA subtypes, 93.3% had type C EA, while 6.7% had isolated EA. Major cardiac anomalies were present in 33.3% (n=5) of cases. The 30-day mortality rate was 26.7% (n=4), while the overall mortality rate was 46.6% (n=7). The primary causes of early mortality were major cardiac anomalies (50%) and sepsis (50%).

Surgical management included staged repair (fistula ligation and gastrostomy, followed by delayed primary anastomosis) in 8 infants (53.3%) and primary repair in 7 infants (46.7%). Among the staged repair group, 2 patients (25%) died within the first 30 days, and 3 patients (37.5%) died thereafter, resulting in an overall mortality rate of 62.5%. In contrast, among the primary repair group, 2 patients (28.6%) died within the first 30 days, and 4 patients (57.1%) died later, yielding a mortality rate of 85.7%.

Conclusion:

The most significant factors influencing survival in VLBW infants with EA were prematurity and the presence of major cardiac anomalies. The staged repair approach was associated with a higher overall survival rate compared to primary repair. In our study group, mortality was notably higher among patients who underwent primary repair. Sepsis and major cardiac anomalies emerged as the leading causes of mortality in this high-risk patient population.

Keywords: very low birth weight, esophageal atresia,

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BRIDGING GAPS IN CARE OF CHILDREN WITH EA. IMPLEMENTATION OF FAMILY LIAISON NURSES IN GERMAN HOSPITALS.

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Purpose:

Parents of children with EA show increased anxiety and decreased quality of life compared to average population. Caring stress, severe EA symptoms and perceived lack of support may contribute to these findings. Parents of children with EA or other rare and chronic diseases experience a lack of coordination in care and must navigate through the health care system by themselves. Especially the first hospital discharge is perceived as challenging and often unorganized. To support people with chronic and rare diseases together with their relatives, the concept of health care professionals in guiding roles has emerged occasionally, e.g. patient navigators. In 2024, the first hospital in Germany implemented a family liaison nurse (FLN) for EA within its department of pediatric surgery. The long-term goal is to establish FLN in every German EA expert centre based on a standardized approach and to create a cross-clinical network for professional exchange. FLN aim to guide the families from their initial hospital stay through discharge and follow-up care to prevent treatment gaps, promote family psychosocial well-being, to decrease emergency readmissions and administrative challenges for hospitals.

Method/ result:

To standardize the implementation of FLNs, existing FLNs and patient navigators will be interviewed and visited if possible. Additionally, a literature review about patient navigation will be conducted. To ensure the quality of care a three-level evaluation is planned. This will involve surveying families, FLNs and other involved health care professionals. The methods and structure of the project will be outlined. Finally, future perspectives and potential developments will be proposed.

Conclusion:

FLN will be introduced at INoEA as a project of a care management system. It has the potential to reduce both care stress for families and administrative burden for clinicians in Germany.

Keywords: family liaison nurse, patient navigation, care coordination, care management

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EVALUATION OF PULMONARY COMPLICATIONS IN PATIENTS DIAGNOSED WITH ESOPHAGEAL ATRESIA: A SINGLE-CENTER STUDY

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Purpose : Esophageal atresia (EA), with or without tracheoesophageal fistula (TEF) is a rare congenital anomaly that affect both the respiratory and gastrointestinal system. Respiratory complications are commonly observed post surgical repair. This study aims retrospectively evaluate the pulmonary status of the patients after surgical procedures while emphasizing the necessity of a multidisciplinary approach.

Method : In this ongoing retrospective study, 41 patients diagnosed with EA and/or TEF and followed between 2014 and 2024 were included. Data were collected from medical records.

Results : Among the patients, 61% were male, and the mean age was 117.3 ± 63.3 months. The most common type of EA was Type C (68.3 %). During the follow-up period, wheezing was present in 26.8% of the patients and 17.1% experienced dysphagia. At least one episode of pneumonia was reported in 34.1% of the patients. Bronchiectasis was present in 22% of the patients, while reflux was observed in 68.3%. There was no correlation between the age of reflux onset and the number of pneumonia episodes (p=0.1). Scoliosis was identified in ten patients (24.4%), and its presence was not associated with pneumonia. A total of 29.3% of the patients were diagnosed with atopy/asthma.

Conclusion : Respiratory complications are commonly seen in children with EA and TEF. Patients must be closely monitored with a multidisciplinary approach after surgical repair.

Keywords: esophageal atresia, tracheoesophageal fistula , respiratory complications

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OCELOT STUDY: DEFINING AND MEASURING THE CORE OUTCOMES FOR PEOPLE BORN WITH OESOPHAGEAL ATRESIA AND/OR TRACHEO-OESOPHAGEAL FISTULA

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Introduction: A core outcome set (COS) for people born with oesophageal atresia and/or tracheooesophageal fistula (OA-TOF) was formulated with a steered focus on outcomes with international relevance (Ocelot study). For most of the 14 outcomes, heterogeneity exists in the definitions and there are numerous watts to measure such outcomes. Inorder to ensure the COS is able to improve research, each outcome must be clearly defined.

Objectives: To provide clear definitions and ways to measure each outcome from the COS.

Methods: The study was undertaken in 5 steps

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- Using comprehensive literature review, one investigator drafted definitions and proposed ways to measure each outcome
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- All members of the international steering group and attendees of the consensus meeting were invited to comment on this draft. All were experts in their field/had personal expertise as a person with or family member with OA_TOF. Experts worked on live document so discussion between experts was possible to add depth.
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- One expert in each field was tasked with collating all comments and writing the final definition and way to measure.
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- Final review and agreement by steering committee
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- 4 external experts not involved in the Ocelot study were asked to peer review final document for scrutiny
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Results: Debate over correct term definitions and ways to measure specific outcomes highlighted challenges where 'no gold standard exists' in clinical practice or health service research. With input from parents and parent support groups, agreement was attained on definition(s) and best ways to measure the 14 core outcomes for OA/TOF patients with approval from experts. This will ensure the COS is able to minimise heterogeneity in future studies, enhancing the quality of evidence based research with the aim of leading to greater knowledge, understanding and ultimately better patient care.

Keywords: oesophageal atresia, tracheo-oesophageal fistula, core outcome set

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REPAIR OF TYPE 2 LARYNGEAL CLEFT WITH ESOPHAGEAL ATRESIA + TRACHEOESOPHAGEAL FISTULA

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AIM:

Esophageal atresia is seen in 1/4500 live births in newborn babies. It is a life-threatening congenital anomaly that can be accompanied by various additional diseases. Laryngotracheoesophageal cleft (LTEC) is the absence of part or all of the tracheoesophageal septum. There are 4 types. It has a high mortality rate. We aimed to present our patient with this rare association.

CASE:

The patient was born at 37 weeks and 2300 grams. When she was born, the patient was operated for esophageal atresia (type C), and then a tracheostomy and gastrostomy were performed. Since respiratory distress did not improve, the patient underwent bronchoscopy. The patient, who was thought to have cleft, was transferred to the pediatric intensive care unit of our hospital when she was 4.5 months old. The patient was operated and was found to have type 2 LTEC. Cleft repair was performed through a right cervical incision. In the control bronchoscopy performed 10 days later, it was seen that the integrity of the larynx-trachea and esophagus was maintained. It was planned to be followed up with tracheostomy for a while postoperatively. The patient was discharged with a home ventilator. It is planned to move away from tracheostomy and gastrostomy and perform antireflux surgery in the future.

CONCLUSION:

LTEC is a rare congenital anomaly and has been reported to be accompanied by EA-TOF in 25% of cases. The variety of symptoms is related to the length of the cleft. Diagnosis is made by esophagography. Endoscopy and bronchoscopy are required for definitive diagnosis. The type of cleft determines the intervention to be performed. Many patients need gastrostomy and tracheostomy before definitive surgery. Postoperative survival is around 50%. The most common complications are recurrent laryngeal nerve injury, anastomotic leak and gastroesophageal reflux. This rare anomaly requires multidisciplinary follow-up in experienced centers.

Keywords: larynx, trachea, cleft, tracheaesophageal fistula

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