Esophageal atresia

WG

Chair: F Gottrand
Co-Chair: L Dall’Oglio
Secretary: U Krishnan
Agenda

• Introduction: what is going on in the EA planet (ERNICA, INoEA, Covid…) (Frederic Gottrand)
• Update on the EoE register in EA patients: current status of agreements and inclusion; preliminary results of the first 45 cases (Frederic Gottrand, Usha Krishnan, Katialine Groff)
• Progress of Transition consensus (Usha Krishnan)
• Comparison of Balloon and Savary dilatation study: current status (Renato Tambucci)
• First results of the mucosal bridge (Matthieu Antoine)
• Announcement of the next world congress on EA in Cincinnati Oct 10-14 2022 (Mike Rutter)
• Update of the STEPS-EA trial (Anne-Fleur van Hal)
• Other project/proposal (?)
Summary of activities 2020


<table>
<thead>
<tr>
<th><strong>EA/TEF n=17</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td>9M/8F</td>
</tr>
<tr>
<td><strong>EA type C / A / other</strong></td>
<td>11 / 3 / 2 (missing n=1)</td>
</tr>
<tr>
<td><strong>Mean Age</strong></td>
<td>6.8 years</td>
</tr>
<tr>
<td><strong>Associated respiratory problems</strong></td>
<td></td>
</tr>
<tr>
<td>Asthma</td>
<td>n=3</td>
</tr>
<tr>
<td>Tracheomalacia</td>
<td>n=7</td>
</tr>
<tr>
<td>Recurrent chest infections</td>
<td>n=3</td>
</tr>
<tr>
<td><strong>Associated malformation</strong></td>
<td>Cardiac n=6</td>
</tr>
<tr>
<td><strong>Associated digestive problems</strong></td>
<td>Anastomotic strictures n=7</td>
</tr>
<tr>
<td><strong>Medication prior to COVID19</strong></td>
<td>PPI n=4 fluticasone n=3</td>
</tr>
<tr>
<td>bronchodilatators n=2</td>
<td>furosemide, enalapril n=1</td>
</tr>
<tr>
<td><strong>Number of days since onset of illness (days) to reach the peak of COVID-19</strong></td>
<td>4.1 days</td>
</tr>
<tr>
<td>Asymptomatic</td>
<td>n=2</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>n=1</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>No hospitalization n=14</td>
</tr>
<tr>
<td>Admitted on the ward and discharged</td>
<td>n=3</td>
</tr>
<tr>
<td>Exudative retinopathy</td>
<td>n=1</td>
</tr>
<tr>
<td><strong>Respiratory support at peak of COVID-19</strong></td>
<td>O2 n=1</td>
</tr>
<tr>
<td><strong>Ped ICU admission</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

Cases reported from Italy, Argentina, Switzerland, Nederland, Canada, France, Turkey.
INoEA International Network of Esophageal Atresia

- In addition, 3 adults (2 males, 30 years) with EA/TEF (1 type A, 1 type B, 1 type C) have been reported to be infected by SARS-CoV-2, (1 from India, 1 from Italy, 1 from France). Two were admitted on the ward. All three had an uneventful outcome.

ERNICA: European Reference Network for rare Inherited and Congenital (digestive and gastrointestinal) Anomalies


CAN EAT - Care and Nutrition in Esophageal Atresia: An ERNICA animation for parents and families - YouTube

https://www.youtube.com/watch?v=6sdwKlbZZoc&list=PLdmabVdgL6xlijhHaXmWQp1I1W8vUOZNn
Agenda

• Introduction: what is going on in the EA planet (ERNICA, INoEA, Covid…) (Frederic Gottrand)
• Update on the EoE register in EA patients: current status of agreements and inclusion; preliminary results of the first 45 cases (Frederic Gottrand, Usha Krishnan, Katialine Groff)
• Progress of Transition consensus (Usha Krishnan)
• Comparison of Balloon and Savary dilalation study: current status (Renato Tambucci)
• First results of the mucosal bridge (Matthieu Antoine)
• Announcement of the next world congress on EA in Cincinnati Oct 10-14 2022 (Mike Rutter)
• Update of the STEPS-EA trial (Anne-Fleur van Hal)
• Other project/proposal (?)
EOE EA network

- Due to General Data Protection Regulation issues impossible to send data from European citizen to Australia (database finally moved to Lille): all Agreements (ethical, privacy...) obtained in France!
- E-CRF retrospective ready and functioning
- Agreements still in process with several participating centers!
**Agreement signed**

<table>
<thead>
<tr>
<th>Country</th>
<th>Site</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>Hospital J de Flandre, Lille</td>
<td>Prof Frederic Gottrand</td>
</tr>
<tr>
<td></td>
<td>Sydney Children’s Hospital</td>
<td>Dr Usha Krishnan</td>
</tr>
<tr>
<td></td>
<td>Canberra Hospital</td>
<td>Pr David Croaker</td>
</tr>
<tr>
<td>Australia</td>
<td>The Royal Children's Hospital, Melbourne</td>
<td>Dr Michael Nightingale</td>
</tr>
<tr>
<td>Israel</td>
<td>Schneider Children's Medical Center of Israel</td>
<td>Professor Raanan Shamir</td>
</tr>
<tr>
<td></td>
<td>Soroka University Medical Center</td>
<td>Dr Noam Zevit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Ari Silbermintz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Baruch Yerushalmi</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Emma Children’s Hospital</td>
<td>Dr Michiel van Wijk</td>
</tr>
<tr>
<td>Finland</td>
<td>Children’s Hospital, Helsinki</td>
<td>Antti Ilmari Koivusalo</td>
</tr>
</tbody>
</table>
Agreement in review

<table>
<thead>
<tr>
<th>Country</th>
<th>Site</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Universitair Kinderziekenhuis, Brussels</td>
<td>Prof Yvan Vandenplas</td>
</tr>
<tr>
<td></td>
<td>CHC Clinique Saint-Joseph</td>
<td>Dr Gigi Veereman</td>
</tr>
<tr>
<td></td>
<td>Ghent University hospital</td>
<td>Dr Koen Huysentruyt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Olivia Bauraind</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Stephanie Van Biervliet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Saskia Vandevelde</td>
</tr>
<tr>
<td>Country</td>
<td>Site</td>
<td>PI</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>UK</td>
<td>Great Ormond Street Hospital for Sick Children</td>
<td>Dr Osvaldo Borelli</td>
</tr>
<tr>
<td></td>
<td>Epson and ST Helier University Hospitals</td>
<td>Dr Sonny Chong</td>
</tr>
<tr>
<td></td>
<td>Bristol Royal Hospital for Children</td>
<td>Dr Christine Spray</td>
</tr>
<tr>
<td>Germany</td>
<td>University of Munich Medical Center</td>
<td>Dr Sibylle Koletzko</td>
</tr>
<tr>
<td>Greece</td>
<td>Iaso General Pediatric Hospital, Athens</td>
<td>Dr Ioanna Panayotou – Angelakopoulou</td>
</tr>
<tr>
<td></td>
<td>Athens Children’s Hospital</td>
<td>Prof Alexandra Papadopoulos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prof Luigi Dalloglio</td>
</tr>
<tr>
<td></td>
<td>Bambino Gesu Children’s Hospital, IRCCS, Rome</td>
<td>Dr Francesca Rea</td>
</tr>
<tr>
<td>Italy</td>
<td>University of Messina Hospital</td>
<td>Dr Renata Tambucci</td>
</tr>
<tr>
<td></td>
<td>Policlinico Hospital, Bari</td>
<td>Dr Paola Deangelis</td>
</tr>
<tr>
<td></td>
<td>Sapienza-University of Rome</td>
<td>Dr Claudio Romano</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Maria Elisabetta</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Baldassarre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Salvatore Olivia</td>
</tr>
</tbody>
</table>
## No agreement

<table>
<thead>
<tr>
<th>Country</th>
<th>Site</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>Karolinska University Hospital</td>
<td>Dr Jan Svensson</td>
</tr>
<tr>
<td>Lebanon</td>
<td>Makassed University General Hospital, Lebanon</td>
<td>Dr Aziz Koleilat</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Children's Hospital, Ljubljana</td>
<td>Dr Shrine Mneimneh</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Vilnius University Children’s Hospital</td>
<td>Dr Vaidotas Urbonas</td>
</tr>
<tr>
<td>Switzerland</td>
<td>University Hospital Lausanne</td>
<td>Dr Andreas Nydegger</td>
</tr>
<tr>
<td></td>
<td>Rady Children's Hospital-San Diego</td>
<td>Dr Sabine Vasseur</td>
</tr>
<tr>
<td></td>
<td>Cincinnati Children's Hospital Medical Center</td>
<td>Dr Hayat Mousa</td>
</tr>
<tr>
<td>USA</td>
<td>Boston's children hospital</td>
<td>Dr Von Allmen, Daniel</td>
</tr>
<tr>
<td></td>
<td>NYU Langone Medical Center</td>
<td>Dr Peter Ngo</td>
</tr>
<tr>
<td>Canada</td>
<td>Hospital Pediatrics at Alberta Health Services - Calgary</td>
<td>Dr Mike Manfredi</td>
</tr>
<tr>
<td>Dubai</td>
<td>Al Jalila Children's Specialty Hospital, Dubai, UAE</td>
<td>Dr Mikhail Kazachkov</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Michelle Bailey</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dr Christos Tzivinikos</td>
</tr>
</tbody>
</table>

[www.espghan.org](http://www.espghan.org)
<table>
<thead>
<tr>
<th>CENTER</th>
<th>SITE_NAME</th>
<th>FIRST_NAME</th>
<th>LAST_NAME</th>
<th>N° patients included n = 49</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Sydney Children's Hospital, AUSTRALIA</td>
<td>USHA</td>
<td>KRISHNAN</td>
<td>28</td>
</tr>
<tr>
<td>02</td>
<td>Hospital J de Flandre, FRANCE</td>
<td>FREDERIC</td>
<td>GOTTRAND</td>
<td>19</td>
</tr>
<tr>
<td>08</td>
<td>Israel</td>
<td>ARI</td>
<td>SILBERMINTZ</td>
<td>0</td>
</tr>
<tr>
<td>08</td>
<td>Israel</td>
<td>RAANAN</td>
<td>SHAMIR</td>
<td>0</td>
</tr>
<tr>
<td>08</td>
<td>Israel</td>
<td>NOAM</td>
<td>ZEVIT</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Amsterdam</td>
<td>MICHIEL</td>
<td>VAN WJIK</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>Finland</td>
<td>ANTTI</td>
<td>KOIVUSALO</td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>Al Jalila Children's Specialty Hospital, DUBAI</td>
<td>CHRISTOS</td>
<td>TZIVINIKOS</td>
<td>2</td>
</tr>
</tbody>
</table>
EOE EA network

• How can we help you expediting Agreements signature in your centers? This is the only way to get access to the e-CRF
EOE EA: Preliminary data

• 47 patients analysed

<table>
<thead>
<tr>
<th>Type A</th>
<th>Type B</th>
<th>Type C</th>
<th>Type D</th>
<th>Type E</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1</td>
<td>31</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>17%</td>
<td>2%</td>
<td>74%</td>
<td>2%</td>
<td>5%</td>
</tr>
</tbody>
</table>

(n=42)

• 62% male and 38 % female

Male-female ratio: 1.61
Symptoms:

- 2 congenital stenosis → 4%
- PPI at the time of diagnosis: 25/27 → 93%

<table>
<thead>
<tr>
<th>Asymptomatic</th>
<th>Regurgitation</th>
<th>Dysphagia</th>
<th>Vomiting</th>
<th>Feeding difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>9</td>
<td>21</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>9%</td>
<td>20%</td>
<td>47%</td>
<td>40%</td>
<td>47%</td>
</tr>
</tbody>
</table>
Endoscopy:
• \( (n=40) \)

<table>
<thead>
<tr>
<th>Normal</th>
<th>Anastomotic Stricture</th>
<th>Rings</th>
<th>Exsudate</th>
<th>Edema</th>
<th>Furrow</th>
<th>Trachealisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>17</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>23%</td>
<td>36%</td>
<td>0%</td>
<td>6%</td>
<td>9%</td>
<td>40%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Biopsies \( (n=47) \): N° EoE/Hpf

<table>
<thead>
<tr>
<th>Esophagus</th>
<th>Proximal</th>
<th>Mid</th>
<th>Distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>26</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>ranges</td>
<td>2-91</td>
<td>0-80</td>
<td>1-96</td>
</tr>
</tbody>
</table>
### Treatment:

- *(n=30)*

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Fluticasone</th>
<th>Budesonide</th>
<th>PPI increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>16</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>17%</td>
<td>53%</td>
<td></td>
<td>73%</td>
</tr>
</tbody>
</table>

- *(n=29)*

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Targeted elimination diet</th>
<th>Elemental formula</th>
<th>No diet therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>2</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>14%</td>
<td>7%</td>
<td>79%</td>
<td></td>
</tr>
</tbody>
</table>
Post treatment

- **Remission** \((n=37)\):
  - YES
    - 29 patients
    - 78%
  - NO
    - 8 patients
    - 22%

- **Relapse post treatment** \((n=33)\):
  - 14 patients
  - 42%
Agenda

- **Introduction:** what is going on in the EA planet (ERNICA, INoEA, Covid…) (Frederic Gottrand)
- **Update on the EoE register in EA patients:** current status of agreements and inclusion; preliminary results of the first 45 cases (Frederic Gottrand, Usha Krishnan, Katialine Groff)
- **Progress of Transition consensus** (Usha Krishnan)
- **Comparison of Balloon and Savary dilatation study:** current status (Renato Tambucci)
- **First results of the mucosal bridge** (Matthieu Antoine)
- **Announcement of the next world congress on EA in Cincinnati Oct 10-14 2022** (Mike Rutter)
- **Update of the STEPS-EA trial** (Anne-Fleur van Hal)
- **Other project/proposal (?)**
INoEA Transition Working Group Update
Members

- **Sub-speciality groups**
  - Pediatric and Adult Gastroenterology: Prof Christophe Faure (Lead), Prof Frederic Gottrand, Dr Benjamin Gold, Dr Usha Krishnan, Dr David Seguy, Dr Andrew Taylor
  - Surgery: Prof Rene Wijnen (Lead), Prof Luigi Dallioglio, Dr Mario Constantini
  - Pulmonology: Prof Anastassios Koumbouralis and Prof Tom Kovesi (Joint Leads)
  - ENT: Prof Mike Rutter (Lead)
  - Feeding and Nutrition: Gastroenterologist: Dr Usha Krishnan (Lead), Dietician: Ms Jessica Menzies, Ms Audrey Vanmalleghem and Deglutologist: Dr Nathalie Rommel
  - Psychology and QOL: Ms Michaela Dellenmark Blom (Lead), Dr Vuokko Wallace, Ms Evelyn Culnane
  - Parent/Patient support groups: Mr Graham Slater (Lead, President of EAT)
  - Literature Review: Dr Michael Dumont and Dr Hayley Slater
Steps Completed

- Literature Review ✓
- Summary Tables based on Literature Review ✓
- Draft questions from sub groups ✓
- Drafting of sections, recommendations, referencing based on the questions and literature review by each sub group
  - Psychology and QOL ✓
  - Respiratory ✓
  - Feeding and Nutrition ✓
Next Steps…..

• Drafting of sections, recommendations, referencing based on the questions and literature review by each sub group
  • Gastroenterology
  • Surgery
  • ENT
  • Online/F2F/Hybrid Voting on recommendations methodology
Next Steps.....

• Collating all sections and drafting whole paper and circulating amongst whole group
• Deciding which journal to submit to
  • Diseases of Esophagus (both adult and paed GI/Surgeons read it but not so much from other specialities)
  • Frontiers (Open Access, includes all disciplines)
• Presentation in INoEA Congress in 2022
• Creation of Transition App for EA patients with funding support from ERNICA
Stay Safe
Update on Old/New projects

- International survey on management of GERD in EA patients
- Survey Monkey link sent to ESPGHAN EA WG and INoEA members
- 40 respondents from 23 hospitals in 19 countries
- 87.5% aware of guidelines
- 35% prescribe PPI during first year
- 65% performed endoscopy/pH metry/Impedance testing for GERD screening
- 62.5% performed investigations as recommended by guidelines prior to fundoplication
- But only 22.5% performed fundoplication for refractory GERD as recommended in guidelines
- Paper currently being finalised for submission
New Project

- In the survey 25 centres had indicated that they were interested in taking part in a multicentre study evaluating “Fundoplication outcomes in children with Esophageal Atresia”, using Pressure Flow Analysis metrics (PFA) on Swallow Gateway Platform with High Resolution Impedance Manometry (HRIM) of the esophagus.
- High-resolution manometry combined with impedance measurements, helps characterize the interplay between esophageal motor function and bolus clearance.
- PFA can offer new insights in this area and potentially help predict the likelihood of developing dysphagia post fundoplication and help with patient selection for anti reflux surgery.
Agenda

• Introduction: what is going on in the EA planet (ERNICA, INoEA, Covid...) (Frederic Gottrand)
• Update on the EoE register in EA patients: current status of agreements and inclusion; preliminary results of the first 45 cases (Frederic Gottrand, Usha Krishnan, Katialine Groff)
• Progress of Transition consensus (Usha Krishnan)
• Comparison of Balloon and Savary dilalation study: current status (Renato Tambucci)
• First results of the mucosal bridge (Matthieu Antoine)
• Announcement of the next world congress on EA in Cincinnati Oct 10-14 2022 (Mike Rutter)
• Update of the STEPS-EA trial (Anne-Fleur van Hal)
• Other project/proposal (?)
Anastomotic stricture in esophageal atresia: comparison of balloon vs bougie dilation
Two main categories of dilators exist:

1. **fixed-diameter push-type dilators (bougie dilators)**
2. **radial expanding balloon dilators**
No clear advantage of either balloon or bougie dilation has been demonstrated.

Data coming from two randomized, controlled trials comparing bougie with balloons dilators for benign strictures in adults found no differences in terms of efficacy and safety at 1 year.
Currently there are no controlled trials comparing efficacy and safety of hydrostatic balloon with bougie dilator for treatment of AS in EA patients.

Therefore, due to the lack of strong evidences, the choice between balloon dilation and bougie is based only on operator experience and comfort with the equipment.
ESPGHAN multicenter collaborative study

Bougie vs Balloon dilators
All data being collected and patient interactions are a part of routine patient care

Primary endpoint

Compare the efficacy of the balloon vs bougie dilations in terms of number of dilatation sessions per patients needed to achieve stricture resolution
Secondary endpoints

• Develop a multi-center database to organize an international survey about the endoscopy activity on EA patients
• Compare the safety profile of bougie vs balloon dilations in terms of early and late complications occurrence
• Analyze epidemiological data to describe the EA population and evaluate AS incidence and identify risk factors for developing AS
follow-up comparative study

Balloon group → Balloon group

Bougie group → Bougie group

standard routine follow-up → significant data on pts history → EA children identified as needing AS dilation → Dilation procedure → 1 to 4 weeks clinical reassessment

additional form → pre-operative form → operative form → post-operative form

DATABASE

www.espghan.org
Inclusion criteria
• Infants undergoing surgical repair of congenital EA
• EA patients referred for endoscopic assessment

Exclusion criteria
• Patients with refractory/recurrent AS previously managed elsewhere
• Patients with insufficient medical history information
Anastomotic stricture after surgical repair of esophageal atresia: frequency, risk factors, and efficacy of esophageal bougie dilatations

Lydia Serhal, Frédéric Gottrand, Rony Sfeir, Dominique Guimber, Patrick Devos, Michel Bonnevalle, Laurent Storme, Dominique Turck, Laurent Michaud*  

Stricture resolution occurred after a mean of 3.2 ±1.74 dilatations per patient  
Sample size of 150 patients (75 for each treatment group) could provide 80% power to detect a difference of 25% in number of dilations per patient with a CI 95% and assuming the same SD
Management of anastomotic strictures after esophageal atresia repair: results of a global survey

Chantal ten Kate (c.tenkate@erasusmc.nl)
Renato Tambucci, Frédéric Gotttrand, Rene Wijnen, Luigi Dall'Oglio

ESPGHAN Annual Meeting, Glasgow
EA working group 05-06-2019
Management of anastomotic strictures after esophageal atresia repair: results of a global survey
110 centers worldwide interested in participating
1. Universitair Ziekenhuis Gent (Gent, Belgio)
2. CHU Lille Pediatric Gastroenterology (Lille, France)
3. Hospital Italiano de Buenos Aires (Buenos Aires, Argentina)
4. Columbia University College (New York, USA)
5. Victor Babes University of Medicine and Pharmacy (Timisoara, Romania)
6. Hacettepe University Faculty of Medicine (Ankara, Turkey)
7. Istanbul Medeniyet University (Istanbul, Turkey)
8. Medical University of Warsaw (Warsavia, Polonia)
9. Hospital de Emergencias Pediatricas (Lima, Perù)
10. Hospital General de Niños (Buenos Aires, Argentina)
11. Erasmus University of Rotterdam (Rotterdam, Paesi Bassi)
12. King Chulalongkorn Memorial Hospital (Bangkok, Tailandia)
13. Ca' Granda Ospedale Maggiore Policlinico (Milano, Italy)
14. Universidad Central de Venezuela (Caracas, Venezuela)
15. A.O.R.N. Santobuono-Pausilipon (Napoli, Italia)
16. CHU Saint Etienne Neonatology Unit (Saint Etienne, Francia)
17. CHU – Toulouse – Hôpital des enfants (Toulouse, France)
18. CHU de Rennes Endoscopy (Rennes, France)
19. CHU de Reims Pediatric Surgery (Reims, France)
20. Trousseau University Hospital Pediatric Surgery (Paris, France)
21. Robert-Debré Hospital Pediatric Gastroenterology (Paris, France)
22. CHU Angers Pediatric unit (Angers, France)
23. CHU Bordeaux Pediatric Gastroenterology (Bordeaux, France)
24. CHU Grenoble Pediatric Department (Grenoble, France)
25. CHU Besançon Pediatric Gastroenterology (Besançon, France)
26. CHU Brest Pediatric Surgery (Brest, France)
27. CHU Strasbourg Pediatric Gastroenterology (Strasbourg, France)
28. CHR Orléans Pediatric Surgery (Orléans, France)
1. Universitair Ziekenhuis Gent (Gent, Belgio)
2. CHU Lille Pediatric Gastroenterology (Lille, France)
3. Hospital Italiano de Buenos Aires (Buenos Aires, Argentina)
4. Columbia University College (New York, USA)
5. Victor Babes University of Medicine and Pharmacy (Timisoara, Romania)
6. Hacettepe University Faculty of Medicine (Ankara, Turkey)
7. Istanbul Medeniyet University (Istanbul, Turkey)
8. Medical Univeristy of Warsaw (Varsavia, Polonia)
9. Hospital de Emergencias Pediátricas (Lima, Perú)
10. Hospital General de Niños (Buenos Aires, Argentina)
11. Erasmus University of Rotterdam (Rotterdam, Paesi Bassi)
12. King Chulalongkorn Memorial Hospital (Bangkok, Tailandia)
13. Ca’ Granda Ospedale Maggiore Policlinico (Milano, Italy)
14. Universidad Central de Venezuela (Caracas, Venezuela)
15. A.O.R.N. Santobuono-Pausilipon (Napoli, Italia)
16. CHU Saint Etienne Neonatology Unit (Saint Etienne, Francia)
17. CHU – Toulouse – Hôpital des enfants (Toulouse, France)
18. CHU de Rennes Endoscopy (Rennes, France)
19. CHU de Reims Pediatric Surgery (Reims, France)
20. Trousseau University Hospital Pediatric Surgery (Paris, France)
21. Robert-Debré Hospital Pediatric Gastroenterology (Paris, France)
22. CHU Angers Pediatric unit (Angers, France)
23. CHU Bordeaux Pediatric Gastroenterology (Bordeaux, France)
24. CHU Grenoble Pediatric Department (Grenoble, France)
25. CHU Besançon Pediatric Gastroenterology (Besançon, France)
26. CHU Brest Pediatric Surgery (Brest, France)
27. CHU Strasbourg Pediatric Gastroenterology (Strasbourg, France)
28. CHR Orléans Pediatric Surgery (Orléans, France)
Data of 11 patients are have been inserted into the database!!
Agenda

• Introduction: what is going on in the EA planet (ERNICA, INoEA, Covid…) (Frederic Gottrand)
• Update on the EoE register in EA patients: current status of agreements and inclusion; preliminary results of the first 45 cases (Frederic Gottrand, Usha Krishnan, Katialine Groff)
• Progress of Transition consensus (Usha Krishnan)
• Comparison of Balloon and Savary dilalation study: current status (Renato Tambucci)
• First results of the mucosal bridge study (Matthieu Antoine)
• Announcement of the next world congress on EA in Cincinnati Oct 10-14 2022 (Mike Rutter)
• Update of the STEPS-EA trial (Anne-Fleur van Hal)
• Other project/proposal (?)
Endoscopic management of esophageal mucosal bridges in children followed for esophageal atresia

M. Antoine, F. Gottrand
Hôpital Jeanne de Flandre, CHU Lille, France
Esophageal mucosal bridges (double-barrel esophagus)

Rare entity, cause of dysphagia, food blockage
Different etiologies: infections, inflammatory diseases, post-traumatic

**Esophageal atresia:** post-surgical, GERD, iatrogenic (nasogastric tube placement)

**Endoscopic management:**
Argon plasma coagulation
Endoscopic knives/scissors
Electrocautery
Miniature staplers
Mucosal bridge
Endoknife
(Dualknife 2mm)
Post section
Literature review

Only a few Case reported

N=4 children (with mucosal bridges at the site of esophageal anastomosis followed for esophageal atresia) reported in 2 publications:
- 3 treated with argon plasma coagulation (Chapuy and al., 2014)
- 1 treated with endoscopic miniature stapler (Kawano and Muensterer, 2019)

Objectives of the project:
- Collect a large number of cases at an international level
- Describe patients characteristics, mucosal bridges treatment, techniques, safety, efficacy and outcome
Preliminary results....

18 patients in 9 centers (France: Lille, Paris Robert-Debré, Lyon, Amiens, Orléans; Hannover; Vilnius; Sydney; Dubai)

Mean age at diagnosis of mucosal bridge (MB): 5.8 ± 4.4 yo (7 months – 13.8 years)

GERD (PPI 13/18, antireflux procedure 10/18)

Esophageal dilatations (13/18, >2 for 10/18)

No symptoms: 5/18
Preliminary results: treatment and outcome....

18 Mucosal Bridge

7 « no treatment »
- Including 4 with esophageal stricture
  - 2/3 were asymptomatic
  - 1/3 improvement

11 « cut »
- (4/11 at the first endoscopy)
  - Including 5 with esophageal stricture or achalasia
  - 5/6 improvement of symptoms
  - 1/6 MD (was asymptomatic)

NO COMPLICATION
Agenda

• Introduction: what is going on in the EA planet (ERNICA, INoEA, Covid…) (Frederic Gottrand)

• Update on the EoE register in EA patients: current status of agreements and inclusion; preliminary results of the first 45 cases (Frederic Gottrand, Usha Krishnan, Katialine Groff)

• Progress of Transition consensus (Usha Krishnan)

• Comparison of Balloon and Savary dilatation study: current status (Renato Tambucci)

• First results of the mucosal bridge (Matthieu Antoine)

• Announcement of the next world congress on EA in Cincinnati Oct 10-14 2022 (Mike Rutter)

• Update of the STEPS-EA trial (Anne-Fleur van Hal)

• Other project/proposal (?)
Cincinnati, Ohio, October 10-14, 2022

The “QUAD” conference
- Including an INPAT session
  – The Cincinnati Airway Course
  – The Dysphagia Conference
  – The Annual Aerodigestive Conference
<table>
<thead>
<tr>
<th>October 2022</th>
<th>Saturday 8</th>
<th>Sunday 9</th>
<th>Monday 10</th>
<th>Tuesday 11</th>
<th>Wednesday 12</th>
<th>Thursday 13</th>
<th>Friday 14</th>
<th>Saturday 15</th>
<th>Sunday 16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Morning</strong></td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>13</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td><strong>Dysphagia</strong></td>
<td><strong>Course FEES</strong></td>
<td><strong>Dysphagia</strong></td>
<td><strong>Dysphagia</strong></td>
<td><strong>Airway</strong></td>
<td><strong>Airway</strong></td>
<td><strong>Airway</strong></td>
<td><strong>Airway Course Dissection A</strong></td>
<td><strong>Flex Branch Sim A</strong></td>
</tr>
<tr>
<td></td>
<td><strong>EAT Family Day</strong></td>
<td><strong>INoEA / Ped Surg esophageal dissection</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
</tr>
<tr>
<td><strong>Afternoon</strong></td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td><strong>Dysphagia</strong></td>
<td><strong>Course Pharyngeal manometry</strong></td>
<td><strong>Dysphagia</strong></td>
<td><strong>Dysphagia</strong></td>
<td><strong>Airway</strong></td>
<td><strong>Airway</strong></td>
<td><strong>Airway</strong></td>
<td><strong>Airway Course Dissection B</strong></td>
<td><strong>Airway</strong></td>
</tr>
<tr>
<td></td>
<td><strong>EAT Family Day</strong></td>
<td><strong>INoEA / Ped Surg esophageal dissection</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
<td><strong>INoEA</strong></td>
</tr>
<tr>
<td><strong>Evening</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Welcome Cocktails</strong></td>
<td></td>
<td><strong>Faculty Dinner A</strong></td>
<td><strong>Or evening at the Zoo</strong></td>
<td><strong>Joint Conference Banquet - Union Terminal / Museum Center</strong></td>
<td><strong>Faculty Dinner B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**THE CINCINNATI "QUAD" CONFERENCE:**

PROVISONAL PROGRAM OVERVIEW
Information Highlights

• Sessions will focus on interdisciplinary care
  – Pediatric to adult transitioning is an additional focus
• There will be breakout rooms for submitted papers
• We plan video poster boards
• The weekends either side of the conference will be for workshops and dissection courses
• There will be a competition for trainees
  – The prize will be 10 free registrations
• We can only accommodate 500 delegates
  – We will also be offering a virtual attendance option
Agenda

• Introduction: what is going on in the EA planet (ERNICA, INoEA, Covid…) (Frederic Gottrand)
• Update on the EoE register in EA patients: current status of agreements and inclusion; preliminary results of the first 45 cases (Frederic Gottrand, Usha Krishnan, Katialine Groff)
• Progress of Transition consensus (Usha Krishnan)
• Comparison of Balloon and Savary dilatation study: current status (Renato Tambucci)
• First results of the mucosal bridge (Matthieu Antoine)
• Announcement of the next world congress on EA in Cincinnati Oct 10-14 2022 (Mike Rutter)
• Update of the STEPS-EA trial (Anne-Fleur van Hal)
• Other project/proposal (?)
STEPS-EA trial

Intralesional STEroid Injections to Prevent Refractory Strictures in Patients with Esophageal Atresia

Rene Wijnen, project leader
John Vlot, principal investigator
Anne-Fleur van Hal, coordinating investigator (steps.ea@erasmusmc.nl)
Quick recall

- Multicenter, single-blind randomized controlled trial.
  - 1:1 randomization to injection with 10 mg/ml TAC (Kenacort-A 10) prior to balloon dilatation and balloon dilatation without any injection
Quick recall

- Hypothesis: ↓ formation of collagen, ↑ breakdown of collagen, ↓ fibrotic healing
  - inhibition of scar formation
  - stenosis will not recur

www.espghan.org
Quick recall

- Three main objectives:
  - Effectiveness
  - Safety
  - Cost-effectiveness
Where do we stand now?

- Grant from Sophia Foundation
  - Each center will receive €750,- per inclusion

- Inclusions N=4  Goal: N=110

- Three centers up and running, waiting for inclusions
  - Norway and France received ethical approval, starting in summer

- Still open for new participating centers if interested!
  - Contact: steps.ea@erasusmc.nl
Agenda

- Introduction: what is going on in the EA planet (ERNICA, INoEA, Covid...) (Frederic Gottrrand)
- Update on the EoE register in EA patients: current status of agreements and inclusion; preliminary results of the first 45 cases (Frederic Gottrrand, Usha Krishnan, Katialine Groff)
- Progress of Transition consensus (Usha Krishnan)
- Comparison of Balloon and Savary dilatation study: current status (Renato Tambucci)
- First results of the mucosal bridge (Matthieu Antoine)
- Announcement of the next world congress on EA in Cincinnati Oct 10-14 2022 (Mike Rutter)
- Update of the STEPS-EA trial (Anne-Fleur van Hal)
- Other project/proposal (?)