Annual Belgian Paediatric Congress

13 - 14 MARCH 2025

PREVENTION AND INNOVATIONS

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BELGISCHE VERENIGING VOOR KINDERGENEESKUNDE
SOCIÉTÉ BELGE DE PÉDIATRIE

Belgian Academy of Paediatrics

OPENING CEREMONY - 53RD ANNUAL BELGIAN PAEDIATRIC CONGRESS - MARCH 13th 2025

Ladies and gentlemen, dear colleagues, and distinguished guests,

It is an honor and a privilege to welcome you all to the 53rd Annual Belgian Paediatric Congress here in the city of Mons.

This year is truly special, as we are not only coming together to exchange knowledge and discuss the latest advancements in paediatrics but also celebrating the dawn of a new era for our profession. We gather today for the first annual meeting under the banner of the Belgian Academy of Paediatrics, a very special occasion that follows the historic unification of five national and regional paediatric societies. We look back with gratitude and much appreciation on what they have achieved and how they paved the way for the current BAoP. Like the birth of a child, this process of collaboration and growth has been months—and indeed, years—in the making, and today, we witness the fruition of that effort.

Therefore, I would like to begin this opening ceremony by acknowledging the contributions of our previous past president, Dr Marc Raes whose leadership has been instrumental in shaping the structure of our scientific working group and the program of this annual meeting, with his guidance of the national and local scientific committees.

I also would like to extend a special recognition to Dr. Ann de Guchtenaere, the current President of the BAOP, who quite literally worked nights and days to make the fusion a reality. Her unwavering dedication and tireless efforts have been crucial in the successful consolidation of our Academy.

The 3 other past Presidents of our scientific and professional societies, Dr. An Bael,

Dr. Pierre Philippet and Dr. Tijl Jonckheer worked together tirelessly to strengthen the networks within our community, ensuring that the foundations of unity are now firmly established.

It is because of their visionary leadership that we have the opportunity to continue their work in a new and dynamic phase, that will drive the future of paediatrics in Belgium.

Now, as we turn our attention to this congress, we are excited to share with you an exceptional scientific program that aligns with the central theme of "Prevention and Innovations." This theme reflects our ongoing commitment to addressing both the prevention of diseases and the continuous pursuit of cutting-edge innovations that can improve the lives of children and their families. Over the course of these two days, we will delve into critical areas such as the prevention of RSV bronchiolitis, climate change and its impact on children's health, and the latest developments in paediatric cardiology, neonatology, feeding disorders, infectious diseases, and much more.

In addition to the plenary talks, the parallel sessions will offer opportunities for deeper exploration into subspecialties such as genetic screening, paediatric endocrinology, nephrology, and paediatric pulmonology. These sessions are not just designed to update your knowledge but also to stimulate dynamic discussions, interdisciplinary collaborations, and share new ideas and insights that can shape our practices going forward.

The collaboration we are witnessing here today—across various subspecialties—further reflects the heart of what we aim to accomplish through the Belgian Academy of Paediatrics: a strong, united voice that will advocate for innovation, research, and the best possible care for our children. Just as the early milestones of a child's life set the stage for future development, this congress represents an essential step in our continued professional growth, allowing us to come together, learn from each other, and ensure that we are always advancing in our collective mission to improve paediatric care across Belgium.

As we convene today, we must also address the pressing challenges facing our profession. One of the most immediate concerns is the continuous decrease in working hours of physicians and paediatricians in training, particularly in hospitals, coupled with an emphasis on work-life balance. A profound re-evaluation of how we consume medical care in paediatrics will soon be mandatory. Given that government funding will not increase to compensate for these changes, we must collectively adopt a more responsible use of medical resources. This means prioritizing essential care, enhancing efficiency, and embracing innovative strategies. In particular, AI, artificial intelligence, is becoming a true opportunity to optimize workflows, support clinical decision-making, and reduce administrative burdens. Additionally, I believe that the role of advanced practice nurses will be crucial in bridging gaps in patient care, ensuring continuity, and alleviating the pressure on physicians. By leveraging these advancements and embracing collaborative models of care, we can maintain the highest standard of paediatric healthcare despite the evolving constraints.

On the global scene, the recent election of Donald J Trump marks another turning point in the international and Belgian medical landscape. His policies have already demonstrated a significant impact on healthcare access, funding, and international collaborations. In Belgium, we cannot remain indifferent to these shifts. We must anticipate the potential consequences of altered international policies, particularly in areas of research funding, pharmaceutical regulations, and the exchange of medical expertise. Our response must be one of vigilance and adaptation, ensuring that we safeguard the progress we have made in paediatric care.

To conclude on a much lighter note, I would like to highlight a unique cultural initiative taking place throughout this meeting: a collective painting that symbolizes our unity and creativity as a medical community. I encourage all participants to contribute to this artwork at any time, making it a shared reflection of our collaboration and dedication.

I also encourage you to visit the BAOP booth, to discover the new format of the Belgian journal of paediatrics, and to visit the booths of our sponsors. Any interaction you will have means a lot to them.

We look forward to 2 days of engaging discussions, learning, and collaboration. Together, we will continue to build upon the foundation set by the leaders before us and create a future that will benefit generations to come.

Thank you, and once again, welcome to this historic congress. Let us embrace the opportunity to learn, to collaborate, and to drive the future of paediatrics forward—together.

Prof Stéphane MONIOTTE, M.D., Ph.D.
President Belgian Paediatric Congress 2025

GENERAL PEDIATRICS

Long Oral Presentation

Short Oral Presentation

Poster Walk

NEONATOLOGY – PEDIATRIC INTENSIVE & EMERGENCY CARE

Short Oral Presentation

INFECTIOLOGY – PNEUMOLOGY – IMMUNOLGY

Long Oral Presentation

LO 2. **Phase 3 Trial Evaluating Safety, Efficacy, and Pharmacokinetics of Clesrovimab in Infants and Children at Increased Risk for Severe RSV Disease**

Heather J. Zar, Louis J. Bont, Paolo Manzoni, Flor M. Muñoz, Octavio Ramilo, Po-Yen Chen, José M. Novoa Pizarro, Gustavo A. Ordoñez, Maria Tsolia, Bruce Tapiéro, Mirta I. Acuña-Ávila, Javier M. Castellanos, Michael Meyer, Ichiro Morioka, Ziqiang Chen, Radha A. Railkar, Xiaowei Zang, Andrea L. Krick, Andrew W. Lee, Luis A. Castagnini, Anushua Sinha on behalf of the MK-1654-007 study group, Chloe Abels (presenting on behalf of authors)

University of Cape Town, Cape Town, South Africa, UMC Utrecht, Utrecht, The Netherlands; ReSViNET Foundation, Zeist, The Netherlands; Yale University, New Haven, CT, USA, University Hospital Degli Infermi, Ponderano, Italy; Univeristy of Torino, Torino, Italy, Baylor College of Medicine, Houston, TX, USA, St. Jude Children's Research Hospital, Memphis, TN, Taichung Veterans General Hospital, Taichung, Taiwan, Hospital Padre Alberto Hurtado, Santiago, Chile, Universidad Del Valle, Cali, Colombia; Clínica Imbanaco, Cali, Colombia, National and Kapodistrian University of Athens, Athens, Greece; P. and A. Kyriakou Children's Hospital, Athens, Greece, CHU Sainte-Justine, Montreal, QC, Canada, Hospital Roberto del Río, Santiago, Chile; University of Chile, Santiago, Chile, Morales Vargas Centro de Investigación, León, Mexico, Middlemore Hospital, Auckland, New Zealand, Nihon University Itabashi Hospital, Tokyo, Japan, Merck & Co., Inc., Rahway, NJ, USA, Merck & Co., Inc., Rahway, NJ, USA, Merck & Co., Inc., Rahway, NJ, USA, Merck & Co., Inc., Rahway, NJ, USA, Merck & Co., Inc., Rahway, NJ, USA; Current affiliation: Uniquity Bio, Malvern, PA, USA, Merck & Co., Inc., Rahway, NJ, USA, Merck & Co., Inc., Rahway, NJ, USA, MSD Belgium

LO 3. **Epidemiology of meningococcal disease in Belgium: overview of the last 10 years**

Stéphanie Jacquinet , Laura Cornelissen, Wesley Mattheus

Sciensano

LO 4. **A Phase 2b/3 Study to Evaluate the Efficacy and Safety of an Investigationa RSV Antibody, Clesrovimab, in Healthy Preterm and Full-Term Infants**

Heather J. Zar, Eric A.F. Simões, Shabir A. Madhi , Octavio Ramilo, Shelly D. Senders, Julie S. Shepard, Kamolwish Laoprasopwattana, Jorge Piedrahita, Jose M. Novoa Pizarro, Sergio L. Vargas, Marc Dionne, Teresa Jackowska, Enmei Liu, Yasunori Ishihara, Kazushige Ikeda, Ying Zhang, Radha A. Railkar, Jeannine Lutkiewicz, Andrew W. Lee, Andrea Guerra, Anushua Sinha, Chloé Abels (presenting on behalf of authors)

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Short Oral Presentation

SO 8. **Belgium's regional disparities in maternal vaccination coverage: do we see real-life impact in infant pertussis cases?**

Ilse Peeters, Naïma Hammami, Caroline Boulouffe, Adrae Taame, Laura Cornelissen

Sciensano, Departement Zorg, Agence Wallonne pour une vie de qualité, Vivalis

SO 9. **Small airway remodeling and associated vascular remodeling in congenital airway diseases**

Astrid Vermaut, Lieven Dupont, Bart Vanaudenaerde, François Vermeulen, Marijke Proesmans, Naftali Kaminski, Dirk Van Raemdonck, Laurens Ceulemans, Laurent Godinas, Lise Vanvuchelen, Birgit Weynand, Mieke Boon

Laboratory of Respiratory Diseases and Thoracic Surgery (BREATHE), Department CHROMETA, KULeuven, Woman & Child, Department Developement & Regeneration, KULeuven, Department of Pediatrics, UZ Leuven, Department of Pneumology, UZ Leuven, Department of Thoracic Surgery, UZ Leuven, Kaminski Lab, School of Medicine, Yale

Poster Walk

GASTROENTEROLOGY – NUTRITION

Short Oral Presentation

SO 13. **Evaluation of transcutaneous interferential electrical stimulation in the treatment of chronic constipation in children: a pilot study**
dr. Van Gool Hannelore, mevr. Baert Elien, mevr. Geraerts Inge, prof. dr. Miserez Marc, prof. dr. Van Hoeve Karen, prof. dr. Hoffman Ilse
UZ Leuven

SO 14. **Efficacy and safety of multiple switching from infliximab originator to different biosimilars in pediatric patients with inflammatory bowel disease**
Sofie De Groote , Karen van Hoeve, Ilse Hoffman
University Hospitals Leuven

SO 15. **Health insurance Convention for Severe Pediatric Feeding Disorder: A 15-Year Review of Multidisciplinary Follow-up for Children with Enteral Nutrition**
Manuelle De Moor, Dominique Hermans, Elisabeth De Greef, Ilse Hoffman, Elke Janssens, Pauline De Bruyne, Olivia Bauraind, Catherine Wanty, Laurence Muyshont, Corinne De Laet
Cliniques universitaires St-Luc, UZBrussel, UZLeuven, JessaZH, UZGent, CHCMontlegia, GHdC, CHUCHarleroi, Huderf

SO 16. **Assessment of the quality of life in pediatric patients with eosinophilic esophagitis**
EL YAAKOUBI Farah, NGUYEN Julie, SALAME Assaad, ILIADIS Eleni, BONTEMS Patrick, KOTILEA Kallirroi
Universitaire Libre de Bruxelles, Pediatric Gastroenterology, Hopital Universitaire des Enfants Reine Fabiola. Hopital Assessment of the quality of life in pediatric patients with eosinophilic esophagitis.

Poster Walk

PW 16. **Reinfection rates after H. pylori eradication treatment during childhood. Interim analysis.**
Sami Boukerrou, Edmee Delmotte, Patrick Bontems, Julie Nguyen, Eleni Iliadis, Assaad Salame, Anne-Sophie Hambye, Kallirroi Kotilea
Pediatric Gastroenterology, Hopital Universitaire des Enfants Reine Fabiola, Hopital Universitaire de Bruxelles, Brussels, Belgium, Nuclear Medicine, CHU Brugmann, Brussels, Belgium.

PW 17. **A survey on attitudes and knowledge on gastrostomies among caregivers of children with cerebral palsy at two belgian hospitals**
Liesbet Verbrugghe, UZ Brussel, Vrije Universiteit Brussel (VUB), Belgium, Raquel Van den Eynde, UZ Brussel, Vrije Universiteit Brussel (VUB), Belgium, An-Sofie Lemmens, Ziekenhuis Oost-Limburg (ZOL), UZ Brussel, Vrije Universiteit Brussel (VUB), Belgium, Ziekenhuis Oost-Limburg (ZOL), UZ Brussel, Vrije Universiteit Brussel (VUB), Belgium
UZ Brussel, Vrije Universiteit Brussel (VUB), Ziekenhuis Oost-Limburg (ZOL), Genk

PW 18. **Congenital portosystemic shunt, a possibly neglected vascular malformation with potential severe short/long-term complications: about two cases.**
Kallirroi Kotilea, Viola B. Weeda, Vanessa Guy-Viterbo, Heloise Lerisson, Patrick Bontems, Pierre Lingier, Raymond Reding
Hopital Universitaire des Enfants Reine Fabiola, Brussels, Belgium

PW 19. **Unexpected cause of rectal bleeding in a 14-year-old boy**
Valentine Nguyen, Angelique Lhomme, Lisa D'Angelo, Viviana Fridman, Sylvie Martus, Martine Demarche, Emeline Bequet
University of Liège, University Hospital of Liège, Hospital Citadelle, Liège

ONCOLOGY – HEMATOLOGY

Long Oral Presentation

LO 5. **Outcome of Belgian children and adolescents with primary AML treated with the consecutive international protocols DB AML-01 and NOPHO-DBH AML 2012**
Zoë Casier (1), Laurens Van Camp (1), Zhiyao Ren (1,2), An Van Damme (3), Laurence Dedeken (4), Jutte van der Werff ten Bosch (5), Pierre Philippet (6), Marie-Françoise Dresse (7), Tim Lammens (1,2), Anne Uyttebroeck (8), Barbara De Moerloose (1,2)
(1) Ghent University Hospital, Belgium, (2) Cancer Research Institute Ghent, Belgium, (3) University Hospital Saint-Luc, Brussels, Belgium, (4) Hôpital Universitaire des Enfants Reine Fabiola, Brussels, Belgium, (5) Universitair Ziekenhuis Brussel, Belgium, (6) Clinique MontLégia, CHC Liège, Belgium, (7) CHU de Liège - site Citadelle, Belgium, (8) University Hospital Gasthuisberg, Leuven, Belgium

LO 6. **Single-cell DNA and Surface Protein Characterization of High Hyperdiploid Acute Lymphoblastic Leukemia at Diagnosis and During Treatment**
Margo Aertgeerts, Sarah Meyers, Olga Gielen, Jochen Lamote, Barbara Dewaele, Mercedeh Tajdar, Johan Maertens, Jolien De Bie, Kim De Keersmaecker, Nancy Boeckx, Lucienne Michaux, Anne Uyttebroeck, Sofie Demeyer, Heidi Segers, Jan Cools
KU Leuven, VIB, UZ Leuven

Short Oral Presentation

SO 17. **Postoperative pediatric cerebellar mutism syndrome (pCMS) in children with a posterior fossa tumor - retrospective analysis at UZ Ghent**
Frances Claus, Leen Willems
UZ Gent

SO 18. **Rebuilding Immunity: Decoding Paediatric Stem Cell Transplant Recovery**
Heleen Vandenwyngaert, Marthe Vanwinsen, Victoria Bordon

Poster Walk

PW 20. **Atypical Atypicals**
Dries Ruttens, Heidi Segers, Brigitte Adams
UZ Leuven

PW 21. **Plastic Bronchitis Associated with Acute Chest Syndrome in Sickle Cell Disease**
Laurine Steurbaut, Marjolein Willemsen, Linde Peeters, Jasmina Krikilion
UZ Brussel

PW 22. **The double-edged sword of immunosuppression: post-transplant malignancies after kidney transplantation in an 11-year-old boy.**
Messiaen Julie , Segers Heidi, Mekahli Djalila, Labarque Veerle, Jacobs Sandra, Renard Marleen, Böckenhauer Detlef, Uyttebroeck Anne, Adams Brigitte

NEUROLOGY – GENETICS – NEUROORTHOPEDICS

Short Oral Presentation

SO 19. **Filamin C associated cardiomyopathy in pediatric patients: a Belgian case series and literature review**
Wannes Renders, Evelien Cansse, Luc Bruyndonckx, Thomas Salaets, Bert Callewaert, Katya De Groote, Laura Muiño Mosquera
University hospital Ghent, University hospital Antwerp, University hospital Leuven

Poster Walk

PW 23. **Subacute encephalopathy with increased CSF lactate revealing chronic laughing gas abuse**
Clémentine Delporte, Stefano Del Re, Michela Bisciglia, Céline Roman, Chloé Joris, Christophe Fricx, Claudine Sculier, Tom Balfroid, Aurélie Empain, Alec Aeby
Hôpital Universitaire de Bruxelles, Université Libre de Bruxelles, Brussels, Belgium

PW 24. **Walking speed during daily living, a clinical endpoint for neuromuscular diseases?**
Tychon Cyril, Poleur Margaux, Servais Laurent
Reference Center for Neuromuscular Diseases, University of Liège, MDUK Neuromuscular Centre, University of Oxford

PW 25. **A case of tay-sachs disease**
Tessa Wassenberg, Berthold Aman
CHU Saint-Pierre

PW 26. **A rare case of severe automutilation in an infant**
Johan Marchand , Alexander Gheldof, Nathalie Smeets, Tessa Wassenberg
Uz Brussel, Kidz Health Castle

CARDIOLOGY

Long Oral Presentation

LO 7. **Genetic background of patients with childhood-onset cardiomyopathy: results from a retrospective cohort study**
Wannes Renders, Evelien Cansse , Max Bascialli, Jozeph Panzer, Hans De Wilde, Kristof Van de Kerckhove, Bert Callewaert, Arnaud Van Lander, Katya De Groote, Daniel De Wolf, Laura Muiño Mosquera
University hospital Ghent, University Ghent

LO 8. **Risk factors for reintervention in children with subaortic stenosis: a 20-year single-center experience.**
Jelena Hubrechts, Alessandra Zanfardino, Alain Poncelet
University Hospital Saint-Luc, Brussels, Belgium

LO 9. **Impaired Cardiopulmonary Fitness in Marfan Syndrome: The Need for Customized Exercise Guidelines**
Tanhé Danneels, Laure Van Mullem, Simon D'hulst, Wendy Dewals, Ilse Coomans, Kristof Vandekerckhove, Laura Muiño Mosquera
Ghent University, Ghent, Belgium, Ghent University Hospital, Ghent, Belgium

Short Oral Presentation

SO 20. **Evaluation of cardiopulmonary exercise testing in children with overweight and obesity: is there a need for tailored protocols and advice?**
Maarten Buytaert, Ilse Coomans, Sander Lefere, Ruth De Bruyne, Kristof Vandekerckhove
Ghent University, Ghent University Hospital

Poster Walk

PW 27. **Late but acute complication of percutaneous ASD closure**
S. Lommaert, J. Van Huffel, A. Poncelet, C. Vô, C. Barrea
Cliniques Universitaires Saint-Luc, Brussels, Belgium

NEPHROLOGY

Long Oral Presentation

LO 10. **A mutant zebrafish model in the search for new therapies for childhood chronic kidney disease**
Van Wesemael P, De Velder J, Glorieux G, Lobbestael S, Horvat M, Sips P, Snauwaert E
Ghent University, UZ Gent

LO 11. **Insulin Resistance in Young Patients with Autosomal Dominant Polycystic Kidney Disease**
Olil Van Reeth (1,2), Inès Vanderheyden (3), Jean-Paul Decuypere (2), Rudi Vennekens (2), Peter Janssens (4), François Jouret (3), Djalila Mekahli (1,2)
(1) University Hospital of Leuven, Leuven, Belgium, (2) KU Leuven, Leuven, Belgium, (3) University Hospital of Liège, Liège, Belgium, (4) University Hospital of Brussels, Brussels, Belgium

Poster Walk

PW 28. **Kidney Replacement Therapy in a 15 year old boy with ADPKD and multiple disabilities: clinical case description and discussion of the ethical dilemma**
Lore Willem (1), Ari Van Hulle (1), Katleen Ballon (2), Detlef Böckenhauer (1), Bert Bammens (3), Diethard Monbaliu (4), Brigitte Adams (1), Koen Luyckx (5), Djalila Mekahli (1)
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PW 29. **A qualitative study on the parental perspectives of children with nocturnal enuresis.**
Laura Noppe, Stephanie De Rechter
Department of Development and Regeneration - Department of Pediatrics, KU Leuven, Heilig Hart Ziekenhuis, Leuven

ENDOCRINOLOGY

Long Oral Presentation

LO 12. **Phenotypic and genotypic characterization and long-term follow-up of patients with resistance to thyroid hormone: a retrospective multicentric cohort**
Tessa Van der Auwera, Anne Rochtus, Brigitte Decallonne, Jeroen Breckpot, David Unuane, Elise Nauwynck, Paul Van Crombrugge
UZ Leuven, UZ Brussel , OLVZ Aalst

Poster Walk

PW 30. **Endocrine sequelae after pediatric craniopharyngioma treatment: a single-center retrospective cohort study**
Marie Papy, Anne Rochtus, Sandra Jacobs
KU Leuven

PW 31. **Infectious causes of hypopituitarism in children: a systematic review**
Graziella Graaf, Anne Rochtus
Faculty of Medicine, KU Leuven, Leuven, Belgium., University Hospitals Leuven, Leuven, Belgium.

PW 32. **Unveiling HDR Syndrome in a 4-Year-Old Boy with Hypocalcemic Convulsions**
Astrid De Wolf, Elise Nauwynck, Nathalie Vanden Eynde, Elise Vantroys, Thomy de Ravel, Ina Foulon, Jean De Schepper, Inge Gies
Universitair Ziekenhuis Brussel

PW 33. **Iatrogenic neonatal hyperphosphatemia due to phosphate-containing enema: a case report**
Elise Nauwynck, Jesse Vanbesien, Willem Staels, Inge Gies, Céline De Cuyper, Koen Huysentruyt, Reiner Mauel, Jean De Schepper
UZ Brussel, UZ Brussel, UZ Brussel, UZ Brussel, UZ Brussel, UZ Brussel, UZ Brussel, UZ Brussel

PW 34. **Hypopituitarism due to Optic Nerve Hypoplasia Syndrome: A Comparison of Two Cases with Distinct Phenotypic Expressions**
Schynts S., University of Liège, Belgium, Gernay C., CHU Liège, Belgium
University of Liège, CHU Liège

PW 35. **Familial male-limited precocious puberty due to a mutation in the LHCGR gene**
Lina KOZANITI, Anne-Simone PARENT, Julie FUDVOYE
CHU de Liège

OTHER

Poster Walk

PW 36. **Beyond the transplant: shedding light on post-transplant metabolic syndrome in pediatric liver recipients**
Maarten Buytaert, Eline Braekman, Kaat Van Overbeke, Agnieszka Prytula, Kathleen De Waele, Kristof Vandekerckhove, Sander Lefere, Ruth De Bruyne
Ghent University, Ghent University Hospital

PW 37. **Naso-Alveolar Molding in Cleft Lip and Palate Management**
Alexander Gerdom, Bastien Camiola, Elin Malek Abrahimians
Cliniques Universitaires Saint-Luc, Bruxelles

PW 39. **Glycogen storage disease type Ib: late diagnosis**
Bianca Langer, Corinne De Laet
Université Libre de Bruxelles, Hôpital Universitaire des Enfants Reine Fabiola

LO 1.

Current Practices and Attitudes of Physicians Regarding Palliative Sedation in Children in Belgium: A National Survey Study.

Yoni Aelvoet, Barbara De Moerloose, Sara Debulpaep, Els Vandecruys, Linde Goossens, Erna Michiels, Laure Dombrecht, Kim Beernaert

Ghent University Hospital, UGent (Ghent University), VUB (University of Brussels), Prinses Maxima Center Utrecht

Background:
Pediatric palliative sedation (PPS) is used to alleviate refractory symptoms in terminally ill minors when conventional treatments fail, but its use raises ethical, legal and practical concerns, and data on this topic are limited. This study is the first to explore current practices, attitudes and decision-making processes of physicians regarding PPS in Belgium.

Methods:
A national, multicenter cross-sectional survey was conducted among 127 physicians with recent experience in end-of-life care (EOLC) for children aged 0-18 years, 100 of whom had already used PPS. Participants were recruited between 06/11/'23 and 22/12/'23 via professional associations, liaison teams and expert networks. The online questionnaire included 48 questions addressing current practices, opinions, sociodemographics and case scenarios.

Results:
Alleviating the child's suffering is the primary goal (97%) for physicians when initiating PPS. However, 32% indicated complete reduction of consciousness as a commonly pursued goal, with half of the physicians acknowledging that hastening death influenced their decision-making. Decisions were almost always made in consultation with parents (96%), but only 72.7% involved the child deemed competent. Midazolam (93.8%) was the most commonly used drug, often combined with morphine (72.2%). Nearly one in five physicians (18.2%) would decide to initiate PPS by using single-agent opioid therapy. Discontinuation of artificial hydration and/or nutrition is carried out by only 45.2% and 63.5% of physicians due to ethical concerns. Although gasping is not considered suffering, physicians requested intensification of PPS with 67.8% escalating the dose and 42.6% initiating adjunctive medication, presumably to alleviate parental and caregiver distress. More experienced physicians were significantly ($p<0.05$) more likely to adhere to recommendations and best practices for PPS.

Conclusion:
Our findings suggest that physicians tend towards deeper sedation than strictly necessary and that PPS may be used under the guise of hastening death, which raises ethical and legal concerns. In contrast to recommendations, significantly more less-experienced physicians would initiate PPS with single-agent opioid therapy and remain hesitant to discontinue fluids and nutrition. This study highlights the need for standardized guidelines, education on best practices for physicians who may encounter PPS and an improved ethical and legal framework in pediatric EOLC.

SO 1.

A survey to investigate the knowledge of clinical signs of child abuse among preschool and primary school teachers.

Axelle Van Orshoven , David De Coninck

Department of Development and Regeneration - Department of Pediatrics - KU Leuven, Faculty of Sociology - KU Leuven

Background:
Child abuse and neglect are critical global health issues with far-reaching physical, psychological, and social consequences. Teachers are uniquely positioned to identify signs of abuse due to their daily interactions with children. However, limited knowledge and training often impede effective identification and reporting of abuse. This study assesses the knowledge of preschool and primary school teachers in Flanders, Belgium, regarding the clinical signs of child abuse and neglect and explores the socio-demographic factors influencing this knowledge.

Methods:
A prospective study was conducted using an online survey comprising 16 hypothetical cases and a sociodemographic questionnaire. The cases, validated by pediatric and forensic experts, included both suggestive and non-suggestive scenarios of child abuse and neglect. Participants rated their level of suspicion using a Likert scale. Statistical analysis explored the relationship between socio-demographic factors and participants' ability to correctly identify cases.

Results:
A total of 155 completed surveys were analyzed. Participants achieved a median accuracy of 75% overall, performing better on suggestive cases (87.5%) than on non-suggestive cases (62.5%). Sensitivity in identifying abuse was higher than specificity, with significant variability observed in non-suggestive case results. Prior training did not significantly improve scores, likely due to the superficial nature of existing training programs. Years of experience and prior exposure to suspected abuse cases also showed no significant correlation with performance.

Conclusion:
While teachers demonstrated reasonable knowledge of child abuse and neglect, gaps remain, particularly in recognizing non-suggestive cases and distinguishing abuse from mimickers. Comprehensive, high-quality training focusing on diverse abuse presentations and mimickers is essential. Further research is needed to evaluate the impact of standardized training programs on improving teachers' ability to detect and report child abuse and neglect effectively.

SO 2.

The Burden of RSV Amongst Hospitalized Infants in Belgium

Marijke Proesmans, Heidi Schabaillie, Carolin Van Rossem, Hans Feys, Jonas Dewulf, Kate Sauer, Oliver Martyn, Linda Vercammen, Hervé Akpo, Linda Ludikhuyze, Marc Raes

University Hospital Leuven, Ghent University Hospital, ZAS, Antwerp, Jan Yperman Hospital, Ieper, AZ Groeninge Hospital, Kortrijk, Sint-Jan Hospital, Brugge, Sanofi Denmark, Sanofi Belgium, IQVIA, IQVIA, Jessa Hospital, Hasselt.

Aims:
The aim of the BELRES (Belgian Respiratory Syncytial Virus) study was to collect information on the burden of disease associated with respiratory syncytial virus (RSV) and other respiratory related infections amongst infants<2years old in hospital setting in Belgium.

Methods:
This study was a retrospective hospital database study, including infants until the age of 2, admitted in hospital with RSV or other respiratory infection in the study period, spanning from 1st of October 2016 until 31st of March 2021. Data extracted included demographic and clinical characteristics, healthcare resource use (HCRU) including admission to intensive care unit (ICU), complications and mortality. Disease incidence rates were estimated using hospital catchment area as denominators.

Results:
During the study, 3454 RSV hospitalizations and 8364 non-RSV acute respiratory infection (ARI) hospitalizations were identified from 7 Flemish hospitals. Of the RSV hospitalizations, 2104 (84.1%) occurred in infants <12 months, of these 1256 (43.3%) were born outside the typical RSV season. The majority were born at term and without any of the per protocol selected comorbidities (n=3138, 90.9%). The average length of stay (LOS) and standard deviation (SD) of RSV hospitalization was 5.7 (5.9) days. Admission to ICU was required in 14.8% of the hospitalizations (n=521) and 3.3% (n=113) needed mechanical ventilation. Rehospitalization occurred in 12.6% (n=435) of the cases and in-hospital mortality during index hospitalization was very rare (n=3, 0.1%). Overall, the estimated incidence of hospitalization for RSV was 18.5 per 1000 per year.

Conclusion:
To our knowledge, this is one of the most comprehensive studies of the hospital burden of RSV or bronchiolitis in Belgian infants. Our results confirm a substantial burden of RSV amongst hospitalized infants in Belgium, primarily in otherwise healthy infants born at term.

This study was funded by Sanofi and AstraZeneca

SO 3.

Parental perspectives on Sexual Health Education for Adolescents: a qualitative study.

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Background:
Sexual health education (SHE) is an essential part of adolescent development and public health, helping young people understand methods of safe and informed sexual behavior. Parental concerns regarding the content and/or approach to SHE continue to be one of the major barriers to providing effective SHE. This study explores parents' perspectives on SHE for adolescents in mainstream secondary schools in Flanders, Belgium: their concerns, views and expectations regarding its delivery at school and/or at home.

Methods:
A qualitative design was adopted. Semi-structured interviews were conducted with 21 mothers of adolescents aged 12-18 years from secondary schools in Flanders. Participants were recruited from schools that were randomly selected and contacted via email invitations, and the interviews were thematically analyzed using the Qualitative Analysis Guide of Leuven (QUAGOL) and the methodology described by Corbin and Strauss.

Results:
Four main themes emerged from the analysis: school, home, society and peers. Participants valued school based SHE for the purpose of giving factual knowledge, for instance, contraception and disease prevention, but felt discussions on intimacy, boundaries, and cultural sensitivity were more appropriate to be carried out at home. Media and peer influences were recognized as strong forces in shaping adolescents' sexual development and health. The participants suggested an earlier introduction of SHE, with ongoing engagement throughout adolescence, and a stronger alliance between schools and families. Other priorities identified included professional expertise in SHE delivery and content that reflects societal diversity.

Conclusion:
The findings emphasize that there is a need for an approach to SHE that must balance factual, technical knowledge with discussions on personal values and cultural sensitivities. Involvement of parents in the development of the curriculum, addressing educational, religious and cultural needs, will help make the SHE programs more effective, meeting public health objectives while preserving family values and societal diversity.

SO 4.

COVID-19 Lockdown and Its Effects on Pediatric Oral Ingestions with Toxic Substances: A Retrospective Study of the Belgian Poison Center Reports

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Background:
The COVID-19 lockdown led to significant changes in household behaviors, including an increase in the use of disinfectants, hand sanitizers, and cleaning agents. These changes may have raised the risk of pediatric intoxications. This study examines the impact of lockdown measures on the incidence of oral toxic exposures in children reported to the Belgian Poison Center.

Methods:
A retrospective analysis was conducted of all pediatric cases of oral ingestion with hand sanitizers, bleach, detergents, or medicines reported to the Belgian Poison Center during the first lockdown (March 1–May 31, 2020) and compared to data from the same period in 2019, 2021, and 2022. Descriptive and comparative statistical analyses were performed to evaluate the frequency, characteristics, and trends in exposure cases.

Results:
A total of 2591 pediatric ingestion cases were reported during the lockdown in 2020, compared to 2657, 2406, and 2644 cases in 2019, 2021, and 2022, respectively. In 2020, the number of calls related to hand sanitizers increased by 329% compared to 2019, with continued elevated numbers in the following years. Bleach and detergent exposure cases also increased by 163% and 30%, respectively, while cases involving human medicines decreased by 20%. Most cases involved young children, with those under six years consistently accounting for over 75% of exposures throughout the study period. During the lockdown, children aged 2–6 years were significantly overrepresented, while adolescent cases were underrepresented. Exposure cases from educational institutions and hospitals decreased and were significantly underrepresented. Referrals to emergency departments decreased slightly during the lockdown, with non-referrals increasing correspondingly.

Conclusion:
The COVID-19 lockdown period saw a marked increase in pediatric exposure to household chemicals and hand sanitizers, highlighting the unintended consequences of public health measures on child safety. These findings underscore the need for targeted public health interventions, including public awareness campaigns and stricter product safety regulations, to mitigate the risk of pediatric poisoning during future public health emergencies.

SO 5.

Influence of parents or peers in medical decision-making during adolescence.

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Background:
Adolescents face unique challenges in medical decision-making due to the interplay of cognitive, emotional, and social developmental factors. Parental advice, traditionally dominant in such decisions, gradually gives way to peer influence as adolescents seek autonomy from their parents. Understanding these dynamics is essential for physicians as they are the gatekeepers of the shared decision-making process that promotes informed and confident healthcare choices.

Methods:
A qualitative study design was used, involving semi-structured interviews with 18 adolescents aged 18 years. Participants discussed hypothetical medical scenarios involving parental and peer influence. The interviews were analyzed using inductive thematic analysis to identify patterns and themes influencing adolescent decision-making. Inclusion criteria ensured normal impulsivity levels and the absence of chronic conditions, verified using the BIS-11 Barratt Impulsiveness Scale.

Results:
Adolescents reported valuing parental input for major and complex decisions due to life experience and emotional support. However, they turned to peers for decisions related to appearance, taboo topics, and social issues, citing relatability and shared experiences. Peer advice, though influential, sometimes introduced pressure to conform. Trust in physicians' expertise emerged as a key factor in decisions. The interplay of advice from parents, peers, and physicians varied based on the decision's complexity and context, with consistent advice from both parents and peers perceived as more credible.

Conclusion:
Adolescents navigate medical decisions by integrating parental, peer, and physician input. While parents provide stability and experience, peers offer relatability and understanding, particularly on socially sensitive issues. Physicians remain trusted sources of medical expertise. Recognizing these dynamics can improve shared decision-making practices, supporting adolescents in making informed healthcare choices.

SO 6.

Decision-Making Capacity in Adolescents with Type 1 Diabetes: Perspectives of Adolescents and Parents

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Background/Aims:
Adolescents with type 1 diabetes (T1D) face complex challenges in managing their health. We explored how these adolescents and their parents perceive their evolving decision-making capacity in the context of medical decision-making. The aim of this study is to examine the factors that shape that capacity in adolescents with chronic disease and the contribution doctors are expected to make in this process. Although research on this topic has been growing the last decade, few studies have used qualitative semi-structured interviews to identify the specific preferences of families dealing with chronic illness. Furthermore, our findings were measured against the WHO Algorithm of Autonomous Decision-Making in Adolecsents.

Methods:
A qualitative study was conducted through semi-structured interviews with 10 families, each having one adolescent diagnosed with T1D. The interview questions focused on decision-making capacity, autonomy, privacy and the role of physicians. Interviews were auto- and video-recorded and transcribed verbatim. Independent and controlled coding of the transcripts was conducted to identify key patterns.

Results:
Both adolescents and parents view responsibility as a key component of decision-making capacity. They both express a preference for parents to maintain decision-making authority in life-threatening situations. In contrast to the WHO algorithm on autonomous decision making in adolescents, our study population emphasizes that doctors are in no good position to evaluate the decision-making-capacity of the teenager. This should be done by a multidisciplinary team including parents, teachers and other caregivers who have a broader understanding of the child's daily functioning. The study also highlights the dual impact of a chronic illness on the maturation process.

Conclusion:
In this study, adolescents with T1D and their parents suggest that decision-making capacity is not solely determined by age but by a combination of responsibility, emotional readiness, family dynamics and the specific health context. This study is the first to demonstrate that parents and adolescents with a chronic illness do not consider the physician to be the appropriate person to decide on the adolescent's decision-making-capacity. This finding challenges the well-established triad of shared decision-making. Further research is needed to develop guidelines for practitioners that take these new findings into account.

PW 1.

Navigating Legal and Practical Challenges: Pediatricians' Perspectives on the Role of Stepparents in Medical Decision-Making.

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Background:
The increasing diversity in family structures presents a significant challenge for pediatricians in managing the involvement of stepparents in medical decision-making. This study explores pediatricians' perspectives on the legal and practical aspects of integrating stepparents into the clinical decision-making process.

Methods:
A qualitative design was employed, utilizing semi-structured interviews. 32 pediatricians from across Flanders were voluntarily recruited and interviewed in 6 panels. Data were analyzed using open, axial, and selective coding techniques to identify recurring themes and influential factors in the inclusion of stepparents in medical decisions.

Results:
The decision to involve stepparents was primarily influenced by the medical context, situational factors, and the perceived vulnerability of the involved parties. While medical information was frequently shared with stepparents, decisions regarding significant medical interventions, such as surgery or medication, often involved consultation with biological parents. Trust and the stepparent's perceived involvement in the child's life were identified as pivotal factors shaping decision-making. Furthermore, the study highlighted the vulnerability of pediatricians who engage stepparents in decision-making without clear legal authorization. Pediatricians demonstrated limited awareness of the legal status of stepparents, with most relying on pragmatic, context-dependent approaches rather than formal legal frameworks. The overarching theme emphasized the tension between adhering to legal constraints and prioritizing a patient-centered, pragmatic approach.

Conclusions:
Pediatricians experience a complex legal-practical dilemma when dealing with stepparents in medical decisions. These findings underscore the necessity for clearer guidelines concerning the roles of stepparents and stepchildren, as well as for the physicians involved. Addressing these uncertainties can enable pediatricians to act in the best interest of the child while ensuring adherence to legal and ethical standards.

PW 2.

Incontinentia Pigmenti and the importance of early diagnosis and management

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Hôpital Delta Chirec , Hopital des enfants Reine Fabiola , Hopital Erasme

Background:
Incontinentia pigmenti (IP) (OMIM 308300) is an ectodermal dysplasia with X-linked dominant inheritance, most commonly caused by pathogenic variant in the IKBKG gene, often involving a deletion of exons 4 to 10. This rare disease (prevalence 1.2/100,000) predominantly affects females, as pathogenic mutations are generally lethal in males, except in cases of mosaicism or in XXY patients. The IKBKG gene, also known as NEMO (NF-κB Essential Modulator) gene, is located on Xq28. It plays a key role in several cellular signaling pathways, particularly NF-κB, which is involved in immune response, inflammation, and apoptosis. It also regulates the development of ectodermal tissue and DNA repair.

Cutaneous manifestations of IP are characteristic and evolve through different stages (erythema followed by vesicules, verrucous, hyperpigmentation, hypopigmentation in a Blaschko-linear distribution), dental anomalies, hair and nail defects, with risk of retinal and neurological complications. Multidisciplinary care is essential.

Methods:
We report the case of a 12-day-old girl admitted for worsening vesiculo-crusty eruption. Despite initial treatment with chlorhexidine and fusidic acid (with transient improvement), she developed a linear vesiculopapular rash with yellowish crusts on the calves and the right forearm, without fever or other symptoms. Differential diagnoses included bullous impetigo or viral infection. Biological workup was performed, and intravenous flucloxacillin therapy was initiated.

Results:
Biological investigations showed no inflammation, with negative bacterial and viral smear. The typical mapping of these lesions following Blaschko's lines pointed to IP diagnosis. Molecular analysis revealed a deletion of exons 4 to 10 in the IKBKG gene. Ophthalmological evaluation demonstrated retinal lesions requiring laser photocoagulation, while neurological examinations were normal. A multidisciplinary approach was adopted, with close dermatological monitoring of skin lesions, ophthalmological follow-up to prevent retinal detachment, and a scheduled neuropediatric evaluation.

Conclusion:
IP is a rare multisystem genodermatosis, where the recognition of Blaschko-linear dermatological lesions, present from the first days of life, is essential to avoid missing potential ophthalmological and neurological complications. Early diagnosis is crucial for initiating a multidisciplinary approach. Coordination between dermatologists, ophthalmologists, and neuro

PW 3.

COCCOS: A feasibility study of a transition program for young persons with chronic conditions in a multicentric setting.

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Background:
During adolescence, adolescents and young adults (AYAs) with chronic conditions are expected to transfer from pediatric care towards adult care services. However, up to 40% of AYAs experience a disruption in care during transfer. The implementation of a transition program is recommended, comprising an adequate preparation and guidance of AYAs in their journey towards adult care, to prevent deterioration of health. Though empirical data supports the clinical effectiveness of transition programs, sustainability of these programs lack as they are hard to stay integrated as long-term care pathways in hospitals. This study comprises a feasibility study to examine the preliminary impact of a co-created transition program.

Methods:
The transition program will be implemented in a multicentric quasi-experimental, pre-test post-test design. A total of 120 participants (ncondition=40) will be recruited and appointed to the control and intervention group. Eligibility criteria are AYAs (17 years old, diagnosed with type 1 diabetes, asthma, and/or obesity) with a planned transfer ≤12 months to adult care, and ≤1 outpatient visit planned in the future or documented in the past. In terms of clinical effectiveness, transition readiness was selected as primary outcome. Secondary outcomes will be empowerment, therapy adherence, quality of life, anxiety and depression. Data collection will occur at three time points (i.e., baseline, moment of transfer, at the 3 month post-transfer mark). In terms of process evaluation, the following set of indicators will be collected throughout the intervention period: fidelity, dose (delivered, received), reach, recruitment, and context. Cost-effectiveness analysis will be performed using Markov modelling.

Results:
Ethics approval has been granted in November 2024. Recruitment and data collection will start in January 2025 and is expected to be completed in July 2026.

Conclusion:
Advancing transitional care is essential for tackling negative health outcomes in healthcare transition. Current study protocol aims to examine the impact of a newly-developed transition program in AYAs with chronic conditions through a feasibility study, focusing on clinical outcomes, process indicators, and cost effectiveness.

PW 4.

Lyme neuroborreliosis revealing MRI enhancement of multiple cranial nerves in a 13-year-old boy with peripheral facial palsy as the only clinical sign

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Background:
Lyme borreliosis is an infectious disease caused by the spirochete Borrelia burgdorferi and is transmitted by a tick bite. Lyme Neuroborreliosis (LNB) is a form of disseminated Lyme disease and can be subdivided in early (before six months) and late (continuous nerve system infection). LNB can cause a variety of symptoms. In children it often presents with an acute facial palsy or lymphocytic meningitis.

Case presentation:
A 13-year-old boy presented to the Emergency Department complaining of severe progressively worsening headache since several weeks following a traumatic impact to his right temple. This resulted in impaired academic performance and general malaise. Upon admission, the patient reported incomplete right eye lid closure and drooping of the right corner of his mouth, both of which had developed within the past day. There were no concussion-related symptoms (e.g., nausea, vomiting or behavioral changes). Two months prior to the onset of symptoms, the patient visited a wooded area, though there was no documented tick bite nor signs indicative of Lyme disease.

Physical examination revealed a right-sided peripheral facial palsy (House-Brackman Grade II). The remainder of the clinical and neurological examination was unremarkable.

An MRI was performed and revealed enhancement of multiple cranial nerves. Since our patient showed no other clinical signs of polyneuropathy besides the cranial nerve (CN) VII palsy further workup eliminating other causes was done. Blood analysis, abdominal ultrasound and chest X-ray yielded no abnormalities. A diagnosis of late-stage LNB was confirmed based on the detection of Borrelia-specific antibodies in both serum and cerebrospinal fluid.

The patient was treated with a 14-day course of intravenous third generation cephalosporines. At follow-up two weeks post-treatment symptoms had resolved, academic activities were resumed and the facial palsy had improved. A follow-up MRI and clinical evaluation are planned in three months.

Conclusion:
This case report shows that Lyme neuroborreliosis can involve multiple cranial nerves presenting with a peripheral facial palsy, which may be the first sign of late-stage LNB and can develop months after the initial infection. In a patient presenting with CN VII palsy and other atypical symptoms such as malaise, headache and poor scholastic performance one should consider multiple cranial neuropathy. An MRI can be a useful diagnostic tool in further workup.

PW 5.

Culture-sensitive care in adolescent medical decision making: a qualitative study of parents with a Muslim background.

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Background:
Multiculturalism is omnipresent in contemporary society and prominently reflected in the healthcare sector. It is an intrinsic aspect intertwined with various domains, whose presence can no longer be overlooked. This raises the question of the extent to which other cultures and religions manifest themselves within Western society, particularly in healthcare. Due to its increasing visibility, rich diversity, and growing relevance, this study focuses on Islam. The objective is to examine how Islamic culture and religion influence the medical decision-making of adolescents with a Muslim background. In doing so, the study aims to provide insights into how Belgian healthcare can become more culturally sensitive, not only for adults but also for adolescents.

Methods:
A qualitative study was conducted involving 17 parents of adolescents with a Muslim background, using semi-structured interviews. Participation was voluntary, and audio recordings of the interviews were made to facilitate transcription. The resulting transcripts were independently coded to ensure a comprehensive and informed interpretation of the diverse perspectives within the dataset.

Results:
The study identified three primary areas of tension. The first pertains to the interaction between religion and healthcare. The second involves the balance between adolescent autonomy and parental influence. Finally, intergenerational differences were also highlighted.

Conclusion:
The findings of this study indicate a varying degree of influence exerted by culture and religion on the medical decision-making rights of adolescents and healthcare practices in general. However, factors such as intergenerational differences, upbringing, social context, the perspective and attitude of healthcare providers, and societal acceptance and adaptation also play a crucial role. While progress has been made towards culturally sensitive care, significant gaps remain. Further research involving other stakeholders in these interactions is essential.

PW 6.

A qualitative study on Flemish primary school teachers' perspective on ADHD behaviour in the school context.

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Background:
Pupils with ADHD often exhibit lower academic performance compared to their peers. However, limited research is available on the specific impact of a pupil with ADHD on the overall learning climate, not only individually, but also for the class group. Additionally, the optimal approach to managing ADHD behaviour in a school context remains unclear.

Method:
We opted for a qualitative methodology, conducting semi-structured interviews with 22 elementary school teachers from the various networks in the Dutch speaking part of Belgium. We utilized a structured questionnaire based on three validated instruments. Data analysis was independently conducted by two researchers.

Results:
Our findings reveal that, according to the teachers in this study, ADHD behaviour influences the learning climate both for the pupil himself/herself and their peers, and the class relations. These effects are shaped by various influencing factors. Interventions in the approach to a pupil with ADHD can be categorized based on the level of application: individual pupil level or class context level, each encompassing multiple interventions. An important revelation is that Flemish primary teachers often feel inadequately prepared to address behavioural or attention disorders after completing their teacher training. Despite available resources like the ADHD toolkit in Belgium, their limited awareness and under-implementation in practice pose challenges.

Conclusions:
The positive characteristics of a pupil with ADHD were more apparent in our research than in previously conducted studies. We also shed light on interventions within the classroom environment to support learning, such as teachers' mixed feelings about medication administration and the importance of providing information to peers. Most teachers unanimously expressed a significant lack of knowledge regarding classroom interventions due to minimal coverage in their teacher training, highlighting a need for accessible and relevant tools to address ADHD in pupils.

PW 7.

Support for Outpatient Care Providers for Eating Disorders in Children, Adolescents and Young Adults.

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PANGG 0-18/ MAST-Multidisciplinary Ambulant Support Team Eating Disorders Province Antwerp.

Background:
MAST stands for Multidisciplinary Ambulant Support Team. Each province has a team consisting of a child and adolescent psychiatrist, a pediatrician/general practitioner, a dietician and two psychologists. The aim is to have the treatment take place in the child or adolescent/ young adult's own environment for as long as possible. Additional, smooth cooperation with primary and secondary care providers ensures that any care requirements can be detected more quickly.

Methods:
Registrations can be made by outpatient care providers who are stuck in a trajectory with clients with an eating disorder. This can be situated in both the first and second line (CLB, CAW, psychologists, general practitioners, pediatricians, specialists in internal medicine, dieticians,etc...Registration is possible via online registration form. In this registration form some data are requested, such as data of the care provider as well as data of the client. On this registration form, the care provider can indicate what kind of help they need by indicating case support or referral or general questions. The referrer is also given the opportunity to indicate a few moments for each weekday when they can be contacted by a MAST team member for clarification of questions by telephone. After completing this registration form, the referrer will receive a reply email confirming the date and time of the first telephone contact.

Results and our offer:
We offer case support to all outpatient care providers of children and youngsters up to the age of 23 years old with an eating disorder (Anorexia Nervosa, ARFID, Bulimia Nervosa, Binge Eating and Obesity with Emotional Eating). The management of the care pathway remains within the child or young person and their professional network. After clarifying questions by telephone, we work with those involved to find the most appropriate solution of support. This is done via online consultation with the care provider and sometimes onsite in special complicated cases. Addional, our secondary task is exchange of expertise by organizing intervision and supervision groups, as well as to organize training courses. Finally general and more specific questions (referral assistance) can also be discussed.

Conclusion:
With this holistic offer in each province we want to strengthen outpatient care providers in their sense of competence in working with clients with an eating disorder.

PW 8.

Diagnostic challenges and novel insights in Kawasaki disease – a case report.

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This case report highlights the diagnostic complexity in a 3-year-old girl with severe urogenital rash, refusal to bear weight, and concurrent Mycoplasma pneumoniae infection. Initial treatment targeted lymphadenitis colli, but persistent fever and evolving symptoms led to Kawasaki disease diagnosis. Treatment included IVIG, high-dose aspirin and corticoids, resulting in clinical remission and resolution of cardiac abnormalities. This case underscores the diagnostic challenges posed by the different constellation of symptoms in Kawasaki disease and co-infection, emphasizing the importance of early echocardiography and tailored management in mitigating severe complications of the disease. Relevance of co-infection, hypotheses on pathophysiology and pharmacogenetics are briefly discussed.

SO 7.

Individualised vancomycin therapy in neonates and children: A systematic review to guide model-informed precision dosing

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Background:
The glycopeptide vancomycin is frequently used in neonates and children to treat (suspected) Gram-positive infections. Vancomycin trough concentrations of 10-15 mg/L are targeted in intermittent administration. However, the 24-hours area under the concentration-time curve/minimal inhibitory concentration is the optimal surrogate marker for vancomycin efficacy and toxicity, which can be monitored using population PK (popPK) models. These models can be integrated into model-informed precision dosing (MIPD) tools to tailor drug dosing. As a first step to developing a vancomycin MIPD algorithm, the aim was to perform a systematic review of neonatal and paediatric vancomycin poppk models.

Methods:
In May 2023, PubMed, EMBASE, Web of Science, Scopus and IPA were systematically screened by two independent reviewers conform the PRISMA guidelines. The search combined the concepts: “neonates or children”, “vancomycin”, “popPK model”. Inclusion criteria were age 0-18 years, intravenous vancomycin administration, and the development of a new popPK model. Exclusively adult, animal or in vitro models were excluded. Study, patient and model characteristics were extracted, and the quality of articles was assessed using the ClinPK statement.

Results:
The search yielded 3320 results. In total, 94 neonatal and/or paediatric popPK models of vancomycin were included. Available studies covered 20 countries (period 1994-2023), comprising 33 paediatric, 24 neonatal, 8 infantile, and 2 adolescent models. Twenty seven models combined multiple age groups. Sample size ranged from 6 to 2554 patients. Studied populations included preterms, obese patients, patients with malignancies, renal insufficiency, etc. In total, 147 different covariates were tested, and 37 were included in the models. Total body weight was the most frequently included covariate (tested in 80 models and retained in 79). Quality was graded as high for 24, moderate for 66, and low for 4 articles.

Conclusion:
This systematic review identified 94 neonatal and paediatric vancomycin popPK models, with total body weight as the most frequently included PK covariate. This overview of popPK models can guide the development of an MIPD algorithm that ensures comprehensive representation of all paediatric populations. As a next step, we will integrate the best-performing models into an MIPD algorithm, aiming to facilitate faster target attainment and potentially improve clinical outcomes.

LO 2.

Phase 3 Trial Evaluating Safety, Efficacy, and Pharmacokinetics of Clesrovimab in Infants and Children at Increased Risk for Severe RSV Disease

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Background:
Clesrovimab is an investigational, long-acting monoclonal antibody for the prevention of RSV lower respiratory tract infection (LRI) in infants, including those at high risk of severe RSV disease due to serious comorbidity or premature birth.

Methods:
This is a planned interim analysis (IA) of a randomized, controlled, phase 3 trial in infants entering their first RSV season recommended to receive palivizumab due to prematurity (≤35 weeks gestational age), chronic lung disease (CLD) of prematurity, or hemodynamically significant congenital heart disease (CHD). Participants (pts) were randomized 1:1 to receive clesrovimab (105 mg IM on day 1, placebo on day 28) or monthly palivizumab in season 1; eligible pts received clesrovimab (210 mg IM) in season 2. The primary endpoint was safety and tolerability of clesrovimab vs. palivizumab in season 1. Secondary endpoints included the incidence of RSV-associated medically attended LRI (MALRI) requiring ≥1 indicator of LRI or severity and of RSV-associated hospitalization through day 150. Clesrovimab serum PK was analyzed through day 150.

Results:
At this IA, 901 pts had been randomized into the trial. Baseline characteristics were well balanced; 28% had CLD, 11% had CHD, and 61% were born preterm without CLD/CHD. In season 1, the proportion of pts with AEs were comparable between arms; no pts in the clesrovimab arm had a drug-related serious AE. In the season 2 IA, proportions of pts with AEs were comparable between those who had received clesrovimab or palivizumab in season 1. There were 8 deaths (1.8%) in the clesrovimab and 4 (0.9%) in the palivizumab arm, all attributable to underlying comorbidities or causes unrelated to treatment. No anaphylaxis/hypersensitivity reactions were reported. Incidence

rates of RSV-associated MALRI and of RSV-associated hospitalization were comparable between clesrovimab (3.6% and 1.3%, respectively) and palivizumab (3.0% and 1.5%, respectively) through day 150. In season 1, the geometric mean half-life of clesrovimab was 44.1 days.

Conclusions:
Clesrovimab was well tolerated in infants at high risk for RSV disease. In season 1, a single dose of clesrovimab had a safety profile and RSV disease incidence rates that were generally comparable to monthly palivizumab.

LO 3.

Epidemiology of meningococcal disease in Belgium: overview of the last 10 years

Stéphanie Jacquinet , Laura Cornelissen, Wesley Mattheus

Sciensano

Over the last 10 years, the epidemiology of meningococcus in Belgium changed importantly. As a result, the Superior Health Council (SHC) recommended in 2019 to replace monovalent MenC vaccine by quadrivalent MenACWY vaccine for one-year-olds and to add a MenACWY booster in adolescents (14-16 years). MenB vaccine is recommended at individual level, not as part of the immunization program. Since 2023, Men ACWY is administered free of charge to one-year-olds only

Method:
Primary clinical samples and/or N. meningitidis strains of invasive meningococcal cases are sent to the National Reference Centre for meningococci (NRC) for confirmation, serogrouping and molecular typing. We analysed NRC data from 2015 until early December 2024

Results:
Between 2015 to 2019, case numbers were stable around 105 cases per year. Between 2020 and 2022, the COVID-19 pandemic resulted in a sharp drop in case numbers to around 41 per year. In 2023 and 2024, respectively 83 and 73 cases were reported, still below the pre-covid average. The proportion and absolute numbers of serogroups W and Y rose from 19% in 2015 (19/98 cases) to 55% of cases in 2024 (40/73 cases). In contrast, the proportion of serogroup B cases fell from 68% in 2015 (67 cases) to 42% in 2024 (29 cases). Serogroup C cases have fallen sharply (<10 cases/year from 2015 and 1 case/year from 2021).

Serogroup B remains the predominant serogroup in the <15 years, but its proportion has decreased in favor of serogroups W and Y (2015: 35/43 cases of B, 81% of cases; 2024: 16/24 cases, 67%). The reduction in serogroup B coupled to increases of W and Y was even more pronounced in the 15-24y (2015: 13/20 cases of B, 65% of cases; 2024: 3/8 cases, 37%).

Despite the overall decreasing trend, in the 65+ age group, an increase in the total number of cases has been observed since 2019 and serogroups W and Y have been dominant since 2018. In 2024, 27 cases (37% of total) were diagnosed in this age group of which 19 cases of serogroup W and Y

Conclusion:
Given the ongoing increase of W and Y serogroups, inclusion of the MenACWY vaccine for adolescents in the free vaccination program, as recommended by the SHC, should be a priority. As young adults are the main carriers, this measure would help to reduce the number of cases in all age groups. Considering the high number of cases of Men B in children under 15 years, current MenB vaccination recommendations should be re-evaluated when the pentavalent MenABCWY arrives on the market

LO 4.

A Phase 2b/3 Study to Evaluate the Efficacy and Safety of an Investigationa RSV Antibody, Clesrovimab, in Healthy Preterm and Full-Term Infants

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Background:
Clesrovimab is an investigational, long-acting monoclonal antibody (mAb) targeting site IV of the fusion protein for the prevention of RSV lower respiratory tract infection in infants.

Methods:
This phase 2b/3 double-blind, randomized, placebo-controlled pivotal study enrolled healthy preterm and full-term infants birth to 1 year of age entering their first RSV season. Participants (pts) were randomized 2:1 to receive clesrovimab (105 mg IM) or placebo on day 1. Safety and tolerability were a primary endpoint. There were two hypothesis-tested endpoints: the efficacy of clesrovimab against RSV-associated medically attended lower respiratory tract infection (MALRI) through day 150 (primary) and against RSV-associated hospitalization through day 150 (secondary). The MALRI definition required ≥1 indicators of lower respiratory tract infection (LRI) or severity. To facilitate comparison across RSV mAb trials, a definition of RSV-associated MALRI that required ≥2 indicators of LRI/severity (≥1 indicator of LRI and ≥1 indicator of severity) was assessed post hoc.

Results:
There were 3,632 pts randomized across 22 countries; >99% received study intervention. Clesrovimab reduced the incidence of RSV-associated MALRI requiring ≥1 indicator of LRI/severity (60.4% [95% CI: 44.1, 71.9], p<0.001) and ≥2 indicators of LRI/severity (88.0% [95% CI:76.1, 94.0]), RSV hospitalization (84.2% [95% CI: 66.6, 92.6], p<0.001), and severe MALRI (91.7% [95% CI:62.9, 98.1]) through day 150 postdose compared to placebo. Efficacy increased with increasing RSV-associated disease severity and was similar from days 1-180 compared to days 1-150 across endpoints. The proportions of pts with adverse events (AEs), including injection-site and systemic AEs, drug-related AEs, and serious AEs were comparable between the clesrovimab and placebo groups . There were no treatment-related deaths or deaths attributed to RSV disease.

Conclusion:

A single dose of clesrovimab given before or during the first RSV season was efficacious in reducing RSV-associated MALRI and RSV-associated hospitalization in healthy preterm and full-term infants and was generally well tolerated with a safety profile comparable to placebo.

SO 8.

Belgium's regional disparities in maternal vaccination coverage: do we see real-life impact in infant pertussis cases?

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Background:
Since mid-2023, Europe experiences intense pertussis circulation. Young infants are most at risk for severe disease. Therefore, routine infant vaccination and vaccination of women during each pregnancy are key to protect this group. Most recent available data (2019) for infants indicates 98% vaccination coverage for 3th dose of pertussis vaccine in all Belgian regions. In contrast, maternal vaccination uptake differs by region, ranging from 85% in Flanders to 39% in Wallonia and 31% in Brussels. We hypothesize that this difference in maternal vaccination coverage could be reflected in infant case numbers.

Method:
Our study period is from January until September 2024. Data on pertussis cases in infants <1y of age was extracted from the regional mandatory notifications (MN). Estimated incidence rates were calculated per region, using official population statistics (Statbel). Incidences in different regions were compared using incidence rate ratios (IRR) with 95% confidence intervals (CI).

Results:
There were 422 confirmed pertussis notifications, of which 42% occurred in Flanders (n=177), 37% in Wallonia (n=157) and 20% in Brussels (n=86). This equals estimated incidence rates of 282/100,000 population in Flanders, 461/100,000 for Wallonia and 626/100,000 in Brussels. The IRR of Brussels vs. Flanders is 2.22 [95% CI 1.71-2.87], indicating a two-fold higher risk of pertussis infection for infants in Brussels compared to Flanders. The IRR of Wallonia vs. Flanders is 1.63 [1.32-2.03]. Since we use different organized sources for case numbers in the different regions, we cannot rule out a measurement bias (e.g. cases in certain region more likely to be notified). However, notification rates in adults are similar across the 3 regions and higher case ascertainment rates in Brussels and Wallonia are not known for other mandatorily notifiable pathogens.

Conclusion:
Estimated incidence of pertussis in young infants is significantly higher in Brussels and Wallonia, compared to Flanders, which could be due to differences in maternal vaccination. Improved quality of data on vaccination status and hospitalization may make future analyses more robust. As the effectiveness of maternal vaccination has been shown in international literature, efforts to identify and address barriers to maternal vaccination should be made to improve coverage in all regions, particularly in Brussels and Wallonia.

SO 9.

Small airway remodeling and associated vascular remodeling in congenital airway diseases

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Cystic fibrosis (CF) and primary ciliary dyskinesia (PCD) are congenital airway diseases caused by genetic mutations. CF arises from mutations in the CFTR gene, coding for an ion channel, while PCD results from mutations leading to absent or dysfunctional respiratory cilia. Although these diseases differ in clinical symptoms and disease evolution, both are defined by bronchiectasis, with obstructive lung disease in the small airways being the leading cause of morbidity and mortality. Investigating the mechanisms, sites, and significance of small airway (SA) disease in CF and PCD may advance patient care and outcomes. Additionally, despite the known impact of pulmonary hypertension (PH) in CF, the underlying vascular changes remain poorly understood, limiting treatment options.

Inflated, end-stage explant CF (n=30), PCD (n=4) and declined donor (n=8) lungs were scanned with HRCT (resolution 600µm) and µCT (resolution 150µm). Airway/total lung volume was used as a marker for bronchiectasis and airway segmentation for generation analysis. Lungs were processed to lung cores (2.8 mL), which were scanned with µCT (n=3/lobe, resolution 8.5µm, morphometrical SA and arteriole analysis), used for RNA bulk sequencing (CF: n=10, analysis of cellular composition), and histologically analyzed (n=6, collagen deposition).

In CF, degree of bronchiectasis (heterogeneous amongst the lungs) was unrelated to the amount of SA loss with a homogenous pattern, most pronounced around generation 9-16 (>50% of airways lost). Functional impairment correlated with degree of SA loss but not with visible bronchiectasis. SA remodeling varied from a bronchiolitic type with constrictive bronchiolitis to a bronchiectatic type with obstructive bronchiolitis, correlated with a negative clinical phenotype. Pulmonary arteriole narrowing appeared with and without SA disease, while rarefaction was present only in area's with. Severity of SA loss was similar in PCD, but was more mucus correlated and showed no constrictive bronchiolitis.

We showed the importance of small airway disease in CF and uncovered diversity in small airway remodeling types amongst the patients, correlated with clinical phenotype, indicating the need for a patient tailored approach. Pulmonary arterioles showed rarefaction and pruning, explaining the presence of PH in CF and demanding further therapeutic options. Despite their similarities, small airway disease in PCD is different and asks for a different approach.

SO 10.

Vaccine failures and breakthrough infections in children during the PCV13 era in Belgium

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In 2019, PCV13 replaced PCV10 in Belgium's childhood vaccination schedule. Since then, a reduction of invasive pneumococcal disease (IPD) caused by PCV13 non-PCV10 serotypes, particularly 19A, is observed. Despite high vaccine effectiveness, infections with vaccine serotypes (VST) can still occur in fully or partially vaccinated children. International studies report such cases in 8% and 9% of all IPD in vaccinated children ≤5 years. This study examines which serotypes caused vaccine failure and breakthrough infections in Belgian children.

We analyzed IPD cases in children 0–5 years from 2019–2023. IPD isolates are sent to the National Reference Center (NRC) for capsular typing. Vaccination data is collected by the NRC and PediSurv, a surveillance network of pediatricians. Vaccine failure is defined as IPD with a VST after completing the full vaccination schedule (2+1 dose) with PCV10 or PCV13. Cases involving mixed (n=2) or unknown vaccine types (n=5) were not considered as failures. Breakthrough infections are defined as IPD with a VST after at least 1 dose, but without completing the full schedule.

A total of 828 IPD cases occurred during the study period. One in three (30%, n=251) involved VSTs, mainly serotype 19A (76% of VSTs). Vaccination data was available for 419 cases (51%). Of these, 76 children were unvaccinated, and 342 were vaccinated (159 fully and 179 partially, including 106 age-appropriately). For VST cases, vaccination status was known for 45%. Vaccine failure occurred in 4% (15/342) of all IPD in vaccinated children. No failures were seen with PCV10 (0/40 fully vaccinated). Fifteen failures occurred with PCV13 (15/100), caused by serotypes 19A (9), 3 (5) and 14 (1). Breakthrough infection occurred in 8% (29/342) of IPD cases among vaccinated children. Similarly, no breakthroughs were seen with PCV10 (0/29 partially vaccinated), but there were 29 with PCV13 (29/111), caused by serotypes 19A (21), 3 (4), 14 (3) and 19F (1).

In conclusion, vaccine failure and breakthrough rates are low, and limited to serotypes 19A, 3, 14 and 19F after PCV13 vaccination. While re-introduction of PCV13 has successfully reduced IPD caused by PCV13 serotypes, its success is undermined by the rise of non-VST IPD. As discussions on implementing the higher-valent PCV20 in the schedule are ongoing, not only inclusion of additional serotypes, but also potentially incomplete protection against certain serotypes must be carefully considered.

SO 11.

Mapping pediatric aeroallergen sensitization profiles and optimizing skin prick test panels in Southern Belgium

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Background:
In recent years, the prevalence of pediatric allergic diseases, particularly respiratory allergies, has risen significantly worldwide, with notable regional variations. These conditions not only persistently affect the quality of life of children but also impose a heavy economic burden. Accurate identification of causal allergens is crucial for effective allergen avoidance, predicting disease severity, and enabling personalized treatment through specific immunotherapy.

Factors such as urbanization, lifestyle changes, climate variations, and age contribute to significant disparities in allergen prevalence and distribution across different regions. Given the evolution of allergen sensitization patterns, local allergen screening panels must be regularly updated. However, in Belgium, research on allergen sensitization patterns has been limited, and no comprehensive multicenter study has been performed recently.

Methods:
This multicenter epidemiological study analyzed data from pediatric patients who underwent skin prick tests (SPT) for suspected aeroallergen-related allergic reactions. Data were collected from seven participating hospitals in Southern Belgium: Montlegia, Mont-Godinne, Saint-Elisabeth, CNDG, CSPO, CUSL, and GHDC. Clinical information, including age, sex, indication, and test results, was collected from patients seen over a one-year period (January 1st to December 31st, 2023). The final sample included 3200 patients after excluding those who met exclusion criteria.

Results:
The overall positivity rate of SPT was 46.5%, with a significant increase in prevalence with age. Prevalence of positive SPT varied between centers, ranging from 30.1% to 53.3%. Differences were also noted in the choice of age cut-off and discrepancies in the selection of allergen panels.

Globally, our findings reveal a high positivity rate for dust mites, followed by grass and birch pollen allergens, and then animal dander with over 60% of sensitized patients exhibiting polysensitization. This frequency of polysensitization also increased with age.

A proposed panel of six aeroallergens has been developed, which sufficiently captures sensitization in 95% of the population, along with a separate six-allergen panel tailored for children under three years old.

Conclusion:
This study highlights the need for a harmonized approach to allergy management, with regular updates to local allergen screening panels to reflect evolving sensitization patterns and regional condition

SO 12.

Impact of RSV Immunization with Nirsevimab (Beyfortus®) on RSV-Related Hospitalizations in Pediatric Patients in Belgium.

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Background/Aims:
Respiratory infections caused by Respiratory Syncytial Virus (RSV) are the leading cause of hospitalization among pediatric patients. Recently, immunizations have been developed to protect children against RSV. Nirsevimab (Beyfortus®) is a monoclonal antibody targeting the RSV F protein, developed to reduce the hospital burden of RSV infections. In Belgium, these immunizations have been reimbursed since this year, allowing parents to immunize their children against RSV starting from October 2024, with reimbursement for those born after April 1, 2024. This study aims to evaluate the impact of these immunizations on the number of hospitalizations, severe outcomes, and mortality due to RSV in children.

Methods:
This observational study was conducted at Jessa Hospital in Hasselt, Belgium. Since 2002, epidemiological data on all RSV hospitalizations have been collected within this hospital. We included data up to February 2025 to compare the number of hospitalizations, mortality, and morbidity rates during RSV seasons before and after the initiation of immunization with Nirsevimab. All hospitalizations were examined, and for children with a positive RSV nasal swab, the reasons for admission, age, immunization status, and course of the hospitalization (including need for oxygen, optiflow, intubation, or transfer) were analyzed.

Results:
Preliminary results indicate that during this RSV season, the majority of hospitalizations at Jessa Hospital involved older children who were not eligible for the reimbursed immunization. Among younger children who were eligible for reimbursement, most hospitalizations were of those who had not been immunized. Children who were hospitalized despite immunization generally exhibited less severe symptoms. These results may also be influenced by variations in RSV seasons. Exact figures and statistics will be provided upon the study's conclusion at the end of February 2025.

Conclusion:
Initial findings suggest that the immunization with Nirsevimab has a favorable impact, primarily reducing the severity of RSV infections in immunized children. The long-term effects and influence on RSV transmission require further investigation in upcoming seasons. Additionally, we question the potential impact of less stringent reimbursement criteria and immunizing slightly older children, as these were the most severely affected in our study. Further research is needed to fully understand the overall impact.

PW 9.

Endobronchial foreign body in children: can it be prevented?

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Background:
Foreign body aspiration (FBA) is a critical pediatric emergency that requires prompt diagnosis and management to avoid severe complications. Rigid bronchoscopy remains the gold standard for diagnosis and removal, though clinical and radiological features are not always specific, posing diagnostic challenges.

This study aims to evaluate the clinical presentation, radiological findings, and outcomes of pediatric patients undergoing bronchoscopy for suspected FBA.

Methods:
We conducted a retrospective, single-center study of pediatric bronchoscopies performed between January 1992 and June 2022 at CHU UCL Namur, Godinne. Data collected included demographics, clinical and radiological findings, type and location of foreign bodies, procedural timing, complications, and follow-up outcomes.

Results:
Among 99 cases, a foreign body was identified in 58 patients, predominantly aged 12–36 months. Organic foreign bodies, especially peanuts (35/58 cases), were the most frequent, with right bronchus involvement being the most common location. Only 7% of foreign bodies were radiopaque.

Clinically, penetration syndrome had the highest positive predictive value (0.84), strongly indicating foreign body aspiration (OR = 26.9). Localized wheezing showed high specificity (0.95), while asymmetric breath sounds were the most specific sign (0.98, OR = 42.9). Interestingly, 14% of cases with confirmed foreign bodies had normal auscultation findings.

X-rays were normal in 15.5% of cases with confirmed FBA. Unilateral or localized hyperinflation was strongly associated with the presence of a foreign body (OR = 16).

The mean hospital stay was 2 days, with no mortality. Per-procedure complications included desaturation (49%), laryngospasm (9%), and intraoperative bleeding (14%). Post-procedure, pyrexia (35%) and laryngobronchospasm (16%) were observed, and 17.5% of cases still presented with abnormal X-rays. All patients achieved full recovery at 3 months, with ventilation/perfusion scans conducted in 15 cases requiring multiple procedures.

Conclusion:
The diagnosis of FBA in children relies on a combination of clinical signs and imaging. Penetration syndrome, localized wheezing, and asymmetric breath sounds are strong clinical indicators, while unilateral or localized hyperinflation on x-rays is a key diagnostic sign. Despite minimal procedural complications, long-term outcomes are excellent, underscoring the importance of early detection and intervention.

PW 10.

To PEP or not to PEP - should immunoglobulins be given to unvaccinated infants after exposure to measles?

Laura Cornelissen

Sciensano

In 2024, Belgium faced the largest outbreak of measles in over 10 years. Cases occurred mostly in unvaccinated young children and particularly in Brussels. As measles is highly contagious and can cause serious complications, contacts of each case are traced. According to Belgian guidelines, only post-exposure prophylaxis (PEP) with the measles-mumps-rubella (MMR) vaccine should be offered to unvaccinated children from the age of 6 months, provided vaccination can be done within 72h after exposure. In several other countries, immunoglobulins (IG) are used in infants <12 months or when exposure took place >72h but <7d ago.

We performed a search in PubMed and Google Scholar on the effectiveness of immunoglobulins as post-exposure prophylaxis after measles exposure. Additionally, official recommendations on measles PEP in young children were retrieved directly from websites of several public health institutes.

Immunoglobulins are recommended as measles post-exposure prophylaxis in our neighboring countries (NL, DE, FR) as well as in the UK, USA and Australia. NL and FR recommendations make exceptions for infants <2m (NL) or <6m (FR) born from mothers with natural measles immunity. Recommended doses vary widely, from 90mg/kg (UK) to 400mg/kg (DE). Recommended mode of administration (intramuscular or intravenous) depends on recommended dosage, since higher volumes are unsuitable for IM administration. A 2014 Cochrane review concluded that PEP by passive immunization is effective, but magnitude of effect is dose-dependent. More recent observational studies support this conclusion. Only in the US, a minimal concentration for measles-specific IG is required for normal human immunoglobulin products (NHIG) on the market. Several studies have shown high variability in measles-specific IG in NHIG products (range 5.0-43 IU/mL). This makes it difficult to establish the recommended dose. After administration of IG, active immunization with MMR vaccine should be postponed for several months.

Whilst IG can be effective as PEP after measles exposure, practical implementation is hindered by a lack of knowledge on the required dose. Additionally, off-label use, a lack of reimbursement, need for IV administration and a narrow time window create logistical and financial barriers. The benefit of immediate protection should be weighed against the risk of delayed MMR administration, especially in the context of an epidemic with potential for repeat exposures.

PW 11.

When genetic and functional testing complement each other

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Introduction:
The complement system, vital for innate immunity, involves 50+ proteins in three pathways: classical, alternative, and lectin. Its dysregulation can lead to infections, autoimmunity, or thrombosis. Mendelian complement deficiencies (CD) affect ~0.03% of the population but is likely underdiagnosed. Factor B (FB) deficiency is exceptionally rare, with two cases reported in literature. This article presents a novel case of FB deficiency, highlighting the clinical, immunological and genetic diagnostic challenges.

Case Description:
An 8-month-old boy presented with fever, sepsis and meningoencephalitis due to Streptococcus pneumoniae (serotype 35F) isolated from blood and suggestive findings on MRI of the brain. His medical history was unremarkable with complete vaccination status including PCV13. Despite treatment with corticosteroids, he developed seizures and transient unilateral hearing loss.

Immunological tests showed normal blood count, immunophenotyping, immunoglobulins, Pneumovax23 response, spleen function, normal C3, C4 but repeatedly absent AP50, indicating a defect of the alternative complement pathway. Quantification of distinct complement factors revealed normal properdin, FH, and FI but reduced FB. The degradation product FBb was similarly reduced. Genetic analysis using targeted sequencing revealed the presence of paternally inherited heterozygous pathogenic CFB gene variant (NM_001710.6:c.898-2A>C) in absence of a second variant in trans. Further immunological assays confirmed functional FB deficiency, which was partially restored with adding recombinant FB. Furthermore, reduced FB concentration in the serum of the mother further strengthened our hypothesis of missing heritability. In-depth molecular diagnostics comprising whole exome sequencing (WES) finally identified a maternally inherited intronic CFB variant, confirming autosomal recessive FB deficiency.

Discussion:
Invasive pneumococcal infections warrant immunological evaluation. The absent AP50 aligned with an alternative pathway defect, which increases susceptibility to encapsulated bacterial infections. Functional assays identified FB deficiency, and thorough parental testing confirmed autosomal recessive inheritance.

This case underscores the importance of combining functional assays with genetic analyses. WES identified a deep intronic mutation missed by standard tests. Diagnosing rare inherited diseases requires comprehensive evaluation and critical analysis of results.

PW 12.

Eosinophilic Granulomatosis with Polyangiitis: A Case Series Highlighting the Complexity of this rare form of vasculitis

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Background:
Hypereosinophilia is a common biological anomaly observed in children, however its etiology might be diverse and its consequences severe. Here, we describe three cases of hypereosinophilia that led to the diagnosis of eosinophilic granulomatosis with polyangiitis (EGPA), also previously known as Churg-Strauss syndrome. EGPA is a rare systemic vasculitis that mainly affects adults. This case series aims to describe the clinical presentation, diagnosis, treatment, and outcomes of EGPA in pediatric patients, as well as provide a straightforward approach to navigating hypereosinophilia.

Method:
We retrospectively reviewed the medical records of three children diagnosed with EGPA in our institution for clinical features, laboratory findings, imaging, pathology, treatment modalities, and outcomes.

Results:
Three pediatric patients aged between 10 and 14 years old presented with the disease over the past 6 months in our institution. All three complained about dyspnea and nasal congestion. Bloodwork-up evidenced peripheral eosinophilia (>1500/mm^3). Further fibroscopy showed nasal polyps and chest CT-scan showed pulmonary infiltrates; and patholoy of nasal polyps evidenced eosinophilic perivasculitis. All patients met the criteria for EGPA according to the MIRRA Study and ACR/EULAR classification. Treatment regimen varied across the three patients but focused on glucocorticoids and mepolizumab, with variable therapeutic response.

Conclusion:
This case series underscores the wide clinical presentations of EGPA in the pediatric population and emphasizes the significance of prompt identification, differential and proper management following the demonstration of peripheral hypereosinophilia.

PW 13.

General Practitioners' perspectives on transitional care for AYA with asthma: Exploring challenges in primary care

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Background:
The transition from pediatric to adult healthcare is a crucial phase for adolescents and young adults (AYA) with chronic conditions like asthma. Ineffectively managed transitions can negatively impact health outcomes and overall quality of life. General practitioners (GPs) play a potentially significant role in supporting this transition, yet their perspectives and the challenges they encounter remain underexplored. This study examines GPs' views on the transition process and identifies obstacles faced in managing the care of AYAs with asthma.

Methods:
Using purposive sampling, individual semi-structured interviews were conducted with 9 GPs and 3 GP trainees working in diverse primary care settings. Thematic analysis was used to identify key themes and subthemes, providing detailed insights into the challenges and perspectives of GPs.

Results:
The findings reveal ambivalence among GPs regarding their roles in transitional care, highlighting varying experiences and opinions about their capacity to enhance transition quality. Key themes included (1) Their experience with the current role of GPs in TC and (2) Their views on the potential role of GPs to enhance quality of care. The latter theme was furthermore expressed by four respective subthemes: a) coordination of interprofessional care; b) interprofessional communication; c) patient involvement and d) guidance.

Conclusion:
This study sheds light on GPs' experiences in delivering transitional care to AYAs with asthma. A lack of role clarity, inadequate interprofessional communication and gaps in training emerge as barriers to providing effective support during the transition. These challenges underline the need for better-defined roles, improved communication, and targeted training to optimize the role of GPs in transition care.

PW 14.

Severe RSV infection complicated by pneumomediastinum

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Background:

A case presentation of a 5-month-old boy with severe respiratory distress

Clinical History:
A 5-month-old boy presented at General Pediatric Outpatient Clinic with a history of coughing, fever since more than 3 days and poor intake. Coming into the consultation room a pale child with severe respiratory distress is seen: nasal flaring, tachypnea, inter-and subcostal indrawing and blocking expiration to create positive airway pressure. After a quick first glance, baby is immediately transferred to Emergency Room. Next to the respiratory distress, subcutaneous emphysema was noticed in the neck. SaO2 being as low as 88%, and which could not corrected with high flow O2 , patient was intubated and transferred to PICU. Chest X-ray and CT thorax confirm the emphysema and pneumo-mediastinum and bilateral pulmonary infiltrates. PCR for RSV is positive. Patient needs PRVC ventilation for 5 days. Antibiotic treatment is initiated for Hemophilus Influenza found in bronchial aspiration. Patient is transferred to General Pediatric ward after 10 days and leaves the hospital three days later.

Discussion:
Pneumomediastinum is seen as a rare complication of RSV and a few other viral pulmonary infections. CAT scan, fiber bronchoscopy, and esophagogram, showed no tears of trachea or esophagus, and no congenital malformations. The subcutaneous emphysema was noted before any aggressive intervention (intubation, e.g.) In the few publications on pneumomediastinum and RSV, the hypothesis is that the pneumomediastinum is caused by alveolar rupture, due to increased alveolar pressure.

Conclusion:
Pneumomediastinum can be seen as a rare and aggravating complication of RSV infection of the bronchi and lungs

PW 15.

Challenges in Diagnosing and Treating Early-Stage Streptococcal Toxic Shock Syndrome: about an invasive Group A Streptococcal Pediatric Case

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Background:
Group A Streptococcus (GAS) is a bacterium commonly carried on the skin or in the throat. It is usually responsible for mild infections such as pharyngitis, impetigo but also found in asymptomatic carriage. However, some patients develop invasive Group A Streptococcal (iGAS) infection, defined by the presence of GAS in a normally sterile site, or in non-sterile site but associated with toxin production leading to Toxic Shock Syndrome (TSS). Untreated, iGAS can rapidly progress to life threatening conditions, especially when associated with TSS.

Since the end of COVID-19 lockdown, an unusual increase in pediatric iGAS cases has been reported across Europe. The reason for such an epidemiological shift remains unclear. We aim to highlight the importance of early recognition and treatment of iGAS and streptococcal TSS (STSS) in this particular context.

Method:
We report the case of a 7-year-old girl who was admitted in Delta hospital, Brussels because of severe torticollis. Clinical outcome rapidly deteriorated after the onset of fever, with the development of STSS. Blood cultures yielded GAS. Clinical presentation, laboratory findings, imaging and treatment are presented and discussed in relation to the recent literature.

Results:
Initial symptoms included cervical pain and vomiting. The fever only came later, probably because masked by painkillers. Although hypotension, a main marker of STSS, was absent, the patient developed severe organ damage, including hepatic dysfunction, acute respiratory distress syndrome, and capillary leak syndrome. Supportive treatment included corticosteroids, diuretics and oxygen. Prompt intravenous antibiotherapy (cefazoline and clindamycin) halted disease progression. Imaging revealed multiple prevertebral abscesses and cervical arthritis. The patient fully recovered after 4 weeks of intravenous antibiotics, followed by 4 weeks orally.

Conclusion:
This case highlights the challenge of diagnosing STSS in atypical presentations lacking classic criteria. Early diagnostic is even more important to consider that an early aggressive treatment is crucial to improve outcome particularly considering the post pandemic rise in iGAS all over Europe. Further studies are needed to elucidate the factors driving this epidemiological shift and to refine diagnostic criteria for early stage of STSS.

SO 13.

Evaluation of transcutaneous interferential electrical stimulation in the treatment of chronic constipation in children: a pilot study

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Background:
This study evaluated the effectiveness of interferential therapy (IFT) in children with therapy-resistant pelvic floor dyssynergia-type constipation (PFD).

Methods:
Children with PFD were selected through baseline investigations. Data were collected using stool diaries, anal manometry and quality of life (QoL) questionnaires. IFT was administered using an interferential stimulator with four adhesive electrodes (two on the abdomen, two on the back). Therapy adjustments were made after three months based on the progress. Primary outcomes included achieving normal defecation frequency (3x/day – 3x/week), 50% reduction in soiling episodes, and improved stool consistency (Bristol Stool Chart scores of 3 – 5 for > 50% of movements). Secondary outcomes included reduced laxative use, improved rectal sensation and QoL. Follow-up lasted one year.

Results:
This pilot study included 15 children (6 girls, 9 boys, mean age 11.4 years) with PFD. After one year, defecation frequency increased (mean 6,1/week to mean 8,8/week, p = 0,06), stool consistency improved significantly (75% to 100% of patients achieving normal consistency, p = 0,01) and soiling episodes decreased (mean 2,4/week to mean 0,5/week, p=0,22). Laxative use dropped significantly (75% to 45% of patients using laxatives, p = 0,05), with 45% of patients no longer requiring therapy. QoL scores improved significantly: gastrointestinal QoL scores increased from 69/100 to 82/100 (p = 0,01) for patients and from 65/100 to 82/100 (p = 0,01) for parents. General QoL scores rose from 64/100 to 78/100 (p = 0,00) for patients and from 58/100 to 76/100 (p = 0,00) for parents. Anal manometry revealed improved rectal sensation and defecation urge. No adverse events were reported.

Conclusions:
IFT improved stool consistency, reduced laxative use, and enhanced QoL in children with PFD. It also improved rectal sensation and defecation urge. Adding IFT to standard treatment may reduce need for water enemas and enhance QoL for patients and families.

SO 14.

Efficacy and safety of multiple switching from infliximab originator to different biosimilars in pediatric patients with inflammatory bowel disease

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Background:
Infliximab (IFX) is highly effective but costly, promoting the development of biosimilars. However, limited data exist on double switching from originator IFX to biosimilars in patients with inflammatory bowel disease (IBD), particularly in children with restricted pharmacokinetic information. This study evaluated the safety and efficacy of sequential switching from originator IFX to two different IFX biosimilars (CT-P13) in IBD.

Methods:
In this single-center study, all children with Crohn's disease (CD) and ulcerative colitis (UC) on maintenance IFX therapy were sequentially switched from originator (Remicade®) to CT-P13 (Inflectra®, cohort A) in 2018 and then to CT-P13 (Remsima®, cohort B) in 2022. Cohort C includes patients who underwent both switches. Demographics, disease activity, and IFX trough levels were collected from six months before to six months after each switch. Baseline refers to data collected six months before first switch on IFX originator. Data are presented as median [interquartile range].

Results:
A total of 42 children (26 CD and 16 UC; cohort A) and 44 children (31 CD and 13 UC; cohort B) underwent a single switch to CT-P13, with a median duration on IFX of 13.5 [6.8-35.5] and 21.53 [11.2-39.4] months, respectively, before switching. Among them, 14 children (11 CD and 3 UC; cohort C) underwent multiple switches. No significant changes in IFX trough levels occurred after switching. Median baseline IFX trough level was 7.9 [5.3-10.6] versus 8.2 [6.7-10.0] µg/mL six months after second switch (p=0.792). Antibodies to IFX developed in one patient (cohort A) post-switch. The proportion of patients in clinical and/or biological remission remained stable (all p> 0.05), except for higher clinical remission rate in cohort C six months post-switch (p=0.039) compared to baseline. No clinically significant changes were noted in C-reactive protein, erythrocyte sedimentation rate, or albumin after switch. The safety profile was similar, with fewer adverse events reported in cohort B post-switch, attributed to seasonal variation with more upper respiratory infections pre-switch. After adjustment, this difference was not significant (p=0.465). No serious adverse events were reported.

Conclusion:
Switching to biosimilar CT-P13 maintains clinical and biological remission without significant changes in disease activity or adverse events. These findings confirm the safety and efficacy of single and multiple switches in pediatric IBD.

SO 15.

Health insurance Convention for Severe Pediatric Feeding Disorder: A 15-Year Review of Multidisciplinary Follow-up for Children with Enteral Nutrition

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Background:
The convention between the Health Insurance Committee and the Belgian multidisciplinary teams (7 since 2009, 9 since 2021) allows to establish a therapeutic plan and follow-up for children (0 to 12 years) with severe pediatric feeding disorder (PFD) requiring artificial nutrition in present or past. These children present complex underlying conditions (except severe neurological conditions), inadequate feeding skills, nutritional and psychosocial dysfunctions. The aim is to support the child and the family in achieving age-appropriate oral feeding pattern.

Methods:
Data were collected from the annual reports of all participating centers. Records were as follows: number of children, medical aspects including underlying conditions and type of oral feeding disorder, nutritional, psychosocial aspects, therapeutic plans and the overall cost of the convention. Indicators included the percentage of children who weaned off enteral nutrition, changes in eating behavior and amount of oral food intake.

Results:
Between 2009 and 2023, the total number of patients increased from 163 to 317 per year (increase of 12.9% per year). The underlying conditions were gastrointestinal (28.3%), genetic (27.5%), cardiac (14.5%), respiratory (9.1%), oro-facial (9.5%), and others (20.6%). These conditions may overlap. Prematurity was persistently present in 25% of cases. Over the last three years, medical conditions were the predominant cause (61%), followed by inadequate feeding skills (48%), nutritional deficits (46%), and psychosocial problems (31%).

The therapeutic plan is tailored to each patient. It includes specialized medical care (66%), nursing (35%), and dietary (72%) care, oral sensorimotor therapy (57%), global body therapy (33%), appetite interventions (43%), psychological support (29%), behavioral therapies (30%), and parental guidance (55%). Nutritional support was weaned off on an average of 40.5% of cases per year. Oral feeding autonomy was achieved in 92% of cases on average per year. Evaluation of the convention's costs showed an annual increase of 12%, proportionally to the increase in patients.

Conclusion:
The increase in patients number reflects the evolution of tertiary care for all complex conditions. The individualized plan for each patient based on the multidisciplinary approach has proven effective. It is important to support ongoing follow-up and management downstream, involving various paramedical professionals engaged in the treatment of PFD.

SO 16.

Assessment of the quality of life in pediatric patients with eosinophilic esophagitis

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Assessment of the quality of life in pediatric patients with eosinophilic esophagitis.

Objectives and Study:
Eosinophilic esophagitis (EoE) is a chronic immune-mediated inflammatory disease of the esophagus. Its prevalence is rising, and its pathophysiology is increasingly understood. Despite advances in management strategies, including pharmacological and dietary interventions, the long-term impact of EoE on patients' quality of life (QoL) is poorly studied. This study seeks to fill this gap by evaluating the QoL of children and adolescents with EoE and exploring the factors that influence their well-being.

Methods:
This prospective, monocentric study was conducted in a tertiary pediatric gastroenterology clinic in Brussels, Belgium, involving 51 children and adolescents aged 2 to 18 years, diagnosed with EoE. QoL was assessed using two validated questionnaires: One specific to EoE symptoms: Pediatric Eosinophilic Esophagitis Symptom Scores (PEESS v2.0) and one generic: Pediatric Quality of Life (PedsQL v3.0).

Results:
The cohort consisted of 34 patients (66.7%) with a history of allergic conditions and 17 patients (33.3%) with additional gastrointestinal disorders (GERD, Crohn’s disease, celiac disease, esophageal atresia). Among the patients, 32 (62.7%) achieved endoscopic remission, and 25 (49%) achieved histological remission. The median PEESS score was 17/80, while the median PedsQL score was 80.16/100. Importantly, no significant correlation was found between these scores and endoscopic or histological remission status, highlighting the complexity of EoE's impact and follow-up. On average, patients underwent five endoscopies throughout their treatment.

Conclusion:
This study represents a step in understanding the broader implications of EoE beyond histological remission. While the clinical scores (PEESS and PedsQL) show promise in assessing QoL, they underscore the need for a comprehensive approach to patient care that includes not just symptom control but also emotional and social support. Our findings emphasize that endoscopic, histological, clinical, and quality of life assessments remain essential in the follow up of EoE patients and should be conducted concomitantly.

PW 16.

Reinfection rates after H. pylori eradication treatment during childhood. Interim analysis.

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Background:
Although its prevalence has decreased, Helicobacter pylori(H. pylori) infection remains a leading cause of gastrointestinal complications. Reinfection and recurrence after treatment pose ongoing challenges, especially in pediatric populations, where intrafamilial transmission increases the risk of infection. This study aims to investigate the prevalence of H. pylori reinfection/recurrence in individuals who underwent successful eradication therapy during childhood

Methods:
A prospective study was conducted using a 10-year database from our tertiary pediatric center in Brussels, Belgium. We identified children with H. pylori infection, confirmed by endoscopy, and successful eradication, as verified by a post-treatment ^{13}C-Urea Breath Test (UBT) in accordance with ESPGHAN guidelines. Informed consent was obtained from all children willing to participate. Data collection included questionnaires assessing quality of life, socio-demographic factors, and control UBT testing

Results (interim analysis):
To date, we have analyzed 66 individuals (32 males, 34 females) with a median age of 14 years (range: 9–21 years). Most were born in Europe (89.4%), but all had a migration background. The median time between treatment completion and the post-treatment UBT was 8 weeks (range: 6-20.5 weeks), and for the control UBT, 202.5 weeks (range: 108–541 weeks). H. pylori reinfection was detected in 12 individuals (18.2%) based on the control UBT. Preliminary analyses suggest that a time interval of ≥ 200 weeks between treatment completion and the control UBT is significantly associated with a higher risk of reinfection (OR = 6.74; 95% CI [1.35–33.75]; p = 0.0203). Moreover, younger age at eradication (≤6 years) also appears to be a significant risk factor (OR = 7.00; 95% CI [1.81–27.07]; p = 0.0048). No significant difference was found between reinfection and gender (p=0.163), nor gastrointestinal (GI) symptoms as assessed by the PedsQL GI questionnaire (stomach pain p=0.800, stomach discomfort p=0.489, nausea/vomiting p=0.346)

Conclusion:
In our pediatric cohort with a high prevalence of H. pylori infection, the reinfection/recurrence rate after successful eradication is 18.2%. Both younger age at eradication and a longer post-treatment interval significantly increase the risk of reinfection. Further analyses will help identify additional risk factors affecting reinfection and possibly contribute to decision-making about prescribing eradication treatment.

PW 17.

A survey on attitudes and knowledge on gastrostomies among caregivers of children with cerebral palsy at two belgian hospitals

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UZ Brussel, Vrije Universiteit Brussel (VUB), Ziekenhuis Oost-Limburg (ZOL), Genk

Objectives and Study:
The decision to place a gastrostomy is often met with a lot of doubt and resistance in caregivers of children with cerebral palsy (CP). This study aims to understand the attitudes and knowledge on gastrostomy care in caregivers of children with CP with or without a gastrostomy in place.

Methods:
Caregivers of children with CP filled out an electronic questionnaire assessing their attitudes on gastrostomy placement and care. Questions of the survey were developed based on focus group interviews amongst pediatric gastro-enterologists, neurologists and gastrostomy nurses.

Results:
The survey was completed by 35 caregivers (73% already had a gastrostomy in place). The questionnaire revealed that placement of gastrostomy leads to emotional distress, parents reported fear (97%) and sadness (61%) as emotions associated with the idea of a gastrostomy. As potential benefits of gastrostomy, participants reported reduction of feeding-related stress, easier administration of food and medication and improved growth. The main concerns reported regarding complications during and after gastrostomy placement were infection (82%), pain (51%) and tube dislodgement (52%). None of the participants rated the information provided by caregivers before placement of the gastrostomy as insufficient, with 72% choosing either ‘good’, ‘very good’ or ‘excellent’. In children with already a gastrostomy in place, 20% of the caregivers indicated that they were insufficiently informed about possible complications. When asked how they could be better informed and guided, 73% wanted more practice together with a specialized nurse, 61% wanted detailed information brochures and 74% chose explanation with video’s.

Conclusions:
Strong negative as well as positive emotions are reported amongst caregivers around placement of a gastrostomy. A larger and more international survey help clinicians to further understand caregiver’s emotions around gastrostomies, which will help in improving pre- and post-intervention counselling.

PW 18.

Congenital portosystemic shunt, a possibly neglected vascular malformation with potential severe short/long-term complications: about two cases.

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Aim:
Congenital porto-systemic shunt (CPSS) is a rare vascular anomaly (incidence: 1/40.000), consisting in diversion of the portal blood into the inferior vena cava (IVC), which may be associated with other cardiac or abdominal malformations. CPSS is categorized into intrahepatic or extrahepatic type. We describe two infants with CPSS, discovered fortuitously at abdominal Doppler ultrasound (DUS), both in the context of suspicion of necrotizing enterocolitis.

Case 1:
A boy with trisomy 21 and common atrioventricular canal successfully surgically treated, presented rectal bleeding related to proctitis at rectoscopy without evidence of portal hypertension. DUS at 1 month of life demonstrated porto-systemic shunt with portal vein (PV) hypoplasia.

Case 2:
A girl operated for esophageal and duodenal atresia, and malrotation, had DUS performed at 5 months first describing PV thrombosis. Subsequent DUS described rather PV hypoplasia associated with total diversion of mesenteric flow into the retrohepatic IVC, as confirmed by CT-scan with contrast. In retrospect, the child had hypoglycaemia and hyperammonaemia during her first months of life. The child died at seven months, due to fulminant RSV pneumonia.

Conclusion:
these cases illustrate the pauci-symptomatic nature of CPSS during the neonatal period. DUS and CT-scan can provide early detection and characterization. Long-term follow-up is required in case of persisting porto-caval shunting, which can induce encephalopathy, liver adenomas/hepatocarcinoma, hepatopulmonary syndrome, and porto-pulmonary hypertension. Beyond the age of two years, if no spontaneous closure occurs, therapeutic options include intervention-radiological or surgical occlusion provided an open PV, or physiological liver revascularization with a surgical mesoRex shunt.

PW 19.

Unexpected cause of rectal bleeding in a 14-year-old boy

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Introduction:
Digestive bleeding is a common cause of emergency room visits in Pediatrics, and manifests in various forms: hematemesis, hematochezia, rectal bleeding, melena, or even occult bleeding. In one-third of cases, the bleeding originates from the distal gastrointestinal tract. Etiologies often vary by age groups. In most cases, the source of the bleeding is quickly identified and is benign. However, in some instances, extensive exploration is required.

Clinical case:
A 14-year-old Caucasian boy presented to the emergency room with acute rectal bleeding, without any other complaints or symptoms. There was no history of physical trauma. His medical history includes constipation in early childhood. His vitals and clinical examination were normal. The initial assessment, including a blood test, stool analysis and an abdominal ultrasound, was normal.

A rectosigmoidoscopy revealed a well-defined, soft and bleeding polypoid lesion in the rectal mucosa. Infectious conditions were excluded. Imaging exams (thoracic and abdominal CT and pelvic MRI) were normal and no Meckel's diverticulum was identified. Histopathological analysis of the mucosal biopsy confirmed the presence of heterotopic gastric mucosa in the rectal mucosa.

Medical treatment with a proton-pump inhibitor (PPI) quickly halted the bleeding. A transanal minimally invasive surgery (TAMIS) was scheduled to completely remove the heterotopia. The patient recovered rapidly and has not experienced any further rectal bleeding since.

Discussion:
Gastric heterotopia (GHT) refers to the presence of mature and functional gastric mucosa (typically of fundic type) outside the stomach, usually due to a congenital developmental differentiation abnormality. It may also be acquired following local injury or inflammatory process. GHT can occur anywhere along the digestive tract, but rarely below the ligament of Treitz. Symptoms depend on its location and the patient's age. Bleeding occurs due to ulceration of the lesion from its acid production. The treatment typically involves surgical removal, as bleeding tends to recur once PPI treatment is stopped. The prevalence and risk of malignant transformation of GHT remain unclear.

Conclusion:
In case of rectal bleeding, the first step is to confirm and characterize the bleeding. The patient should undergo a thorough examination. After ruling out serious acute causes and common etiologies, rarer conditions, such as GHT, should be considered.

LO 5.

Outcome of Belgian children and adolescents with primary AML treated with the consecutive international protocols DB AML-01 and NOPHO-DBH AML 2012

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Background:
Acute myeloid leukemia (AML) accounts for 15 to 20% of pediatric leukemia cases. From 2010 to 2014, primary AML patients were treated according to the DB AML-01 protocol (DB) and, as of 2014, according to the NOPHO-DBH AML 2012 protocol (NOPHO2012). The aim of this study is to analyze the evolution of the outcome of these AML patients in relation to the AML treatment protocol.

Methods:
Both protocols were approved by the ethics committees of all participating institutions and written informed consent was obtained from parents/guardians of all patients. Baseline patient and leukemia characteristics were retrieved from the protocol database. Primary outcome parameters were overall survival (OS) and event-free survival (EFS). EFS was defined as time from diagnosis to any event (resistant disease, relapse, death, second malignant neoplasm) or last follow up date. For patients with resistant disease, the time of event was set at diagnosis. OS was the time between date of diagnosis and date of last follow up or date of death from any cause. Data were analyzed in SPSS statistics version 29.0.1.0.

Results:
Between 2010 and 2022, a total of 119 protocol patients were registered: 42 in DB, 77 in NOPHO2012. The main differences between both protocols were length and intensity of the induction courses, high risk (HR) group stratification criteria and the use of MRD for evaluation of response. Patient and leukemia characteristics were comparable except for a higher proportion of FLT3/ITD in DB. Median follow-up was 78 mo (DB) and 37 mo (NOPHO2012). EFS in the combined cohort was 59.4% (95%CI 50.8-69.6%) and OS was 71.2% (95%CI 60.8-83.3%). An improvement of EFS and OS was found, from 52.9% (95%CI 39.3-71.2%) and 70.7% (95%CI 57.1-87.7%) in DB to 63.4% (95%CI 52.8-76.0%) and 75.4% (95%CI 65.4-86.9%) in NOPHO2012. However, this difference was not statistically significant. Combining the presence of FLT3/ITD without NPM1 mutation and MRD evaluation by flow cytometry for risk group stratification was an effective approach to identify HR patients and for the allocation to HSCT. However, relapse rates remain high, even in standard risk patients.

Conclusion:
There was an outcome improvement from DB to NOPHO2012, although not significant and relapse rates remained high. Since sample sizes are small in this Belgian cohort, conclusions should be made with caution and evaluated against the international cohort treated with the same protocols.

LO 6.

Single-cell DNA and Surface Protein Characterization of High Hyperdiploid Acute Lymphoblastic Leukemia at Diagnosis and During Treatment

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Background:
High hyperdiploid (HeH) B-cell acute lymphoblastic leukemia (B-ALL) is the most prevalent subtype of childhood ALL. It is characterized by 51 or more chromosomes, with specific trisomies and tetrasomies and additional point mutations, but there is limited knowledge about the heterogeneity of these mutations. HeH B-ALL is generally associated with a more favorable outcome. However, due to its high incidence in children, it is responsible for about 15%-25% of all relapses, underscoring the importance of a better understanding of its biological complexity. For this reason, we performed multi-omics single-cell sequencing in patients with HeH B-ALL.

Methods:
Bone marrow or peripheral blood samples of 13 patients with HeH B-ALL were collected at diagnosis and during treatment. Samples during treatment were enriched for leukemia cells with the MARS gentle sorter. We performed targeted single-cell DNA sequencing with the Mission Bio Tapestri Platform, using our custom amplicon panel of 414 amplicons across 39 commonly mutated genes. This method detected single nucleotide variants, small insertions/deletions and large chromosomal copy number changes in around 4500 cells per sample. For some cases, additional single-cell surface protein sequencing was performed.

Results:
We detected (sub)clonal mutations in all patients, ranging from 1 to 16 mutations per case. Within all 13 cases at least one RAS mutant (KRAS or NRAS) subclone was detected (range: 1 to 4 subclones), indicating the importance of RAS signaling in HeH B-ALL development. NSD2 mutations were detected in 4 out of 13 cases and always in a subclone with RAS signaling mutations. Chromosomal copy number changes were mostly stable over all the leukemia cells, while mutations were typically subclonal, demonstrating that chromosomal changes were acquired prior to additional mutations. Based on surface proteins, different immune cell populations were distinguished and HeH B-ALL cells were found to be heterogeneous. Single-cell DNA sequencing could also detect residual leukemia cells during chemotherapy treatment, and analysis of chromosomal copy number changes aided in the accurate detection of these cells.

Conclusion:
This single-cell multi-omics study enabled us to extensively characterize the genetic and surface protein heterogeneity in patients with HeH B-ALL, showing subclonal RAS mutations in all cases, which might ultimately pave the way for novel diagnostic and treatment strategies.

SO 17.

Postoperative pediatric cerebellar mutism syndrome (pCMS) in children with a posterior fossa tumor - retrospective analysis at UZ Ghent

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Background/Aims:
Postoperative pediatric cerebellar mutism syndrome (pCMS) is a condition that can occur in children following resection of a posterior fossa brain tumor. It is marked by mutism or reduced speech, and emotional instability, and frequently co-occurs with neurological, cognitive, and affective disturbances. This study aimed to assess the clinical characteristics and identify risk factors for pCMS in children treated for posterior fossa tumors at UZ Ghent.

Methods:
This retrospective single-center study included all children treated for posterior fossa tumors at UZ Ghent between 2008 and 2022. Demographic, clinical and surgical data were extracted from patient records and analyzed to identify cases of pCMS. The definition of pCMS was based on the 2016 Delphi consensus, including the additional features outlined in the consensus article. Statistical analyses were performed to evaluate associations between pCMS and potential risk factors.

Results:
Data from 69 children were analyzed, with 38 cases (55%) of pCMS identified. The most common symptoms were neurological, such as hypotonia, hemiparesis, and oculomotor problems. Dysarthria was the most frequent speech impairment, while mutism was the most common language deficit. Anxiety and autistic behavior were the main affective disorders. pCMS occurred significantly more frequently in children with medulloblastoma (OR 3.81; 95%CI 1.33-10.95) and in cases where the tumor was located in a midline position (OR 12.87; 95%CI 1.51-109.71). Conversely, children with pilocytic astrocytomas were significantly less likely to develop pCMS (OR 0.26; 95%CI 0.09-0.72). A similar protective effect was observed for tumors larger than 5 centimeters (OR 0.17; 95%CI 0.05-0.52). No significant associations were found for other parameters, such as surgical approach, tumor proximity to the brainstem, and left-handedness.

Conclusion:
This study highlights the clinical characteristics and risk factors associated with pCMS in children treated for posterior fossa tumors. Neurological impairments were most commonly reported, with speech, language, affective, and cognitive disturbances potentially underrecognized. These findings emphasize the need for targeted postoperative monitoring. The identified risk factors, including tumor type and midline location, align with previous research. The observed protective effect of larger tumor size may be due to the higher proportion of large pilocytic astrocytomas in the cohort.

SO 18.

Rebuilding Immunity: Decoding Paediatric Stem Cell Transplant Recovery

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Universiteit Gent

Background/Aims:
Allogeneic haematopoietic stem cell transplantation (HSCT) is a life-saving treatment for children with malignant and non-malignant conditions. However, it is associated with significant risks, including delayed immune reconstitution, viral reactivations, and graft-versus-host disease (GvHD). This study aims to evaluate immune recovery post-HSCT in paediatric patients and identify factors influencing the reconstitution of immune cells to optimise outcomes.

Methods:
A retrospective analysis was conducted on 79 paediatric patients who underwent HSCT at Ghent University Hospital between 2010 and 2022. Patient records were reviewed to assess the recovery of T cells (CD3, CD4, CD8), B cells (CD19), natural killer (NK) cells, neutrophils, and monocytes. Data were analysed to determine the impact of variables such as age, donor type, graft source, and conditioning regimens on immune reconstitution.

Results:
Immune recovery showed significant variability based on patient age, donor type, and conditioning regimens. Younger children (3–12 months) experienced faster immune recovery. Bone marrow grafts supported better immune outcomes compared to peripheral blood or umbilical cord blood grafts. Haplo-identical donors delayed T cell recovery but enhanced NK cell counts. Conditioning with Busulfan improved B cell recovery but increased the risk of GvHD, while antithymocyte globulin (ATG) facilitated neutrophil recovery but heightened Epstein-Barr virus (EBV) reactivation. Relapse of haematologic malignancies was associated with poor immune recovery and higher mortality.

Conclusion:
This study highlights the importance of individualised HSCT strategies, including donor selection, graft source, and conditioning regimens, to optimise immune recovery and minimise risks. Future research with larger cohorts and advanced therapeutic approaches is essential to improve outcomes for paediatric HSCT patients.

PW 20.

Atypical Atypicals

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UZ Leuven

Background:
Atypical hemolytic uremic syndrome (aHUS), can be caused by malignancies, drugs and infections among other causes. There is a known association between acute lymphoblastic leukemia (ALL) and aHUS, but the underlying pathophysiology remains poorly understood. Hypotheses include aHUS occurring secondary to ALL, its chemotherapeutic treatment, or a shared genetic predisposition.

Case:
A 2-year-old girl was diagnosed with B-cell ALL and treatment according to the ALLTogether1 protocol was started. At diagnosis she was also suffering from RSV infection. Induction chemotherapy, consisting of dexamethasone, vincristine, asparaginase and intrathecal methotrexate, was complicated by anuric acute kidney injury (AKI) secondary to thrombotic microangiopathy necessitating hemodialysis. Persistent anuria, neurological symptoms, and alternative complement pathway activation led to a diagnosis of secondary aHUS and initiation of eculizumab, awaiting genetic testing. Renal function and thrombocytopenia improved steadily after eculizumab initiation. Genetic analysis for aHUS was negative, prompting discontinuation of eculizumab. However, a relapse AKI and thrombocytopenia necessitated reinstatement of eculizumab, with favorable clinical response. Eculizumab was eventually discontinued during the second consolidation phase, without subsequent kidney or hematologic deterioration. The course was further complicated by posterior reversible encephalopathy syndrome related to severe hypertension, severe mucositis following intrathecal methotrexate and atypical mycobacterial (ATM) cervical lymphadenitis. During maintenance therapy with methotrexate and 6-mercaptopurine, the patient experienced an aHUS relapse, again requiring hemodialysis. Given the previous favorable response, treatment with eculizumab was restarted, leading to stabilization. Currently the patient no longer requires dialysis, though ongoing hemolysis persists.

Discussion:
Despite negative genetic testing for aHUS, known triggers, including ALL, RSV infection and chemotherapy, strongly suggest secondary aHUS. However, the relapsing nature of aHUS, association with severe treatment toxicities, and ATM infection raise the possibility of an underlying genetic predisposition. The favorable response to eculizumab supports a complement-mediated process. Further genetic analysis is crucial to elucidate the underlying pathophysiology and optimize treatment strategies.

PW 21.

Plastic Bronchitis Associated with Acute Chest Syndrome in Sickle Cell Disease

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Background/Aims:
Plastic bronchitis is a rare but severe complication of acute chest syndrome (ACS) in sickle cell disease patients. It is characterized by the formation of rubber-like bronchial casts that can cause widespread obstruction of the airways. It can also be seen in other conditions as cystic fibrosis or following Fontan surgery. We would like to alert doctors for this rare but life-threatening complication by presenting a case of a 4 year old boy with acute chest syndrome and severe respiratory failure.

Methods:
Single case report.

Results:
A 4 year old boy with HbSS sickle cell anemia presented to the emergency department with fever, left-sided chest pain and severe respiratory distress. Chest X-ray showed a retrocardiac infiltration. He was diagnosed with ACS and admitted with High-flow oxygen therapy, broad-spectrum antibiotics and morphine. Despite treatment, his respiratory status deteriorated rapidly, necessitating intubation and mechanical ventilation. Imaging demonstrated complete opacification of the left lung with mediastinal shift to the right. Bronchoscopy performed after intubation revealed extensive occlusion of the left mainstem bronchus by thick rubbery casts consistent with plastic bronchitis.

Therapeutic interventions in the ICU included mechanical ventilation, thoracentesis for pleural effusion, repeat bronchoscopy for mechanical clearance of plugs, inhaled nitric oxide for ARDS, mucolytic agents, diuretics and exchange transfusion for reduction of HbS. The patient's condition improved, with successful extubation after nine days and full recovery.

Conclusion:
Plastic bronchitis, although rare, should be considered in cases of ACS with severe respiratory deterioration. Early diagnosis through bronchoscopy and tailored management strategies are crucial to improving patient outcomes. Further research is warranted to optimize treatment protocols and preventive strategies.

PW 22.

The double-edged sword of immunosuppression: post-transplant malignancies after kidney transplantation in an 11-year-old boy.

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Introduction:
Malignancies after solid organ transplantation are a known complication, with post-transplant lymphoproliferative disease (PTLD) arising in one to three percent of children after a kidney transplant. Here, we describe an 11-year-old boy with a history of congenital dysplastic kidneys treated with peritoneal dialysis and a living donor kidney transplant at 21 months of age, developing two types of malignancies 9 years later.

Results:
At the age of 11, the patient had chronic kidney disease stage 4 (CDK4) and hypertension. He received immunosuppression (tacrolimus, prednisolone), anti-hypertensive medication, growth hormone and monthly iron and darbepoeitin. At presentation, he had several dermatological lesions (verrucae vulgares, mollusca contagiosa) and an exophytic mass in the left axilla, present for 2 months and initially diagnosed as a giant mollusca. Ultrasound examination of the lesion and thoracic wall revealed adenopathies. Viral screening in the blood showed a positive PCR for EBV (log 3.62 EBV IU/mL) and polyoma (log 2.87 copies/mL).

PET-CT showed several adenopathies in the axilla, nasopharynx, and neck with intraspinal/intracranial extension and additional hypermetabolic nodules in the lung and liver. A biopsy of the nodule in the axilla showed an EBV+ T-cell PTLD. Additional biopsies were performed from the other involved sites since some of these were already visible at previous imaging studies and showed a different metabolic activity on PET. These revealed the presence of an EBV-driven smooth muscle tumor in the nasopharynx, ethmoid, lung and liver. Renal biopsy to further investigate the CKD4 showed acute tubular injury with segmental to global glomerulosclerosis and mild hyaline arteriolosclerosis; IFTA grade 2.

Due to the rarity of T-cell PTLD, treatment options were limited and the patient was initially treated with R-CHOP, but experienced multiple treatment-related toxicities. Evaluation after four courses of R-CHOP showed stable EBV+ smooth muscle lesions with uncertainty regarding the extend of response of the T-cel PTLD, prompting treatment switch to weekly vinblastine.

Conclusion:
Long-term immunosuppression after a solid organ transplant is necessary to preserve the graft but carries the risk of the development of malignancies, such as PTLD. Careful clinical follow-up and monitoring of relevant viral reactivation and consequent adjustment of immunosuppression are necessary.

SO 19.

Filamin C associated cardiomyopathy in pediatric patients: a Belgian case series and literature review

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Introduction:
In recent years, there is increasing interest in the role of the Filamin C (FLNC) in cardiomyopathy. FLNC, a member of the filamin family of actin-binding proteins, plays a vital role in maintaining the structural integrity, signaling and mechanotransduction of sarcomeres in cardiac and skeletal muscles. Variants in the FLNC gene are extensively described in skeletal myopathies and all types of cardiomyopathies, mostly in adults. But increasing literature discussing an early-onset, often isolated form of cardiomyopathy is being published. The yield of FLNCvariants in different CMP subtypes is reported to be between 1-8%.

Aim:
To give a complete overview of currently published pediatric patients with cardiomyopathy and a causative variant in FLNC including the known Belgian patients with a distinct CMP phenotype.

Methods:
Data of Belgian pediatric patients with a FLNC associated cardiomyopathy were collected. Literature was searched to create an overview of previously published pediatric cases (diagnosis at age <18y). The FLNC main transcript (NM_001458.5) was used as reference.

Results:
A summary to date of FLNC variants found in published pediatric cases is shown in the attached figure. In Belgium, 8 patients with a genetic variant in FLNC were identified and included in this case series. A total of 70 patients were described, 61.4% were male (n=43). The mean age at presentation was 7.6 years (+/-6.1). 31.4% of patients presented with associated extracardiac manifestations – such as myopathy or orthopedic anomalies. Missense variants were most frequent (65.7%), followed by nonsense variants (15.7%). Truncating variants – caused by nonsense, frameshift or splice-site mutations – were mostly associated with DCM and ACM (P <0.001). Respectively 60% of DCM (n=9) and 85.7% of ACM (n=6) were caused by truncating variants. Missense variants can result in all CMP subtypes, with an important proportion of RCM (60.4%, n=29). 18 patients (25.7%) underwent a heart transplantation, 4 received an ICD (5.7%), and 4 patients (5.7%) suffered from sudden cardiac death (SCD) at presentation.

Conclusions:
A significant association between genetic variant type in FLNC and CMP subtype is described, with an important proportion of pediatric patients presenting with RCM.

PW 23.

Subacute encephalopathy with increased CSF lactate revealing chronic laughing gas abuse

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Background:
Chronic recreational use of nitrous oxide (N2O), commonly known as laughing gas, is increasing significantly, particularly among teenagers. While occasional use poses minimal risks, chronic abuse can lead to serious neurological impairments. Common aftereffects include myelopathy and neuropathy, although brain involvement is rare.

Case report:
We present a case of a fifteen-year-old girl admitted to our emergency department with subacute confusion. She was living partially on the streets, but had no history of drug abuse or sexual relations and was afebrile. She was unable to walk.

Clinical examination of the patient revealed retrograde amnesia, confusion, normal cranial nerves but weakness of the lower limbs (MRC 2/5), hypoesthesia below T10, epicritic hyposensitivity, impaired sense of position, and bladder globe. Rotulian reflexes were exaggerated (3/4) while achillean reflexes were absent, babinski sign was present bilaterally and cutaneous abdominal reflexes were normal. Therefore, a subacute encephalopathy associated with peripheral neuropathy and myelopathy with cordonal posterior syndrome was suspected.

Toxicology, metabolic, auto-immune and genetic testing came back negative. Bloodwork showed a decrease in vitamin B12 (< 150 ng/L) and increase in homocysteine (90 pmol/L). Spinal cord magnetic resonance imaging (MRI) was normal. Cerebral MRI showed diffuse FLAIR hypersignal with a reduction of the diffusion in the ADC map sequence. Lumbar puncture revealed elevated CSF lactate (4.8 mmol/L) with normal blood lactate. Nerve conduction studies showed no response on both peroneal and tibial nerves. Normal responses were found in the upper extremities.

The presence of white matter lesions associated with restricted diffusion coefficients and elevated lactate levels led us to suspect a mitochondrial disease. However, severe neuropathy with myelopathy affecting the posterior columns of the spinal cord, low B12 and high homocysteine, suggested N2O toxicity.

Extensive anamnesis revealed chronic N2O abuse for over a year. The patient was treated by high doses of vitamin B12. Control of CSF lactate at 15 days after last use of N2O was normal (2.2 mmol/L).

Conclusion:
Although extremely rare, subacute encephalopathy can reveal N2O intoxication in addition to myelopathy and neuropathy. Elevated CSF lactate has never before been described but could be explained by neurotoxicity of N2O leading to cytokine imbalance, brain hypoxia, and acidosis.

PW 24.

Walking speed during daily living, a clinical endpoint for neuromuscular diseases?

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Background:
Advancements in wearable technologies enable reliable measurement of walking speed and other digital endpoints, meeting the demand for objective quality-of-life measures. Clinical trials can then incorporate novel outcomes beyond traditional metrics like symptoms and life expectancy. For regulatory acceptance, such outcomes must demonstrate validity, reliability, feasibility, accuracy and sensitivity to change.

Methods:
This presentation builds on a systematic review of literature, evaluating the current state of validation and initiatives aimed at regulatory qualification. Additional articles from regulatory agencies websites were also included to provide a more comprehensive analysis.

Results:
From an initial pool of 503 publications, only 11 were relevant for identifying real-life walking speed as a potential outcome in conditions such as muscular dystrophies, Parkinson's disease sarcopenia and others. All papers except 1 were part of the broad initiative, namely the qualification of the SV95C and MOBILISE-D. The stride velocity 95th centile (SV95C) was the first-ever digital endpoint qualified by the European Medicine Agency for the use in clinical trial in patient with DMD above 4 years old. This achievement relies on its excellent metric properties. There have been no outcome or device that have been validated by the U.S. Food and Drug Administration (FDA) for the assessment of walking speed in real-life. We only found 4 letters of intent on the FDA website regarding our concept of interest.

Conclusion:
Walking speed as a digital endpoint holds significant promises for both research and clinical applications. It is particularly relevant for neuromuscular disorders but also shows potential across diverse fields, including cardiopulmonary, renal, genetic and psychiatric diseases, as well as neurodevelopmental disorder. This technology requires additional research to be fully integrated in clinical practice. Advancements in machine learning are expected to enhance the interpretation of these data. The ability to monitor walking speed in daily living provide the opportunity for a personalized medicine by tailoring treatments to the individual performance of each patient.

PW 25.

A case of tay-sachs disease

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Introduction:
Axial hypotonia and muscle weakness in early childhood can be caused by various factors including central nervous system disorders, neuromuscular diseases, genetic syndromes, metabolic diseases or neonatal conditions. This case describes an 11-month-old female infant presenting with axial hypotonia and neurodevelopmental regression over 3 weeks.

Clinical examination at paediatric emergency revealed axial hypotonia, bilateral mild ptosis, inexpressive face, bilateral reactive mydriasis, and head circumference increasing from 50-75th to 90-95th percentile. The patient had no significant medical history, nor familial history.

Methodology & results:
Initial examinations ruled out infectious, tumor related, and accidental causes. EEG, MRI, and blood gases were normal, while fundoscopy showed bilateral cherry-red spots. Blood analysis only revealed cellular lysis with elevated LDH. Electromyography and metabolic testing were inconclusive. CGH array reveal no abnormalities. Genetic analysis through targeted exome sequencing of lysosomal storage disorder genes confirmed Tay-Sachs disease, identifying two significant HEXA gene variants: a maternal variant (c.1258del, p.Trp420Glyfs*3) and a paternal variant (c.775A>G, p.Thr259Ala), known to reduce HEXA enzyme activity in heterozygous carriers.

Discussion:
This GM2 gangliosidosis is a rare autosomal recessive disorder causing fatal neurodegenerative disease through intra-lysosomal glycosphingolipid accumulation due to beta-hexosaminidase A deficiency. The disease's severity and onset depends on the remaining enzyme production. Symptoms, including muscle weakness, poor attention, and exaggerated startle responses, appear before age one and progress to seizures, blindness, spasticity, and death, typically before age four.

While no curative treatment exists, patients receive palliative care including speech therapy and neurological follow-up. Current research explores gene therapy, stem cell transplants, and enzyme replacement. The child is enrolled in a gene therapy trial with confidential outcome.

Conclusion:
Infants with neurodevelopmental regression and axial hypotonia require fundoscopy to search for cherry-red spots. Genetic testing is crucial for metabolic disease diagnosis. Prenatal/pre-implantation testing for families with index cases are essential.

PW 26.

A rare case of severe automutilation in an infant

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Background:
Case presentation of an 11-month-old girl with insensivity to pain leading to severe auto-mutilation

Clinical History:
A baby girl presented at age 11 months at the General Pediatric Outpatient Clinic because of repeated self-inflicted injury to the fingers and the tongue. Since age 9 months, after onset of teething, parents have noted that she bites in her fingers resulting in deep wounds. She also has bitten of the tip of her tongue repeatedly.

Retrospectively, parents remember absence of crying when vaccinated , and after falls. Family history is negative for neuropathies, parents are non-consanguineous. Clinical examination showed a scarring wound of the tip of the tongue but was otherwise normal, including neurological exam with normal deep tendon reflexes and reactions to light touch. Sweating test showed normal results. With the clinical suspicion of congenital insensitivity to pain (CIP), genetic testing was performed but this only showed one class 3 variant in SCN9A. Further genetic analysis is pending.

Discussion:
CIP is part of the group of hereditary sensory and autonomic neuropathies (HSAN) in which there is a dysfunction of autonomic and/or sensory nerves. Multiple genes are described to be involved in several types of CIP. In our patient, because of the isolated insensitivity to pain with preserved sweating and light touch, autosomal recessive SCN9A is the most likely diagnosis but this has not been confirmed to date. Patients with CIP need close monitoring for cornea lesions, fractures and wound infections. Deep visceral pain is also less well perceived.

Conclusion:
CIP is a rare cause of automutilation in infants. Affected patient will need continuous adaptation to lifestyle since there is no medical treatment. Increased vigilance for complications is paramount.

LO 7.

Genetic background of patients with childhood-onset cardiomyopathy: results from a retrospective cohort study

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Background:
Childhood-onset cardiomyopathy (CMP) has a rare incidence of approximately 1/100 000 children. 40-50% of children have a positive familial history of cardiomyopathy or sudden cardiac death and the general yielding across the different types of CMP is 50-60%, with dilated CMP (DCM) having the lowest genetic yield (20-30%). A high proportion of rare disease phenocopies such as metabolic disorders and RASopathies is generally found in early childhood (<10yrs).

Aim:
To investigate genotype-phenotype correlations and cardiac outcomes.

Methods:
Children under 18yrs who presented at our institution between 1990-2024 with any type of CMP, were included in the study. Demographic, genetic, and cardiac outcome data were collected and analyzed.

Results:
A total of 157 children (63.1% male, mean age: 5.3±5.8yrs) were diagnosed with CMP. The most frequent subtypes were DCM (49%) and hypertrophic CMP (HCM, 47.1%) with fewer cases of restrictive CMP (RCM, 5 patients) and arrhythmogenic CMP (ACM, 1 patient). Nearly half of the patients (46.5%) were diagnosed during infancy. Genetic screening was performed in 68.8% of patients, most frequently in HCM (74.3%). Overall, a causative variant was identified in 56.5%. Genetic yield was higher in children with HCM in comparison to those with DCM (65.4% vs 46.9%, p=0.067). Additionally, in 15.7% variants of unknown significance (VUS) were found. A trend of higher genetic yield was seen in older age groups. In infants (0-1yrs), a variant in a metabolic or RASopathy gene was found in 57.1%. Notably, sarcomere gene variants, traditionally associated with adult-onset CMP, contributed to 28.6% of infant cases, as displayed in figure 1 b. Major cardiac events occurred in 43.3%. Of all patients 25.5% died, 12.1% underwent a heart transplant and 7% received an implantable cardioverter-defibrillator. No significant differences in outcomes were observed across CMP subtypes.

Conclusion:
Genetic testing identified the underlying etiology in over 50% of patients with childhood-onset CMP. While rare disease phenocopies are highly prevalent in infants, sarcomere gene variants –once thought to be limited to adult-onset CMP– can also manifest in a very young age. These findings underscore the importance of early genetic testing to guide diagnosis and management.

LO 8.

Risk factors for reintervention in children with subaortic stenosis : a 20-year single-center experience.

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Objective:
Subaortic stenosis (SAS) is a lesion of the left ventricular outflow tract found in 2-6% of children with congenital heart defects. Despite good short-term surgical outcomes, recurrences are not rare, with reintervention required in up to 30%. The mechanisms behind lesion recurrence remain unclear. Tunnel-like lesions, higher preoperative peak gradients, and younger age at surgery have been associated with increased recurrence risk. Our study aimed at identifying risk factors for reintervention in children with recurrent SAS following a first successful resection.

Methods:
This retrospective study included 76 pediatric patients treated for SAS at University Hospital Saint-Luc (Brussels) from 2000 to 2020. Data from ultrasounds, clinical records and surgeries were analysed, considering patients' age, weight, height at surgery, type of SAS, associated cardiac malformations and concomitant myomectomy. Statistical analysis was conducted using IBM SPSS software to identify predictors of recurrence.

Results:
The median age at surgery was 3 years (IQR 25-75: 1.6-5.6 years), with a male predominance (60.5%). Nearly 80% of patients had associated cardiac malformations. After several years of follow-up, the recurrence rate was 13.1%. Younger age, smaller size, and a lesion-to-valve distance of 8 mm or more, particularly in fibromuscular or tunnel-like lesions, were correlated to higher reintervention risk. The 10-year reintervention-free survival rate was 89.5%.

Conclusion:
Managing SAS in children remains challenging due to the significant risk of recurrence. The study identified key predictors of reintervention, stressing the importance of individualised treatment plans and close monitoring, especially for younger patients with specific anatomical abnormalities, to improve long-term outcomes.

LO 9.

Impaired Cardiopulmonary Fitness in Marfan Syndrome: The Need for Customized Exercise Guidelines

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Background:
Aortic dilatation is a key cardiovascular manifestation of Marfan syndrome (MFS), with aortic dissection being the primary cause of mortality. Exercise guidelines for patients with MFS have been stringent due to concerns about triggering aortic dissection. While reduced exercise capacity has been suggested in MFS, there is limited literature on this in children.

Method:
A prospective study was conducted involving 19 children with MFS (68,4% boys, 12,2±3,5yrs). A control group of 19 healthy children (68,4% boys, 12,5±3,3yrs), matched for sex, age, weight and height, was selected from a database of cardiopulmonary exercise tests (CPET) performed at Ghent University Hospital. Both groups underwent CPET and echocardiographic evaluations of aortic diameters and cardiac function. Maximal test duration, workload, heart rate (HR), oxygen consumption (VO2), and pulmonary parameters like ventilatory efficiency (VE) and breathing reserve (BR) were compared between the two groups.

Results:
Children with MFS showed significantly reduced cardiopulmonary fitness compared to controls. This was demonstrated by a shorter CPET duration (9,4min [IQR 7,9–11,0] vs. 12,8min [IQR 11,2–13,8]; p=0,001), a lower percentage of predicted workload (71,6% [IQR 68,9–89,2] vs. 97,8% [IQR 87,5–119,8]; p<0,001) and reduced peak VO2 (73% [IQR 66,5–80,5] vs. 89% [81–94,5]; p<0,001).

VE (p=0,416) and BR (p=0,549) were similar, suggesting pulmonary limitations are unlikely causes of the reduced exercise capacity.

Consistent with previous studies, children with MFS exhibited a lower maximum HR (183bpm [IQR 169–190] vs. 188bpm [IQR 185–197]; p=0,028), indicating chronotropic incompetence. In patients with MFS, beta-blockers did not significantly affect HR (p=0,243) or peak VO2 (p=0,713). Maximum HR was positively correlated with peak VO2 (ρ=0,53, p=0,021). No associations were found between echocardiographic parameters and exercise capacity.

Conclusions:
Children with MFS have significantly reduced cardiopulmonary fitness compared to healthy controls. While pulmonary restrictions appear to play a minimal role, the underlying cause remains uncertain, though subclinical cardiac dysfunction, reduced muscle strength, and physical deconditioning may contribute. The observed chronotropic incompetence is a possible cause of the limited exercise capacity. Further research should explore the factors affecting exercise performance to develop individualized rehabilitation programs.

SO 20.

Evaluation of cardiopulmonary exercise testing in children with overweight and obesity: is there a need for tailored protocols and advice?

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Background/aims:
Cardiopulmonary exercise testing (CPET) evaluates cardiorespiratory capacity and physical fitness. However, testing protocols and predicted values are weight-based, posing difficulties for children and adolescents with overweight and obesity (OW/OB).

Methods:
Single center data from CPET in healthy children and adolescents referred for minor exercise complaints were retrospectively reviewed (June 2019 – November 2023). A standardized, continuous-ramp protocol on a cycloergometer was used. OW/OB was defined based on BMI z-score.

Results:
375 children and adolescents were included, 71 (18.9%) classified as living with OW/OB. Mean (±standard deviation) age, weight and length were 12.1±2.7y, 43.6±12.8kg and 156±16cm in the control group vs. 11.2±2.6y, 56.5±16.9kg and 153±15cm in the OW/OB group. There was a male predominance in the control group (66.8% vs. 52.1%).

Both groups showed data consistent with maximal effort. Children with overweight or obesity had a higher heart rate and oxygen consumption (VO2) at rest . Regarding maximal exercise (maximal VO2 and load), outcome parameters were equal, respectively 1572.8±530.3 vs. 1538.3±527.2l/min for VO2max (p=0.555) and 125±52 vs. 116±48W for maximal load (p=0.170). On the contrary, predicted values (expressed as a percentage of the absolute value on the weight-based predicted value) were significantly higher in children with normal weight compared to OW/OB, resp. 87.4±14.9 vs. 68.9±14.8% (p<0.001) for VO2max and 90.5±18.1 vs. 68.6±17.3% (p<0.001) for maximal load.

Conclusion:
Maximal exercise capacity is lower in OW/OB, hence physical rehabilitation is an important cornerstone in multidisciplinary strategies. Differences in resting HR, and predicted maximal VO2 and load suggest underlying differences in cardiopulmonary fitness and metabolism. Further research to optimize and validate CPET protocols and prediction equations is needed, aiming towards tailored advice to increase motivation and to prevent injuries.

PW 27.

Late but acute complication of percutaneous ASD closure

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Background:
Atrial Septal Defect (ASD) is frequent and requires closure once the right ventricle (RV) is dilated and left-to-right shunt significant. Percutaneous closure is safe and demands a short hospital stay. Complications (embolization, thrombosis, erosion) are rare but severe, usually at short-term.

Methods:
We report the case of a girl who, 8 months after percutaneous ASD closure, presented with cardiac shock and neurological symptoms due to device thrombosis and tamponade. Diagnosis, treatment and follow-up were carried out in a tertiary care hospital.

Results:
A 11yo girl, with a central ASD II, no symptom, and no other medical history than hypercholesterolemia in her family, showed a dilation of the RV (RV/LV = 0.9), significant shunt (Qp/Qs = 2.3) and slightly elevated RV pressure (33mmHg + CVP). As the anatomy allowed, percutaneous closure was performed. After balloon sizing, an Occlutech Figulla 16.5mm was implanted - larger than predicted by echocardiography. Patient was discharged after 24h with aspirin. Follow-up until 6 months was favorable, anti-aggregation was stopped. However, at 8 months, following complaints of back- and headache, she was had fluctuating consciousness, clonic movements followed by left hemiparesis, and hemodynamic shock. Echocardiography revealed massive pericardial effusion and thrombi on both sides of the device. Pericardiocentesis yielded fresh blood and stabilised the patient. On surgical exploration, erosion was shown on left atrial roof. The device was retrieved, ASD closed (patch) and lesions directly closed. Surgery was well tolerated. Anticoagulation with LMWH then rivaroxaban was given. The left cerebellar stroke on MRI had no correlation with the clinic, which recovered in 4 days. No pro-thrombophilic issue was discovered.

Conclusion:
Cardiac erosion is a rare but potentially fatal complication of percutaneous ASD closure. It usually presents within the first 72h. Aspirin prevents thrombi formation during the endothelialisation of the device. Risk factors for cardiac erosion include deficient rims, instability of device, over/undersized device. This particular case is unusual because of its late presentation. One question raised is about the possible overestimation of the ASD diameter by balloon sizing. In conclusion, awareness must be raised about the rare though serious complications that may arise in the many patients having undergone ASD closure, mostly in the short-term, but also after a longer interval.

LO 10.

A mutant zebrafish model in the search for new therapies for childhood chronic kidney disease

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Background/Aims:
Children with chronic kidney disease (CKD) face a reduced life-expectancy due to an accelerated cardiovascular disease (CVD). Indeed, histological signs of CVD are already present prior to dialysis initiation even in young children with CKD. Protein-bound uremic toxins (PBUT), i.e. toxic organic metabolites that accumulate with deterioration of kidney function, are recognized as key players in the pathophysiology of accelerated CVD by contributing to the chronic pro-inflammatory state. Treatment options that can mitigate PBUT-driven inflammation and CVD are lacking.

Methods:
We hypothesize that a CKD zebrafish model, created by selective knock-out of genes involved in kidney development (wt1a, nup107, eya1, myo1e, hnf1β-α, pax2a) by CRISPR-Cas9 technology, can be used for the discovery of new therapeutic treatments specifically targeting accelerated CVD in children. Zebrafish (Danio Rerio) offers the complexity of an intact in vivo model, and experiments in larval stages can be performed at scale, allowing high throughput applications such as unbiased in vivo drug screening.

Results:
We found in wild type (WT) zebrafish the presence of PBUTs, indicative for orthogonal pathways and metabolites in zebrafish underscoring its suitability for PBUT research. Also, PBUT administration to WT larvae resulted in a decrease in cardiac function and an increase in oxidative stress. The transgenic Tg(kdrl:GFP) reporter line that visualizes the vascular endothelial and smooth muscle cells, was incorporated into the CKD zebrafish model, allowing visualization of the vascular abnormalities in the CKD model. The clearance of fluorescently labeled dextran and a proteinuria nanoluciferase reporter line was used for description of the kidney phenotype.

Conclusion:
We propose a widely applicable CKD zebrafish model, providing the opportunity to positively impact the currently unacceptable high CVD mortality present in the pediatric CKD population. We aim to explore the in vivo efficacy of drugs targeting PBUT-driven inflammatory pathways with the established CKD-zebrafish models.

LO 11.

Insulin Resistance in Young Patients with Autosomal Dominant Polycystic Kidney Disease

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Background:
Autosomal dominant polycystic kidney disease (ADPKD) is the most common monogenic kidney disorder, characterized by progressive cyst formation (in kidneys and other organs, such as the liver, as well), leading to kidney enlargement and kidney failure. Altered glucose metabolism is increasingly recognized as a key feature in ADPKD, with reports of insulin resistance (IR) in adult patients with preserved kidney function, and ADPKD being an independent risk factor for post-transplant diabetes mellitus. However, it remains unclear whether this defective glucose metabolism is an early event in ADPKD. We aimed to characterize the glucose and insulin sensitivity profile of young ADPKD patients, using an oral glucose tolerance test (OGTT).

Methods:
Genotyped patients with ADPKD aged 12-25 years with normal kidney function and no history of diabetes were recruited from 3 Belgian academic centers (University Hospitals of Leuven, Liège and Brussels) and matched to healthy controls by age, sex and BMI. Participants underwent a 2-hour OGTT, classifying glucose tolerance per WHO criteria. IR indices were calculated, including HOMA-IR (fasting index of IR), Matsuda-DeFronzo index (incorporating dynamic insulin and glucose levels), and triglyceride index (linking lipid and glucose metabolism). An MRI measured height-adjusted total kidney volume (HtTKV) in the ADPKD group within 6 months around the OGTT. Analyses aimed to determine whether ADPKD represents an independent risk factor for IR in young ADPKD patients, and to assess risk factors for early development of IR, including genotype, BMI, hypertension and HtTKV.

Results:
27 patients with ADPKD (mean age 20.6 ± 3.7 years) and 20 controls (21.9 ± 1.3 years) were enrolled. All controls had normal glucose tolerance, whereas 3 patients with ADPKD (11%) showed impaired glucose tolerance. IR was higher in the ADPKD group, with elevated HOMA-IR (1.98 ± 0.95 vs. 1.30 ± 0.59) and reduced Matsuda-DeFronzo index (6.16 ± 2.61 vs. 8.83 ± 2.89). Glucose and insulin levels were significantly higher in ADPKD patients at fasting and all OGTT time points (30, 60, 90 and 120 minutes). Triglyceride index was similar between groups (8.09 ± 0.23 in ADPKD group vs. 7.97 ± 0.46).

Conclusion:
Preliminary data reveals significant differences in IR and OGTT results in young ADPKD patients compared to controls, suggesting early metabolic dysregulation. Ongoing recruitment aims to confirm these findings and identify contributing factors.

PW 28.

Kidney Replacement Therapy in a 15 year old boy with ADPKD and multiple disabilities: clinical case description and discussion of the ethical dilemma

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We describe a very complex case with regard to the initiation of kidney replacement therapy (KRT) in a 15 year old boy with multiple disabilities and autosomal dominant polycystic kidney disease (ADPKD), leading to difficult ethical, medical and psychosocial challenges.

X is 15 year old boy diagnosed incidentally with ADPKD at the age of 12 years with bilateral kidney cysts and recurrent urinary tract infections. The patient is severe and multiple disabled (profound mental retardation, epilepsy, cerebral palsy GMFCS V, MACS V, EDACS V, CFCS IV, VFCSV). He has a gastrostomy and receives tube feeding because of feeding problems associated with huge total kidney volumes. He is part of a family with three siblings. The father and the oldest sister are also diagnosed with ADPKD. The other siblings are not yet screened for ADPKD. The family puts extraordinary effort to take care of their son and to optimize his development and physical wellbeing. He has been taken care of at home and receives home education.

The boy's kidney function deteriorated rapidly and KRT was considered. As shown in literature, the initiation of KRT in children with severe developmental disabilities remains a topic of intense debate among professionals. However, the boy had a good quality of life and the parents expressed their desire to pursue the treatment. In addition, ADPKD is an inherited disease and in this specific case already three members of the same family have been diagnosed with it, and thus the discussion with regard to (living-related) transplantation was very complex.

According to the review of the literature and to the local multidisciplinary meeting, including the nephrology team, the transplant surgeon and the rehabilitation pediatrician, the different options of the type of KRT with pros and cons have been evaluated. These options have been also discussed with the parents, with special attention to his global functioning and wellbeing.

In this presentation we aim to share the decision making process of our team and the parents, with special attention to the ethical, medical and psychosocial challenges that occurred.

PW 29.

A qualitative study on the parental perspectives of children with nocturnal enuresis.

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Background:
Enuresis nocturna (NE), commonly referred to as bedwetting is a prevalent condition among children. It is clinically defined as the involuntary nocturnal voiding of urine in children aged five years and older. NE impacts not only the affected child but also their broader environment, including the well-being of their parents. This qualitative study aims to examine the repercussions of NE on parents, and to identify the specific challenges they face in daily life as a consequence of their child's condition.

Methods:
We conducted semi-structured interviews with parents of a child experiencing enuresis. Participants were recruited after providing informed consent after urology consultations at University Hospitals Leuven or H. Hart Hospital Leuven, located in Flanders, Belgium.

Results:
The study included interviews with 11 parents of children aged between 6 and 13 years old (median age: 8 years). Of the children, 64% were boys (n = 7) and 36% were girls (n = 4). Parents identified the impact of bedwetting on their children across three key domains: emotional well-being, social interactions, and triggering factors. Furthermore, the effects on parents were categorized into five dimensions: parental concerns, the parent-child relationship, family dynamics, advice for other parents, and the influence of societal taboos.

Conclusion:
NE affects various aspects of life for both children and their parents, potentially affecting overall quality of life (QoL). It is crucial for healthcare providers to discuss this issue openly to deliver comprehensive and holistic care.

LO 12.

Phenotypic and genotypic characterization and long-term follow-up of patients with resistance to thyroid hormone: a retrospective multicentric cohort

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Background:
Resistance to thyroid hormone β (RTHβ) is a rare disease caused by an inactivating mutation in the thyroid hormone receptor beta gene (THRB). This condition leads to elevated thyroid hormone levels with non-suppressed TSH levels. The clinical phenotype is highly variable, ranging from asymptomatic to signs of hyperthyroidism and/or hypothyroidism. This study aims to analyse the genotype and phenotype of pediatric and adult patients followed in three Belgian referral centres and describe the long-term outcomes.

Methods:
We conducted a retrospective multicentric cohort study involving patients diagnosed with RTHβ either genetically or biochemically at UZ Leuven, OLVZ Aalst and UZ Brussel. Patient records from January 2000 to September 2022 were reviewed for genotype, clinical presentation, biochemistry, imaging, therapy and potential long-term effects like learning difficulties, cardiovascular comorbidities and bone demineralization.

Results:
The study included 51 individuals with RTHβ (44 adults, 7 children), of whom 45 had a pathogenic variant. The most prevalent signs/symptoms in the adult population were palpitations (60.5%), anxiety/nervousness (44.2%) and goiter (37.2%). Asymptomatic patients accounted for 18.6% of the adult population. In the pediatric population 33.3% were asymptomatic and the most common symptom was learning difficulties (66.7%).

Cardiovascular problems were significant: 31.8% had atrial fibrillation, 31.8% had arterial hypertension, 9.1% experienced CVA/TIA and 6.8% had myocardial infarction. Cardiac ultrasound and ECG were performed in 59.1% and 63.6% of adults, respectively. Bone densitometry, conducted in 29.5%, revealed osteopenia or osteoporosis in 92.3% (12/13). Among adults, 81.6% did not obtain higher education. Betablockers were prescribed to 56.9%, while only 5.9% used 3,5,3'-Triiodothyroacetic Acid (TRIAC).

Conclusion:
Patients with RTHβ exhibit very heterogeneous clinical presentation. Learning difficulties are prevalent in children, while adults often have atrial fibrillation. This study underscores the importance of a personalized approach in treating and monitoring RTHβ patients. Systematic screening for bone and cardiovascular problems is crucial. Establishing international registries and programs, such as EU Reference Network of Rare Endocrine Conditions (ENDO ERN), is essential for improving patient outcomes.

PW 30.

Endocrine sequelae after pediatric craniopharyngioma treatment: a single-center retrospective cohort study

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Objectives:
Craniopharyngiomas(CP)are rare brain tumors with a low mortality rate, but with significant morbidity, in part due to the various long-term endocrine sequelae related to hypothalamic/pituitary deficiencies. Our objective was to assess the prevalence of endocrine dysfunction and outcome after treatment of CP at our institution and to apply the novel diagnostic criteria for hypothalamic syndrome (HS). In addition, we give an overview of treatments already attempted for hypothalamic obesity (HO).

Methods:
This retrospective cohort study included children treated and followed up for CP at the pediatric oncology and endocrinology department at University Hospitals Leuven between January 2000 and December 2023. Clinical and endocrine characteristics were collected during a five-year period following diagnosis of CP. The Müller radiological criteria and the novel diagnostic criteria for HS were applied. A brief literature review regarding treatments already attempted for HO was conducted.

Results:
15 patients with pediatric CP were included in the study, all of whom developed endocrine sequelae over time. Seven patients (47 %) presented with at least one hormonal deficit, and eight patients (53 %) developed panhypopituitarism over time. HO was clinically confirmed in nine patients (60 %). 10 patients (67 %) met the diagnostic criteria for HS. Currently, no overall effective treatment strategies are available for HO. Conclusions: Long-term endocrine sequelae and HO are highly prevalent in pediatric CP. Continuing multidisciplinary care to improve the quality of life of these patients is necessary. International cooperation and further long-term prospective trials for the treatment of HO are needed.

PW 31.

Infectious causes of hypopituitarism in children: a systematic review

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Background/Aims:
Infection causing pediatric hypopituitarism is rare but potentially life-threatening and scarce evidence is available for clinicians. Here, we give a quantitative overview of the infectious causes of hypopituitarism in children, and systematically discuss symptoms and clinical signs as well as the extent of endocrinological recovery.

Methods:
We conducted a systematic literature search in Embase, Medline (PubMed) and Web of Science Core Collection to identify all published pediatric cases of hypopituitarism caused by infection. We selected articles with use of predefined exclusion- and inclusion criteria.

Results:
We identified 43 cases of children with hypopituitarism due to infection. Tuberculosis (TBC) of the central nervous system and pituitary abscess were the most frequent etiologies (17 and 12 cases respectively), followed by meningitis and meningoencephalitis with various microorganisms involved (8 cases). Clinical manifestations were variable and depended on the affected hormonal axes and the causative infectious disease. The pituitary-adrenal and -thyroid axes were often disturbed hormonal axes during infection associated with hemodynamic instability. Follow-up was insufficiently reported but revealed persistent requirement of hormonal replacement therapy in 12 cases and complete pituitary recovery in only 4 cases. Death was reported in a total of 7 patients.

Conclusion:
TBC and pituitary abscess have been most frequently associated with pediatric hypopituitarism. However, the occurrence of pituitary insufficiency in septic children needs to be further quantified. Mortality and long-term morbidity are considerable and make awareness among physicians crucial. To better understand the incidence and outcome of hypopituitarism in the infections we discuss, prospective studies are required.

PW 32.

Unveiling HDR Syndrome in a 4-Year-Old Boy with Hypocalcemic Convulsions

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Introduction:
Hypocalcemic convulsions in young children is rarely due to congenital hypoparathyroidism (HP). HP, Sensorineural Deafness, and Renal Disease (HDR) syndrome was diagnosed in a toddler with hypocalcemic convulsions.

Clinical case:
A 3.5-year-old boy presented with febrile seizures. His medical history was unremarkable, aside from prematurity and recurrent otitis media. His father had been diagnosed with idiopathic HP at the age of 10 years, while his deafness was attributed to recurrent otitis media during childhood. Physical examination showed mild micrognathia. Biological assessment showed a low serum calcium level (1.70 mmol/L) and elevated serum phosphorus (2.61 mmol/l). Hormonal analysis revealed a normal serum PTH (31.1 ng/L). A familial form of hypoparathyroidism was suspected and treatment with alphacalcidol was initiated. Renal ultrasound and hearing testing were normal. A CGH-array and CaSR gene sequencing showed no abnormalities. Additional next-generation DNA sequencing at the age of 5.9 years, when a 40 dB bilateral hearing loss was observed, identified a heterozygous, paternally inherited pathogenic variant in the GATA3 gene (NM 001002295.2 (GATA3): c. 123C>G), confirming the diagnosis of HDR syndrome.

Discussion:
HDR syndrome (MIM #146255) is a rare autosomal dominant disorder, characterized by HP, sensorineural deafness, and renal dysplasia, caused by loss-of-function variants in the GATA3 gene. Clinical presentation is very heterogenous. Median age of HP onset is 11 years. Deafness in general occurs earlier and is typically bilateral and more pronounced at higher frequencies.

Conclusion:
HP should be suspected when hypocalcemia is accompanied by hyperphosphatemia, even if serum PTH levels are (inappropriately) normal. HDR syndrome should be included in the differential diagnosis of a familial HP, even in the absence of renal dysplasia or hearing loss. Early diagnosis of HDR syndrome enables timely detection and treatment of hearing loss and renal insufficiency if renal dysplasia is present.

PW 33.

Iatrogenic neonatal hyperphosphatemia due to phosphate-containing enema: a case report

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Background:
Functional constipation is a prevalent condition in neonates and infants, often attributed to immature coordination between pelvic floor relaxation and the Valsalva maneuver. The primary approach to management involves parental education and reassurance, along with dietary modifications, such as the introduction of infant formulas containing partially or extensively hydrolyzed proteins, prebiotics, probiotics, or non-palm oil fat sources. For acute relief, glycerin suppositories are commonly recommended as they aid in stool softening and facilitate bowel movements. In contrast, phosphate-containing enemas (PcE's) are contraindicated in neonates due to the significant risk of severe electrolyte disturbances. These risks arise from variable defecation patterns, the increased likelihood of enema absorption, and the immature renal function that limits phosphorus clearance.

Methods/Results:
We present a case of a neonate who developed severe hyperphosphatemia and hypocalcemia following the administration of a phosphate-containing enema, despite the absence of underlying comorbidities. The infant exhibited persistent vomiting and irritability. Clinical examination revealed pallor, a distended and tender abdomen. Laboratory investigations showed hyperphosphatemia, hypocalcemia, and a prolonged QTc interval—critical findings that necessitated urgent intervention. Management included hyperhydration, intravenous calcium gluconate, and oral alfacalcidol, resulting in complete clinical recovery within 60 hours. Subsequent diagnostic workups, including anorectal manometry, rectal suction biopsy, sacral ultrasound, and colon contrast enema, returned normal results, confirming a diagnosis of functional constipation. Follow-up kidney ultrasound and serum parathyroid hormone (PTH) levels were also within normal limits.

Conclusion:
This case highlights the significant risks associated with the inappropriate use of over-the-counter phosphate-containing enemas in neonates, even in the absence of underlying health conditions. It emphasizes the importance of early identification and timely supportive treatment to prevent life-threatening complications.

PW 34.

Hypopituitarism due to Optic Nerve Hypoplasia Syndrome : A Comparison of Two Cases with Distinct Phenotypic Expressions

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Background:
Congenital central hypopituitarism may be associated with optic nerve hypoplasia or septo-optic dysplasia. These syndromes inconsistently include hypothalamic and/or pituitary dysfunction, optic nerve abnormalities and midline brain malformations in varying proportions.

Cases report:
we report two cases of panhypopituitarism diagnosed following severe neonatal hypoglycaemia.

In the first patient, the initial assessment revealed central hypocorticism, central hypothyroidism and growth hormone insufficiency. Ophthalmologic evaluation revealed small optic discs, and brain MRI showed posterior pituitary ectopia with an absent pituitary stalk and significant optic tract atrophy. Treatment included hydrocortisone, L-thyroxine and growth hormone replacement therapy.

The second patient presented with central hypocorticism. Brain MRI revealed absence of the septum pellucidum and hypoplasia of both the optic chiasma and optic nerves. Ophthalmologic evaluation confirmed optic nerve hypoplasia. This patient also developed diabetes insipidus, thermoregulation disorders and hypothalamic obesity. Treatment included hydrocortisone and desmopressin.

Discussion:
The phenotypic expression of these syndromes is highly variable, involving ophthalmologic, endocrine and neurologic disorders, which can make diagnosis difficult. The etiology is likely multifactorial, with genetic and environmental factors potentially involved. The assessment should include cerebral MRI, endocrine assessment and ophthalmologic evaluation. Hypopituitarism can affect hormones of both the anterior and posterior pituitary. In some cases, hypothalamic dysfunction may result in thermoregulatory disorders or hypothalamic obesity.

Treatment involves hormone replacement therapy and patient education on hydrocortisone dose adjustments to prevent acute adrenal insufficiency. Follow-up of these patients is crucial, in order to assess their development but also to adjust their treatment.

Conclusion:
This poster highlights the high variability in the phenotypic expression of these syndromes. Assessment and management require a multidisciplinary approach. Early diagnosis and treatment initiation are essential to reduce morbidity and mortality.

PW 35.

Familial male-limited precocious puberty due to a mutation in the LHCGR gene

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We report the case of a patient with a familial peripheral male limited precocious puberty (FMPP) caused by a pathogenic variant in the LHCGR gene.

A 4 years-old boy was referred to the endocrine clinic because of premature pubic hair development and rapid growth acceleration. His parents reported spontaneous erection and masturbatory behavior. Personal history was without particularity. Familial history reported early pubertal development and short stature in the maternal grandfather. A maternal uncle and a first cousin received a treatment with anti-androgenic properties for early signs of virilization.

Physical examination revealed a testicular volume of 8 mL bilaterally with pubic hair at Tanner stage 2. Penile length was evaluated at 10 cm. His height was 117.5 cm (+1.78SD ; + 0,62 SD of genetic target height) and his weight was 23.5 kg (+1.72 SD). Height velocity was 14.3 cm/year (+8.5 SD).

Initial hormonal evaluation revealed normal serum levels of 17-OH Progesterone, DHEA-S, delta-4-androstenedione, cortisol, and ACTH with significantly elevated testosterone levels (6.56 nmol/L ; normal range : 0,10-0,70 nmol/L), while gonadotrophin levels were undetectable. IGF-1 level was elevated for the age at 298 ng/mL and in accordance with a Tanner stage 3. Tumor markers, including alpha-fetoprotein and HCG, were negative. Prolactin levels were within the normal range (62 mU/L). Bone age was advanced to 6 years for a chronological age of 4.5 years. Testicular ultrasound revealed no testicular masses.

Genetic analysis of the LHCGR gene was performed and showed a heterozygous mutation c.1730 C>T (p.Thr577Ileu) of the LHCGR gene in the patient. This mutation is known to lead to constitutive activation of LHCGR. Analysis of the other family members is pending.

He started on treatment with anastrozole 1 mg daily and bicalutamide 25 mg daily, that is currently well tolerated.

FMPP is a rare cause of male peripheral precocious puberty, caused by activating mutations in the LHCGR gene, leading to constitutive activation of the LH receptor without any input from LH, leading to excessive sex hormone production through stimulation of steroidogenesis in Leydig cells. Treatment aims to slow pubertal progression and prevent rapid skeletal maturation with a negative impact on final adult height. This involves the use of anti-androgen agents and the use of aromatase inhibitors to delay estrogen related bone maturation.

PW 36.

Beyond the transplant: shedding light on post-transplant metabolic syndrome in pediatric liver recipients

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Background/Aims:
Liver transplantation (LT) has become a highly successful surgical treatment with excellent survival rates. Therefore, our focus has shifted to preventing long-term complications, including post-transplant metabolic syndrome (PTMS).

Methods:
A literature review on PTMS following pediatric LT.

Results:
A standardized definition of metabolic syndrome (MS) in the pediatric population is lacking. The International Diabetes Federation does not diagnose MS in children ≤9years, whereas other associations provide age-specific cutoffs. The criteria to define MS include (1) waist circumference (WC), (2) high triglycerides, (3) low HDL-cholesterol (the latter two as indicators of dyslipidemia), (4) impaired glucose tolerance, and (5) hypertension. The lack of uniformity in criteria results in different prevalence rates of PTMS, ranging in most studies between 14-20%. However, components of PTMS manifest more frequently.

Immunosuppressive therapy, most often calcineurin inhibitor-based, leads to a MS phenotype characterized by dysregulated metabolic parameters, but mostly normal weight and WC. As time after transplantation progresses, overweight and obesity become increasingly important contributing factors for PTMS. Nevertheless, around one-third of PTMS patients still have a normal weight status a decade post-LT.

Because PTMS is an important cardiovascular risk factor, it is crucial to implement adequate screening and management strategies. Metabolic health could be improved by patient-specific immunosuppressive regimens, lifestyle intervention, and potentially by optimizing donor factors. However, universal guidelines are lacking.

Conclusion:
Healthcare professionals should promote a healthy lifestyle to prevent PTMS development. It is crucial to acknowledge that not all patients with impaired metabolic health are living with obesity. Nevertheless, obesity remains an important risk factor for PTMS. Tailored management in a multidisciplinary setting for transplant patients is needed to enhance their long-term physical and mental well-being.

PW 37.

Naso-Alveolar Molding in Cleft Lip and Palate Management

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Background:
Cleft lip and palate (CLP) is a facial malformation affecting approximately 1 in 800 births in Belgium, causing a discontinuity in the soft tissues of the lip, nasal sill, maxillary bone, hard palate, and soft palate. Despite advances in surgical techniques, large clefts remain challenging, especially when correcting nasal deformities. Residual asymmetry is generally corrected only after growth, leaving children with residual visible cleft-related stigmas throughout schooling, leading to teasing and loss of self-esteem.

Methods:
Naso-Alveolar Molding (NAM) is a pre-surgical orthodontic technique used at our Cleft Lip and Palate Center since 2024 to treat large complete labio-alveolo-palatine clefts, whether unilateral or bilateral. Its primary goal is to restore more harmonious anatomical relationships by gradually bringing the labial and maxillary segments closer together while also reshaping the nasal structure.

Results:
Thanks to this technique, the severity of the cleft is significantly reduced before the first surgical intervention, typically around three months of age, enabling optimal conditions for cheiloplasty (lip closure) and primary rhinoplasty. Less invasive dissection is necessary and healing is improved by decreasing tension on sutured tissues. This leads to improved naso-labial aesthetics in the short- and long-term, reducing visible cleft stigmas from early childhood and the need for further corrective interventions. NAM also realigns the alveolar bone segments, which supports early gingivoperiosteoplasty and avoids secondary alveolar bone grafting in over 70% of cases. The impact of NAM on long-term facial growth remains a topic of ongoing study and requires further research. Despite its effectiveness, NAM is a demanding technique for both the orthodontist and the parents, who play a crucial role in its success. Rigorous commitment is necessary to ensure daily application of the device and regular adjustments during consultations.

Conclusion:
Naso-Alveolar Molding has proven to be an effective pre-surgical technique for managing large cleft lip and palate, significantly improving the anatomical alignment of the lip, maxillary segments, and nasal structure. By reducing the severity of the cleft before surgery, NAM facilitates less invasive procedures, better healing, and long-term aesthetic improvement.

PW 39.

Glycogen storage disease type Ib : late diagnosis

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Background and case presentation:
Type I glycogen storage disease is a rare metabolic disorder causing glycogen accumulation in organs (primarily in the liver) due to an enzymatic deficiency preventing glucose release. It's typically diagnosed in early infancy following severe hypoglycemia, though rarely diagnosed later due to other complications.

A 13-month-old female presented with poor weight gain and solid food aversion. Weight and height were below the 3rd percentile, with growth failure starting at 5 months. She consumed standard formula milk (200-250 ml/kg/day), demanding feeds every 3-4 hours, including during nightime. She has no digestive symptoms. Neurological development was described as normal. Birth history included gestational diabetes, difficulty feeding in first days of life and severe neonatal hypoglycemia (12 mg/dL). Clinical examination revealed distended abdomen with significant hepatomegaly.

Method:
Abdominal ultrasound and fasting blood tests were ordered, including metabolic panel, tumor marker:s, liver enzymes, and infectious screening.

Results
Ultrasound confirmed heterogeneous hepatomegaly (15 cm) and medullary nephrocalcinosis. After 4-hour fast, tests showed hypoglycemia (24 mg/dl), severe hyperlactatemia (>20 mmol/L), hypertriglyceridemia, and elevated liver enzymes. There were no signs of cholestasis or liver failure. The patient is transferred to pediatric intensive care where intravenous glucose allows glycemia and lactatemia correction.

The patient developed E. coli urinary infection with neutropenia (<500/mcL) and chronic diarrhea. This, combined with the intolerance to short term fasting, suggests type Ib glycogen storage disease which is later confirmed genetically. Treatment with Empagliflozin (to control neutropenia) and dietary management was initiated. At age 2, growth parameters normalized with improved biochemical markers.

This case demonstrates delayed diagnosis of type Ib glycogen storage disease, which can be explained by variable enzyme deficiency expression and hypoglycemia tolerance through lactate utilization. The case emphasizes the importance of investigating severe hypoglycemia and monitoring growth charts.

Conclusion:
This type Ib glycogen storage disease case highlights a delayed diagnosis at 13 months based on growth failure and hepatomegaly, emphasizing the importance of investigating severe hypoglycemia and proper growth monitoring.