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PARENTERAL SYMPTOMS AND COMPLICATIONS IN CHILDREN WITH INFLAMMATORY BOWEL DISEASES IN RELATION TO THE MUTATIONS OF CARD15 GENE

U.E. Grzybowska-Chlebowczyk[1], H. Wos[1], A. Sieron[2], M. Kajor[3], S. Wiecek[1], H. Koryciak-Komarska[2], A. Augusciak-Duma[2]

[1]Department of Paediatrics, [2]Department of General, Molecular Biology and Genetics, [3]Department of Pathomorphology, Silesian Medical University, Katowice, Poland

The aim of the study was the evaluation of parenteral symptoms and complications incidence in children with non-specific colitis and their analysis in relation to the mutations of CARD15 gene.

Patients and methods: The study involved 38 children with Crohn's disease, aged from 5 to18 years and 40 children with ulcerative colitis, aged from 6 to18 years.

The control group included 23 children, aged from 4 to 18 years , with functional disorders of the alimentary tract resulting from lactose intolerance.

In all the examined patients mutations R702W, G908R and L1007fs of CARD15 gene were determined, according to the protocol described by Tukel.

Results: Parenteral symptoms in the group of children with Crohn's disease, manifested as arthritis and erythema nodosum, were observed in 7 patients (18.4%), whereas in the group with ulcerative colitis- in 4 children (10%). Intestinal complications in the form of stenosis, fistula, abscess and gastrointestinal bleeding were the most frequently observed in children with Crohn's disease 15 (39.5%)

Parenteral symptoms were statistically significantly more frequent in children with Crohn's disease and at least one mutation of CARD15 gene.

Intestinal complications statistically appeared more often in children with Crohn's disease and mutation L1007fs.

Conclusions:

1. Parenteral symptoms and intestinal complications more frequently occur in the group of children with Crohn's disease, in comparison with the children with ulcerative colitis.
2. We observed a relation between parenteral symptoms and at least one mutation of CARD15 gene, and a relation between intestinal complications and L1007fs mutation.

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ACUTE ACALCULOUS CHOLECYSTITIS IN CHILDREN: A 10-YEAR RETROSPECTIVE STUDY IN A SINGLE CENTER

S.-C. Huang[1], **Y.-J. Yang**[2]

[1]Department of Pediatrics, Kuo General Hospital, [2]Department of Pediatrics, National Cheng Kung University and Hospital, Tainan, Taiwan R.O.C.

Objective: The aims of this study were to define the etiology, clinical presentation, and prognosis of acute acalculous cholecystitis (AAC) in children.

Methods: Children aged less than 18 years diagnosed with AAC were analyzed retrospectively between 2000 and 2009. The demographic and clinical characteristics, etiology, and outcome were recorded. AAC was defined as GB wall thickness of greater than 3.5 mm and duration of symptoms less than 1 month. The severity of sonographic findings were scored, with 1 point each given for wall thickness greater than 3.5 mm, GB distention, sludge, and pericholecystic fluid.

Results: A total of 109 children (male/female =1.18, mean age = 5.8 years) were diagnosed with AAC. The most common presentation was fever (88%), followed by hepatomegaly (73%) and jaundice (49%). 65% and 72% of patients had thrombocytopenia and elevated alanine aminotransferase, respectively. The common causative etiologies were infectious diseases (58%) and systemic illnesses (27%). In addition to the wall thickening, the most frequent sonographic finding was GB distension (34%), followed by sludge (15%), and pericholecystic fluid (14%). All of our patients were treated non-operatively. Sixteen (15%) patients died. Children with mortality had a significantly higher rate of shock (p< 0.001), anemia (p=0.01), thrombocytopenia (p=0.04), hypofibrinogenemia (p=0.002), presence of pericholecystic fluid, and higher sonographic scores (p=0.04) than those with survival.

Conclusion: Childhood AAC may be secondary to a variety of etiologies, especially during the course of infectious diseases. Presence of shock and a low value of fibrinogen are predictable factors for mortality in childhood AAC.

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NON-ALCOHOLIC FATTY LIVER DISEASE AND STEATOHEPATITIS IN TAIWANESE CHILDREN: THE PREVALENCE AND SERUM RETINOL BINDING PROTEIN 4 LEVEL

Y.-J. Yang[1], **S.-C. Huang**[2]

[1]Department of Pediatrics, National Cheng Kung University and Hospital, [2]Department of Pediatrics, Kuo General Hospital, Tainan, Taiwan R.O.C.

Subjective: The aims of this study were to investigate the prevalence of non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steatohepatitis (NASH) in schoolchildren with various body mass index (BMI). Moreover, the correlation between serum RBP4 level and liver injury was investigated.

Methods: 847 schoolchildren aged 4 to 12 years were evaluated by anthropometric measurements. The serum glucose, aspartate aminotransferase (AST), alanine aminotransferase (ALT), triglycerides and cholesterol levels were measured after an 8-hour overnight fast. NAFLD was diagnosed as fatty infiltrates of liver in sonogram and NASH was defined as NAFLD with an elevated ALT level.

Results: The prevalence of overweight (85^{th} % < BMI < 95^{th} %) and obesity (BMI > 95^{th} %) in schoolchildren was 14.8% and 11.4%, respectively. The mean age and male-to-female ratio were significantly higher in children with obesity than those with normal weight (P=0.001). The obese children had a higher rate of abnormal AST and ALT (P< 0.001) and higher fasting triglyceride (P< 0.001) and glucose (P=0.04) levels than those with normal weight. Among 245 children with ultrasound examinations, fatty liver disease was identified in 2.5%, 20.6%, and 68.2% of children with normal weight, overweight, and obesity, respectively. Nine (40.9%) subjects were diagnosed as NASH in children with obesity. The serum RBP4 level was significantly higher in children with NAFLD and NASH than that in normal (P< 0.05).

Conclusions: Childhood obesity is closely related to male gender, increase of age, fasting triglycerides, and glucose levels. Moreover, the serum RBP4 level was parallel to the liver injury in children.

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GASTROESOPHAGEAL REFLUX DISEASE IN INFANT: RELATIONSHIP BETWEEN MULTICHANNEL INTRALUMINAL IMPEDANCE-PH MONITORING AND CLINICAL OUTCOME

F. Cresi, E. Locatelli, C. Marinaccio, G. Grasso, E. Castagno, L. Silvestro

Pediatrics, University of Turin, Turin, Italy

Background and aims: combined multichannel intraluminal impedance and pH-monitoring (MII/pH) is a new technique identifying refluxes irrespective of acidity and detecting their duration, proximal extent and pH. These features are important when studying gastroesophageal-reflux-disease (GERD) in infants, in which weakly acid refluxes are prevalent. Clinical application of MII/pH is uncommon yet, owing to lack of reference values and difficult interpretation of the variables obtained. Aim of the present study was to investigate the relationship between MII-pH results and clinical outcome on a sample of GERD infants.

Methods: infants (age: 0-3 months) with GERD symptoms were studied with MII/pH and submitted to a follow-up consisting in clinical examinations and structured interviews to parents at 3-6-9-12-18-24-36 months to evaluate the presence of symptoms and the therapy effects.

Results: 54 patients completed the follow-up (32M; age 33.69±21.78 days; weight 3465.13±791.08 gr.; length 52.08±3.55 cm). 22 and 15 patients were still symptomatic at the age of 6 and 9 months, without difference in MII/pH values between symptomatic and non symptomatic infants. The 12 infants that were still symptomatic at the age of 12 months showed a higher bolus exposure index (BEI) with respect to the healed patients (2.63±1.72% vs 1.72±1.05; p=0.029).

Conclusions: MII-pH in first months of life could be useful to identify patients with high risk of presenting GER symptoms for more than 1 year. BEI is a pH independent variable with a significant relationship with symptoms duration. Our data highlight the clinical relevance of MII/pH-detected weakly acidic refluxes in GERD infant.