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THE EFFECTIVENESS OF A CONSTIPATION PAMPHLET IN IMPROVING OUTCOMES AMONG PEDIATRIC PATIENTS WITH FUNCTIONAL CONSTIPATION: A SINGLE-BLINDED RANDOMIZED CONTROLLED TRIAL

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Background and relevance Constipation is distressful to the patient, parents and pediatrician. The ESPGHAN/NASPGHAN have recommended therapy for functional constipation, however, studies have shown that constipation is still prevalent among children and accounts for at least 3% of visits to the general pediatric clinic and as much as 30% of visits to the pediatric gastroenterologist. The use of a 'Constipation Pamphlet' may be effective in alleviating symptoms and recurrence of constipation.

Objective To determine the effectiveness of 'Constipation Pamphlet' in improving outcomes among children with functional constipation.

Methods Patients include 2 to 18 years old, fulfilling the ROME IV Criteria for functional constipation, or with Blethyn grade 2 or 3 on abdominal radiograph, seen at the University of Santo Tomas Hospital. The Control Group was given the recommendations of ESPGHAN/NASPGHAN in the management of functional constipation; the Experimental Group was given a 'Constipation Pamphlet', which in addition to the above recommendations, the following were recorded daily in a stool calendar: consumption of fruits, vegetables, and water; bowel movement, stool consistency; and laxative intake. Both groups were followed-up every 2 weeks, and outcomes were assessed after 8 weeks.

Results There were a total of 90 patients. All patients had less than 3 bowel movements per week (100%), painful bowel movement, and hard stools (93.33%). Abdominal radiograph revealed fecal stasis (73.33%). More consumption of fruits, vegetables and water was noted in the Experimental Group ($P<0.001$, $P<0.001$, and $P=0.007$); Regular daily bowel movement and normal stool consistency of Bristol type 4–5 was observed in the Experimental Group ($P=0.009$, $P<0.001$); Acceptable toilet habits were established by the 4th week ($P=0.002$) and maintained in the Experimental Group ($P=0.015$). A greater proportion of patients in the Experimental Group ceased lactulose intake by the 4th week ($P=0.045$) in contrast to the Control Group which continued until the 8th week of the study period. The Experimental Group were already symptom-free by the 2nd week, and sustained up to the end of the 8th week ($P<0.001$).

Conclusion The use of a 'Constipation Pamphlet' is effective in alleviating symptoms and preventing recurrences of constipation among pediatric patients.

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THE UNEXPECTED „TROUBLEMAKER‘ – BEHAVIOURAL CHANGES IN CHILDREN WITH COW'S MILK PROTEIN ALLERGY

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Introduction The most common food allergy in children is cow's milk protein allergy, and the clinical manifestations of the entity are very diverse.

Beside the organic symptoms of milk protein allergy, behavioural problems often occur in these children: the parents describe problems with attention, increased impulsivity and sleeping disorder; the biological background of these symptoms is not fully understood at the moment. The aim of our human research is to examine the psychological aspects induced by these proteins.

Methods Participants of the study were children above 3 years of age, with suggested symptoms of cow's milk protein allergy ($n=43$). The location of the study was the Paediatric Gastroenterology Department of the Balassa János County Teaching Hospital. The parents of the involved children were asked to fill in a self-edited questionnaire, which contained questions about sociodemographical and health status, as well as features about behaviour (according to DSM-5 symptoms-checklist about attention deficit-hyperactivity disorder). The evaluation of the questionnaires were performed with SPSS statistical program.

Results Examining the entire research population ($n=43$, mean age: 7.88 years, 41.9% female) the score received according to the ADHD symptoms-checklist before the diet (6.88, SD: 4.43) showed significant decrease after 3 months of the elimination diet (4.48, SD: 3.69, $p=0.001$). The above mentioned score of the children with sleeping disorder ($n=13$, 10.62, SD: 4.23) also represented a significant reduction after 3 months of the diet (6.69, SD: 4.59, $p=0.009$).

Discussion According to our results it is found that psychological symptoms (attention deficit, hyperactivity, sleeping disorder) can be induced by cow's milk protein allergy, but a significant improvement in these symptoms – beside the somatic symptoms – can only be achieved with a strict elimination diet.

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DEMOGRAPHIC RESULTS REGARDING PEPTIC ULCER DISEASE IN CHILDREN

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Background Peptic ulcer disease (PUD) in children is reported worldwide, but it is rarer than in adults. The causes of PUD in the pediatric age are: *Helicobacter pylori* (*H. pylori*), non-steroidal anti-inflammatory agents (NSAIDs), steroids, immunosuppressive drugs and stressful events.

Material and methods A group of 1757 children, admitted in a pediatric gastroenterology regional center in Northeast Romania performed upper digestive endoscopy and underwent gastric biopsy for *H. pylori* infection.

Results Out of the 1757 children, gastroduodenal ulcer was present in 32 cases (1.82%). Out of the 32 patients, 17 had gastric ulcer and 15 duodenal ulcer. Regarding gender, there was equal distribution, 16 patients (50% cases) were male and 16 female. Regarding the place of origin, higher frequency was observed in children with gastroduodenal ulcer from the rural area 68.75% (22 cases out of 32), compared with the children from urban area 31.25% (10 cases out of 32). The median age of diagnose for gastroduodenal ulcer was 13.19 +3.477 SD. Out of 17 cases of gastric ulcer, in 5 cases (29.41%) *H. pylori* infection was present. Regarding duodenal

ulcer, *H. pylori* infection was present in 12 children out of 15 (80%).

Conclusions Peptic ulcer disease remains high in children and the infection with *H. pylori* has a high incidence among this pathology.

P321 DISORDERS OF THE GALLBLADDER FUNCTIONAL STATUS IN THE CHILDREN WITH PANCREATIC REACTIVE CHANGE

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Introduction Biliary system functional disorders are one of the most common conditions among children and adolescents. The so-called dyskinesias in childhood and adolescence have progression and contribute to the development of organic diseases of the bile-excreting system.

Materials and methods On the basis of the Uzhhorod City Children's Clinical Hospital, 86 children were examined and treated. The main disease in the patients of which was accompanied by pancreas reactive changes. The age of children ranged from 2 to 16 years. Of these, 47 (54.7%) boys and 39 (45.3%) girls. To evaluate the motor function of the gall bladder and biliary tract, dynamic ultrasound cholecystography (UHC) with dietary stimulation of biliary excretion was used.

Results The vast majority of children (75 (87.2%)) have presented complaints on vomiting. The data of the objective examination corresponded to the clinical picture of the underlying disease. Paraclinical examination revealed that in 63 (73.3%) children urine amylase increased in 41 (65.1%) to 128 U/l, in 12 (19%) - to 256 U/l and in 2 (3.2%) - up to 512 U/l. In 61 (70.9%) children, acetonuria was noted, and in 15 (17.4%) - hyperglycemia was onset.

According to gall bladder ultrasound examination, its increase was found in 24 (27.9%) patients, deformation was found in 24 (27.9%), sealing of walls - in 12 (13.95%), biliary precipitate was visualized at 8 (9, 3%) children. 15 patients were selected for the possible detection of violations of the gallbladder motor function from the examined group, which were subjected to a detailed ultrasonographic examination - dynamic ultrasound cholecystography (DUCG). At DUCG the phases of gallbladder contraction are registered. With a hyperkinetic type of dysfunction of the gallbladder, the volume of the gall bladder was reduced by more than 65% at 60–90 minutes after taking a cholecystic breakfast; with a hypokinetic type was less than 33%.

Summary It was established that in almost half of the children from the selected group (7 (46.7%)) the volume of the gall bladder exceeded the age standards. Functional disorders of the gall bladder were observed in all children with reactive changes in the pancreas: 13 (86.7%) were hyperkinetic, 2 (13.3%) under hypotonic type. Volume of the gallbladder in the onset in 46.7% of children exceeded the age norms.

P322 COMMON THINGS ARE COMMON, EXCEPT WHEN THEY'RE RARE

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Introduction Blue rubber bleb nevus syndrome (BRBNS) is a rare condition characterised by multiple cutaneous and internal venous malformation. Cutaneous lesions are often small, blue to purple in colour and have a predilection to the palms and soles of the feet. GI lesions are pathognomonic for the disease and most commonly seen in the small bowel. Haemorrhage from venous blebs in the GI tract can cause chronic iron deficiency and anaemia.

Life-long iron supplementation and repeated iron and blood transfusions are required for affected individuals. Treatment options have included sclerotherapy, aggressive surgical removal of GI venous malformations, and more recently, medical treatment with sirolimus.

Case report We present a case of a 9-year-old Irish male with chronic iron deficiency anaemia and multiple vascular lesions.

The patient presented at one year old with a large vascular malformation, likely congenital hemangioma, overlying the occiput which increased in size over time. A trial of propranolol failed to reduce the size of the lesion and it was excised at 18 months old. However, a reoccurrence was noted 5 years after surgery. Other cutaneous stigmata include one vascular lesion on the sole of each foot.

The patient presented again in early childhood with a chronic microcytic anaemia. His anaemia progressed over time, with recurrent drops of haemoglobin requiring frequent blood transfusions. He had a normal haptoglobin level and no evidence of hemosiderin in his urine, suggesting a cause other than haemolysis of the vascular lesion causing the anaemia.

To investigate this unexplained iron deficiency anaemia, he had a colonoscopy at age 6 years. This showed two small haemangiomas in the rectum and descending colon and no evidence of inflammation. Repeat upper and lower endoscopy three years later was normal, with no vascular lesions seen.

The patient subsequently had a capsule endoscopy which demonstrated multiple small bowel angiomata and venous blebs. The pathognomonic cutaneous and small bowel vascular malformations, combined with a recurrent, severe iron deficiency anaemia dependent on blood transfusions are consistent with a diagnosis of BRBNS for this patient. He has recently started on sirolimus, a mTOR inhibitor which has been used for treatment of vascular anomalies in children including BRBNS. Initial response to the treatment looks promising with improvement in haemoglobin one month after starting treatment.

Conclusion We present a rare case of blue rubber bleb nevus syndrome in a 9-year-old boy with multiple venous blebs causing severe, chronic anaemia.