1/2023 – Kwiecień 2023
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NEWSLETTER
Polskiego Towarzystwa Gastroenterologii, Hepatologii i Żywienia Dzieci

Szanowni Członkowie Polskiego Towarzystwa Gastroenterologii, Hepatologii i Żywienia Dzieci,
Przekazujemy Państwu pierwszy numer Newslettera PTGHIŻD. Będziemy wydawać go regularnie tj. co kwartał. W pierwszym numerze zamieściliśmy aktualne informacje dotyczące naszego Towarzystwa, wykaz zbliżających się wydarzeń naukowych i dydaktycznych oraz przegląd najważniejszych publikacji naukowych. Zachęcamy do zapoznania się z Newsletterem i mamy nadzieję, że spełni Państwa oczekiwania. Bardzo nam zależy na aktywności Towarzystwa. Prosimy więc o uwagi i komentarze (drogą mailową lub za pośrednictwem FB), które niewątpliwie wpłyną na jakość wydawanego Newslettera.

Z poważaniem, Prof. Dariusz M. Lebensztejn, Prezes ZG PTGHiŻD

Aktualne informacje – styczeń-marzec 2023

Wykaz zbliżających się wydarzeń naukowych i dydaktycznych

Przegląd najważniejszych publikacji naukowych

W związku z dynamicznym wzrostem liczby przypadków połknięcia magnesów ESPGHAN opublikował nowe algorytmy postępowania:
Pediatric Magnet Ingestion, Diagnosis, Management, and Prevention: A European Society for Paediatric Gastroenterology Hepatology and Nutrition (ESPGHAN) Position Paper
Nugud, A.A. MBBS, MRCPCH; Tzivinikos, Christos MD, MSc; Assa, Amit MD, MHA; Borrelli, Osvaldo MD, PhD; Broekaert, Ilse MD; Martin-de-Carpi, Javier MD, PhD; Deganello Saccomani, Marco MD, PhD; Dolinsek, Jernej MD, PhD; Homan, M.; Mas, Emmanuel MD, PhD; Miele, Erasmo MD, PhD; Thomson, Mike MD, PhD; Benninga, Marc A. MD, PhD; The Gastrointestinal Committee of ESPGHAN
Magnet ingestion is a special category of foreign body ingestion associated with high levels of morbidity and mortality worldwide, particularly if it is associated with staggered ingestion of multiple magnets or with simultaneous ingestion of other metallic foreign bodies, especially button batteries. A special category of magnet ingestion is the ingestion of earth magnets, which have higher levels of magnetism and therefore, potentially, carries a worse outcome. Legislative bodies, scientific Societies and community-led initiatives have been implemented worldwide with the aim of mitigating the effects of this growing, yet avoidable potential medical emergency. A scoping literature review summarized epidemiology, diagnosis, management, and prevention, including an algorithm for the diagnosis and management of magnet ingestion is presented and compared to previously published reviews and position papers (North American Society of Pediatric Gastroenterology, Hepatology and Nutrition, National Poison Center, Royal College of Emergency Medicine). The main emphasis of the algorithm is on identification of

staggered/multiple magnet ingestion, and early joint gastroenterology and surgical consultation and management.

Opublikowano wytyczne postępowania u dzieci z chorobą Hirschsprunga, które mają problemy z oddawaniem stolca mimo leczenia chirurgicznego:

Evaluation and Management of Postsurgical Patient With Hirschsprung Disease Neurogastroenterology & Motility Committee: Position Paper of North American Society of Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN)

Ambartsumyan, Lusine MD; Patel, Dhiren MD; Kapavarapu, Prasanna MD; Medina-Centeno, Ricardo A. MD; El-Chammas, Khalil MD; Khlevner, Julie MD; Levitt, Marc MD; Darbari, Anil MD, MBA

Children with Hirschsprung disease have postoperative long-term sequelae in defecation that contribute to morbidity and mortality and significantly impact their quality of life. Pediatric patients experience ongoing long-term defecation concerns, which can include fecal incontinence (FI) and postoperative obstructive symptoms, such as constipation and Hirschsprung-associated enterocolitis. The American Pediatric Surgical Association has developed guidelines for management of these postoperative obstructive symptoms and FI. However, the evaluation and management of patients with postoperative defecation problems varies among different pediatric gastroenterology centers. This position paper from the Neurogastroenterology & Motility Committee of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition reviews the current evidence and provides suggestions for the evaluation and management of postoperative patients with Hirschsprung disease who present with persistent defecation problems.

Grupa endoskopowa ESPGHAN zwraca uwagę na możliwość poszerzania balonowego w terapii zwężeń w chorobie Leśniowskiego-Crohna u dzieci:

Approach to Endoscopic Balloon Dilatation in Pediatric Stricturing Crohn's Disease: a position paper of the Endoscopy Special Interest Group of ESPGHAN

Ledder, Oren; Homan, Matjaž; Furlano, Raoul; Papadopoulou, Alexandra; Oliva, Salvatore; Dias, Jorge Amil; Dall'oglio, Luigi; Faraci, Simona; Narula, Priya; Schluckebier, Dominique; Hauser, Bruno; Nita, Andreia; Romano, Claudio; Tzivinikos, Christos; Bontems, Patrick; Thomson, Mike

Crohn's disease (CD) is often complicated by bowel strictures that can lead to obstructive symptoms, resistant inflammation and penetrating complications. Endoscopic balloon dilatation (EBD) of CD strictures has emerged as a safe and effective technique for relieving these strictures which may obviate the need for surgical intervention in the short and medium term. This technique appears to be underutilized in pediatric CD. This position paper of the Endoscopy Special Interest Group of ESPGHAN describes the potential applications, appropriate evaluation, practical technique and management of complications of this important procedure. The aim being to better integrate this therapeutic strategy in pediatric CD management.

Analiza ponad tysiąca przypadków wykazała, że zapalenie trzustki nie wpływa na bezpieczeństwo endoskopowej cholangiopankreatografii wstecznej u dzieci:

Pediatric ERCP in the Setting of Acute Pancreatitis: A Secondary Analysis of an International Multicenter Cohort Study

Trocchia, Carolena; Khalaf, Racha; Amankwah, Ernest; Ruan, Wenly; Fishman, Douglas S.; Barth, Bradley A; Liu, Quin Y.; Giefer, Matthew; Kim, Kyung Mo; Martinez, Mercedes; Dall'oglio, Luigi; Torroni, Filippo; De Angelis, Paola; Faraci, Simona; Bitton, Sam; Werlin, Steven; Dua, Kulwinder; Gugig, Roberto; Huang, Clifton; Mamula, Petar; Quiros, J. Antonio; Zheng, Yuhua; Piester, Travis; Grover, Amit; Fox, Victor L.; Wilsey, Michael; Troendle, David M.

Previous studies have demonstrated the safety of performing Endoscopic Retrograde Cholangiopancreatography (ERCP) in the pediatric population; however, few have addressed the outcomes of children undergoing ERCP during acute pancreatitis (AP). We hypothesize that ERCP performed in the setting of AP can be executed with similar technical success and adverse event profiles to those in pediatric patients without pancreatitis. Using the Pediatric ERCP Database Initiative, a multi-national and multi-institutional prospectively collected dataset, we analyzed 1124 ERCPs. One hundred and ninety-four (17%) of these procedures were performed in the setting of AP. There were no difference in the procedure success rate, procedure time, cannulation time, fluoroscopy time or American Society of Anesthesiology class despite patients with AP having higher ASGE difficulty grading scores. This study suggests that ERCP can be safely and efficiently performed in pediatric patients with AP when appropriately indicated.

Ocena 2500 dzieci z alergią pokarmową potwierdziła negatywną korelację między stężeniem swoistych przeciwciał IgE a dawką alergenu wyzwalającą dodatni wynik testu prowokacji lub anafilaksję:

Relationship between serum allergen-specific immunoglobulin E and threshold dose in an oral food challenge

Noriyuki Yanagida, Sakura Sato, Ken-ichi Nagakura, Kyohei Takahashi, Naoko Fusayasu, Yoko Miura, Takaaki Itonaga, Kiyotake Ogura, Motohiro Ebisawa

The prevalence of food allergies is increasing globally. Although strict avoidance is mandatory for severe food allergies, accidental ingestion frequently occurs. The frequency of accidental ingestion depends on an individual's threshold for food allergens. An individual's threshold provides information on the maximum tolerable doses and minimum eliciting doses. Although studies have revealed threshold doses for different allergens, evidence regarding risk factors for a low threshold dose is limited. Increased specific immunoglobulin E (sIgE) levels are associated with anaphylaxis and severe reactions during oral food challenges (OFCs). Peanut and Ara h 2 sIgE levels have been reported as risk factors for a low threshold dose in the peanut OFC. Nevertheless, the relationships between threshold doses of other causative foods and sIgE levels remain unclear. Identifying individuals at high risk for low threshold doses and anaphylaxis can improve the practical management of food allergies and the quality of life in such patients. We hypothesized that many patients would react to a low threshold dose, and the low threshold dose would be related to high sIgE levels. Therefore, this study examined the relationship between threshold dose and sIgE levels and the risk factors for a low threshold dose among children with IgE-mediated food allergies to eggs, milk, wheat, peanuts, walnuts, and cashews.

Metaanaliza obejmująca ponad 2500 dzieci z mózgowym porażeniem dziecięcym określiła częstość uzyskiwania przez nich rozpoznania molekularnego w sekwencjonowaniu eksomowym lub genomowym na 31%:

Diagnostic Yield of Exome Sequencing in Cerebral Palsy and Implications for Genetic Testing Guidelines

Pedro J. Gonzalez-Mantilla, MD; Yirui Hu, PhD; Scott M. Myers, MD

Importance Exome sequencing is a first-tier diagnostic test for individuals with neurodevelopmental disorders, including intellectual disability/developmental delay and autism spectrum disorder; however, this recommendation does not include cerebral palsy.

Objective To evaluate if the diagnostic yield of exome or genome sequencing in cerebral palsy is similar to that of other neurodevelopmental disorders.
Data Sources The study team searched PubMed for studies published between 2013 and 2022 using cerebral palsy and genetic testing terms. Data were analyzed during March 2022.
Study Selection Studies performing exome or genome sequencing in at least 10 participants with cerebral palsy were included. Studies with fewer than 10 individuals and studies reporting variants detected by other genetic tests were excluded. Consensus review was performed. The initial search identified 148 studies, of which 13 met inclusion criteria.
Data Extraction and Synthesis Data were extracted by 2 investigators and pooled using a random-effects meta-analysis. Incidence rates with corresponding 95% CIs and prediction intervals were calculated. Publication bias was evaluated by the Egger test. Variability between included studies was assessed via heterogeneity tests using the I2 statistic.
Main Outcomes and Measures The primary outcome was the pooled diagnostic yield (rate of pathogenic/likely pathogenic variants) across studies. Subgroup analyses were performed based on population age and on the use of exclusion criteria for patient selection.
Results Thirteen studies were included consisting of 2612 individuals with cerebral palsy. The overall diagnostic yield was 31.1% (95% CI, 24.2%-38.6%; I2 = 91%). The yield was higher in pediatric populations (34.8%; 95% CI, 28.3%-41.5%) than adult populations (26.9%; 95% CI, 1.2%-68.8%) and higher among studies that used exclusion criteria for patient selection (42.1%; 95% CI, 36.0%-48.2%) than those that did not (20.7%; 95% CI, 12.3%-30.5%).
Conclusions and Relevance In this systematic review and meta-analysis, the genetic diagnostic yield in cerebral palsy was similar to that of other neurodevelopmental disorders for which exome sequencing is recommended as standard of care. Data from this meta-analysis provide evidence to support the inclusion of cerebral palsy in the current recommendation of exome sequencing in the diagnostic evaluation of individuals with neurodevelopmental disorders.

Badanie randomizacją nastolatków z otyłością wykazało większą skuteczność chirurgii metabolicznej i bariatrycznej (zmiana BMI po 2 latach -12.6 kg/m2) w porównaniu do leczenia zachowawczego (-0.2 kg/m2):
Metabolic and bariatric surgery versus intensive non-surgical treatment for adolescents with severe obesity (AMOS2): a multicentre, randomised, controlled trial in Sweden
Kajsa Järvholm, PhD; Annika Janson, MD; Prof Markku Peltonen, PhD; Prof Martin Neovius, PhD; Eva Gronowitz, PhD; My Engström, PhD; Anna Laurenius, PhD; Andrew J Beamish, MD; Prof Jovanna Dahlgren, MD; Lovisa Sjögren, MD; Prof Torsten Olbers, MD
Severe obesity in adolescents has a profound impact on current and future health. Metabolic and bariatric surgery (MBS) is increasingly used in adolescents internationally. However, to our knowledge, there are no randomised trials examining the currently most used surgical techniques. Our aim was to evaluate changes in BMI and secondary health and safety outcomes after MBS.

Retrospektywne badanie kohortowe wykazało pozytywny związek przezskórnej endoskopowej gastrostomii z korzystnymi wynikami allogenicznego przeszczepu macierzystych komórek krwiotwórczych u dzieci:
Impact of percutaneous endoscopic gastrostomy on pediatric bone marrow transplantation outcomes: Retrospectice single-center cohort study
Igne Kairiene MD, Mantas Vaisvilas MD, Agnija Vasciunaite MD, Geiste Tubutyte, Irena Nedzelskiene, Ramune Pasauliene MD, Audrone Muleviciene PhD, Jelena Rascon PhD
The article focuses on the rate of complications and the outcomes in a pediatric population after allogeneic hematopoietic stem cell transplantation, highlighting the value of percutaneous endoscopic gastrostomy insertion to ensure enteral nutrition, peroral medication administration, and gastric decompression.
Allogeneic hematopoietic stem cell transplantation (aHSCT) is a curative treatment for several pediatric malignancies and inborn disorders. Transplant-related mortality (TRM) remains a major cause of treatment failure after aHSCT. In patients with malignancies, the rates of TRM have been consistently decreasing, and these range between 5% and 13%. In a nonmalignant setting, TRM remains the predominant cause of treatment failure and reaches 29%–34% among patients undergoing aHSCT from unrelated donors, and these are 9%–5% among those undergoing aHSCT from matched family donors.
TRM is a composite outcome affected by several factors, including treatment intensity before aHSCT, stem cell source, preparative regimen, graft-vs-host disease (GvHD), infections, and supportive care. Malnutrition is a proinflammatory state that is an independent risk factor for acute GvHD (aGvHD) and transplant related mortality on posttransplant day 100 (TRM100). Malnutrition is caused by an imbalance in energy consumption (insufficient or excessive) and utilization. Body mass index (BMI; defined as weight [kg] divided by height squared [m2]), serum albumin level, and weight loss within 30 days after HSCT have been shown to be associated with a three-to fourfold increase in the risk of severe aGvHD in patients up to 21 years of age.
Nutrition support is essential to prevent the harmful effects of malnutrition. It prevents infections in pediatric patients, reduces TRM, and increases overall survival (OS) in adults. Nutrition is especially important in children who not only have to combat complications after aHSCT but also need to thrive. In general, nutrition after aHSCT has been provided via the parenteral route. Several studies have compared parenteral nutrition (PN) with enteral nutrition (EN) after aHSCT in pediatric patients, and the main outcomes are summarized in a systematic review by Evans et al. Recently, Zama et al. have validated the advantage of EN in children by demonstrating the reduction in the rate of bloodstream infections and aGvHD.
In nearly all previously reported studies, EN was administered via nasogastric tube, and studies comparing percutaneous endoscopic gastrostomy (PEG) with PN are limited. PEG is the best approach for long-term EN and is routinely used in the care of children with eating disabilities. PEG is rarely inserted in pediatric HSCT settings; thus, it is a novel approach for providing better supportive care.
PEG is also beneficial for gastric decompression, especially for patients with ileus. Children after aHSCT frequently experience damage of the intestines that may also manifest as ileus. In addition, PEG is recommended for medicine administration by European Society for Clinical Nutrition and Metabolism (ESPEN) guidelines to ensure better treatment adherence.
Concerns remain regarding the safety of PEG in the setting of aHSCT because patients with immunosuppression are more prone to complications of PEG insertion. Since 2012, PEG placement before aHSCT has become the standard practice in the pediatric transplant program at Vilnius University Hospital Santaros Klinikos (VUHSK). Usually, the PEG was removed within the first 3 months after aHSCT. We hypothesized that PEG placement has a positive impact on transplant outcomes, as it reduces early TRM and improves survival after aHSCT.

Wystąpienie przeciwciał przeciwko integrynie alfa V beta 6 (αvβ6) poprzedza rozpoznanie wrzodziejącego zapalenia jelita grubego w prawie połowie przypadków, u niektórych pacjentów nawet o 10 lat:
Anti-Integrin αvβ6 Autoantibodies Are a Novel Biomarker That Antedate Ulcerative Colitis

Alexandra E. Livanos; Alexandra Dunn; Jeremy Fischer; Ryan C. Ungaro; Williams Turpin; Sun-Ho Lee; Shumin Rui; Diane Marie Del Valle; Julia J. Jougon; Gustavo Martinez-Delgado; Mark S. Riddle; Joseph A. Murray; Renee M. Laird; Joana Torres; Manasi Agrawal; Jared S. Magee; Thierry Dervieux; Sacha Gnjatic; Dean Sheppard; Bruce E. Sands; Chad K. Porter; Kenneth Croitoru; Francesca Petralia; CCC-GEM Project Research Consortium; OSCCAR Consortium; Jean-Frederic Colombel; Saurabh Mehandru

Inflammatory bowel diseases (IBDs), including Crohn's disease (CD) and ulcerative colitis (UC), are chronic inflammatory disorders that primarily affect the gastrointestinal tract with shared genetic and environmental risk factors. Analogous to other immune-mediated diseases, there is an increasing appreciation that IBD may be preceded by subclinical immune perturbations, and there is a growing interest in biomarkers that can predict the occurrence of IBD. In addition, identification of biomarkers to predict disease course is a major unmet need due to the considerable variability of IBD disease progression. In this context, noninvasive blood-based biomarkers are appealing because of their ease of collection and application in clinical practice. The identification of predictive biomarkers has been more successful in CD, with some being used to risk stratify patients in clinical trials.10 In contrast, discovery of predictive biomarkers in UC remains elusive.

Recent studies have highlighted a novel autoantibody against integrin αvβ6 in the serum of patients diagnosed with UC. In a study from Japan, anti-integrin αvβ6 (anti-αvβ6) autoantibodies had a sensitivity of 92.0% and a specificity of 94.8% for diagnosing UC in adult patients compared with non-IBD subjects. These results were further confirmed in a Swedish cohort and extended to a Japanese pediatric population. Integrin αvβ6 is an epithelium-associated heterodimer that interacts with the extracellular matrix and enables activation of latent transforming growth factor–β, which is thought to be its primary role in vivo. Accordingly, critical homeostatic roles, such as maintenance of epithelial barrier integrity and suppression of epithelial inflammation, have been ascribed to integrin αvβ6.

Recognizing that loss of epithelial barrier integrity is a major and perhaps early feature of disease pathogenesis, we hypothesized that onset of UC may be preceded by the appearance of anti-αvβ6 autoantibodies and, thus, may serve as a preclinical biomarker. Furthermore, due to the important physiological role of integrin αvβ6, we explored the performance of anti-αvβ6 autoantibodies to predict adverse clinical outcomes in recently diagnosed UC.

Our study leverages 2 unique preclinical cohorts of UC. In our primary preclinical cohort— PREDICTS (Proteomic Evaluation and Discovery in an IBD Cohort of Tri-service Subjects)—longitudinal serum samples were obtained up to 10 years before disease diagnosis. The Crohn's and Colitis Canada Genetic Environmental Microbial (CCC-GEM) project served as an independent external validation preclinical cohort. Finally, we also studied 2 well-characterized incident IBD cohorts to better understand the association between anti-αvβ6 autoantibodies and UC-related disease outcomes.

Zastosowanie 5-aminosalicylanów w leczeniu pierwszej linii (monoterapia) choroby Leśniowskiego-Crohna nie było związane z lepszymi wynikami leczenia:
5-aminosalicylate maintenance is not superior to no maintenance in patients with newly diagnosed Crohn's disease—A nationwide cohort study

Ohad Atia, Idan Goren, Tali Sharar Fischler, Yisca Loewenberg Weisband, Shira Greenfeld, Revital Kariv, Natan Ledderman, Eran Matz, Ramit Magen Rimon, Iris Dotan, Dan Turner, Henit Yanai

A subset of patients with Crohn's disease (CD) may have mild and localised disease with an indolent course. Although this group represents 20%–45% of all CD patients, they are most often excluded from clinical trials. In these mild, localised cases, clinicians may choose a watchful waiting approach following induction treatment or maintenance with conventional therapies.

Although current guidelines advocate against it, 5-aminosalicylates (5-ASA) agents are widely used in clinical practice for the maintenance of remission in patients with CD. Cochrane reviews suggested no benefit for 5-ASA over placebo and concluded that additional trials on the matter may not be justified. However, most of the included RCTs were limited by a relatively small sample size, lack of long-term follow-up, and were prone to selection bias. Several real-world and population-based studies showed that many patients with CD treated with 5-ASA follow an indolent course. However, whether the mild course reflected the treatment effect or merely the natural history of a mild CD remains largely unknown.

Therefore, in this nationwide study, we aimed to compare disease outcomes of patients with newly diagnosed mild CD on first-line 5-ASA maintenance treatment (MT) versus no-MT.

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