Mo1212

Neuro-Immune Interactions At Different Intestinal Sites of Pediatric Irritable Bowel Syndrome (IBS) and Their Correlation With Symptoms
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Introduction: neuro-immune interactions have previously been proposed as factors involved in sensory-motor dysfunction and symptom generation in adult IBS patients. No such studies have been performed in pediatric IBS. Thus, we investigated mast cell infiltration and mast-cell-neuronal interactions in the ileo-colic mucosa of children with IBS, as well as the relationships between these parameters and symptoms. We also measured local calcitropicckinectrin (MCK)-concentrations. Methods: IBS patients were diagnosed according to Rome III criteria and abdominal pain quantified with a validated questionnaire. Ileo-colic mucosal mast cells and mast-cell-neuronal interactions were identified immunohistochemically and quantified with a computer-assisted method. Fecal calcitropicckinectrin concentrations were quantified by ELISA. Relations between parameters and symptoms were evaluated using Spearman’S rank correlation. Results: 21 IBS patients and 10 controls were enrolled. The number of mast cells in close vicinity of nerve fibers (MC-NF) was significantly higher in the ileum (P=0.011), right colon (P= 0.04), and left colon (P=0.001) of IBS patients as compared to controls. A significant correlation was found between MC-NF count and abdominal pain intensity scores (r=0.474, P=0.030). Similarly, a significant correlation was found between MC-NF count in the right colon and abdominal pain intensity scores (r=0.523; P=0.015). In addition, the pain intensity score was significantly correlated with mast cell count both in the ileum (r=0.667, P=0.003) and right colon (r=0.567, P=0.007) and with MC-NF count both in the ileum (r=0.434, P=0.049) and right colon (r=0.534, P=0.033). Discussion: in children with IBS mast cell-neuronal interactions are increased in ileo-colic mucosa: this interaction is strongly correlated with frequency and intensity of abdominal pain.

Mo1222

Gastrointestinal Manifestations of Ehler-Danlos Syndrome Type III (Hypermobility Type): A Paediatric Cohort
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Background: Ehlers Danlos Syndrome (EDS) is a group of inherited connective tissue disord-ers characterized by a defect in the synthesis of collagen. Ehlers Danlos Type III (EDS III) characteristi- cally has associated gastrointestinal disorders. The clinical phenotype of EDS type III is well re-nown in adults but there is very little data in children. Aim : To describe the clinical presentation of gastrointestinal symptoms associated with EDS type III in a paediatric cohort of patients. Methods: A retrospective review of computerized patient records was carried out on all children with a diagnosis of disease type EDS III referred to the paediatric neurogastro-clinic. Results: A total of 56 children were recruited with a median range of 13 years (range 2-18yrs). Gender distribution: female n=37(66%), male n=19(34%). Ethnic origin: White British n= 42, MWEK n=4, Asian n=3, Asian/White n= 1.Other 6, 89% presented with symptoms of abdominal pain associated with eitherGOR(27), bloatedness(35) or constipation (P= 40). 53 patients had nausea and 23 patients had associated vomiting, 6 children complained of dysphagia and 2 children had oesophageal spasm. 11 patients had IBS type symptoms. 82% had constipation 4 patients had faecal incontinence and soiling, 2 patients had pathol-ic joint pain led to 9 patients using wheelchair for mobility. 15 children reported recurrent joint dislocation and 6 had fractures. 20 children reported chronic fatigue. Weight loss was noted in 18 children. 28 patients had autonomic dysfunction, 17 had postural orthostatic tachycardia syndrome and 20 had orthostatic hypotension. 8/20 who had impedance study showed pathological reflux while 5/15 children showed reflux on barium study. 13/16 children had delayed gastric emptying. High resolution oesophageal manometry showed symptoms (hypersensitive zone) in 6/11, small bowel manometry abnormal in 3/5 and anorectal manometry abnormal in 2/3, delayed colonic transit with megacolon in 7/15 children. Medical management required for GIT symptoms, orthostatic hypotension and joint pains. Nutritional management with exclusion diet and FODMAP were used in 6 children with some effect. 15 children received enteral feeds and 5 children parenteral nutrition. Surgical treatment was required in 6 patients. All of them required multidisciplinary input. Conclusion: Children with a diagnosis of EDS type 3 present with a wide spectrum of foregut, mid gut and hindgut motility disorders. Associated autonomic dysfunction and hypermobility with lax joints can be quite debilitating. A holistic approach to management through the multidisciplinary team is required.

Mo1223

Gastric Electrical Stimulation for Treatment of Chronic Constipation in Children: Long-term Experience
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Gastrointestinal Manifestations of Ehler-Danlos Syndrome Type III

Mo1224

Combination PEG+E and Sodium Picosulphate Is Effective for Bowel Dis-impaction in Pediatric Patients Presenting to a Surgical Clinic
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Background: Polyethylene glycol (PEG 3354 + electrolytes) and sodium picosulphate (SPS) are well-established treatments for constipation. PEG alone can produce dis-impaction in <2% of patients (1) while SPS alone has limited effect of chronic constipation (2). This study investigated the effect of combined PEG/SPS to achieve bowel dis-impaction in treatment-resistant pediatric patients presenting to a surgeon in a tertiary children’s hospital. Method: Retrospective audit of 44 consecutive clinic records was con-ducted over a month period. All 44 patients previously presented at the hospital, and had failed treatment by many clinicians including General Practitioners, pediatricians and gastroenterol-ogists before referral to the surgeon. Patients had nuclear colonic transit studies. Dosage was 6-10 saches PEG+E and 15-20 drops SPS on day 1, 6-8 saches PEG+E/20 drops SPS on day 2 and 4-6 saches PEG+E/10 drops SPS on day 3. Patients were provided instructions to administer the regimen at home over 3 days. PEG/E was dissolved in 125 ml water/ sachet and mixed with an equal volume of juice, then drunk at 80 ml/min. Results: By nuclear transit study, 27 patients had slow transit constipation (STC), 14 had anorectal retention (AR) (6 STC, and 3 AR). Spectrum Disorder was diagnosed in 16/44. All 44 were dis-impacted. Mean (±SE) stool output per week shifted from 0.88±(±0.23) to 6.37± (±3.03) defecation/wk week. (i.e 4±3.8-3.49±0.010). Average stool output was 6.7± 2 days over the 3-day period. Stool consistency shifted from Bristol Stool Scale 2 to 4. Mean soiling incidents/wk decreased from 5.4±(±4.96)wk to 1.05±(±12.83)±wks. (i.e 5±5 < 0.000). Conclusion: continued high-dose PEG/ESP was effective in dis-impication for treatment-resistant children with chronic constipation presenting to a tertiary referral surgical clinic. The combination of PEG+E and SPS produced dis-impaction in all patients without complication. This method could be useful for all patients with chronic constipation. 1. Cundy DC, et al. J Pediatr Gastroenterol. Nutr. 2006 Jul;43(1):65-70. 2. World S, et al. Int J Clin Pract 2007 Jun;61(6):944-50.

Mo1225

Is There an Association Between Esophageal Reflux and Pathologic Apneas in Infants? A Systematic Review
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Introduction: in infants, gastro-esophageal reflux (GER) is universally present and apneas are commonly encountered. Apneas can be centrally mediated, obstructive or both and have been proposed to be GER induced. It has also been suggested that apneas cause GER. Finally, no studies specifically looked for a common etiology. Aims: To perform a systematic review to determine whether there is an association between GER and apneas in infants (<12 months). Methods: PubMed, EMBASE and Cochrane databases were searched for prospective studies investigating an association between GER and apnea in infants. Studies with n≥5 patients were included. All included studies were assessed for methodological quality according to NOS. Due to heterogeneity in design, outcome measures and analysis, pooling of results was impossible. Results: A total of 289 infants (3 studies reported gestational age: range 24–43 weeks, 1 reported postnatal age: range 1–34 weeks) were evaluated for GER and apneas. All used respiratory rate and heart rate to evaluate apneas, all but 2 included oxygen saturation measurement as well. Four studies used distal esophageal pH-metry to detect GER, 1 used pharyngeal pH-metry and 1 used spectral pH-metry. Four studies investigated the association between GER and apneas. One study was performed in 24 infants in a randomized controlled trial design. No studies specifically looked for a common etiology. Conclusion: This systematic review showed no evidence for an association between GER and apneas in infants. The quality of included studies was low. Therefore, there is a need for high quality studies using uniform