Conclusions Studies showed that in children with chronic gastritis, Epstein-Barr virus markers are detected in the blood with high frequency. There is a relationship between the presence of the Epstein-Barr virus in the gastric mucosa and histological signs of gastritis.

GP177

ASSESSMENT OF NUTRITIONAL AND IRON STATUS OF HELICOBACTER PYLORI INFECTED CHILDREN – A SINGLE CENTER STUDY

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Introduction *Helicobacter pylori* (*H. pylori*) infection affects about 30% to two-thirds of human populations and is usually acquired in early childhood. There are conflicting results regarding the nutritional effects of *H. pylori* infection in children mostly about the reduced bioavailability of essential nutrients with growth impairment.

The association between *H. pylori* infection and iron deficiency anaemia is of considerable current interest.

Objectives To evaluate the effects of *H. pylori* infection on the nutritional and the iron status of symptomatic children that required a first upper endoscopic evaluation.

Methods This was an observational prospective study of 649 symptomatic children (age range 6 months-18 years) mostly with uninvestigated dyspepsia or extradigestive signs, admitted in our unit, from January 2015 to December 2017. Weight, height, body mass index for age and sex were used according to growth charts provided by WHO, 2007. Romania is in a nutritional transition and does not have updated national growth charts. *H. pylori* infection was documented by at least two standard invasive tests. Hematologic parameters and nutritional status were compared in patients with and without *H. pylori* infection.

Results Active *H. pylori* infection was documented in mostly of studied patients (63,64%). The majority of patients presented normal nutritional status (67,32%), with a significant proportion of wasting (12,63%) associated with risk to underweight (13,09%) overweight (4,48%) and obesity (2,16%). The prevalence of undernutrition was higher in uninfected *H. pylori* children compared with the infected ones (13,55% versus 12,1%; $p = 0,67$). Overnutrition prevalence was higher in the case of the *H. pylori* negative children compared to the positive ones (3,81% versus 2,66%, $p = 0,37$). The stunted was observed only in 3,08% cases. Iron deficiency anaemia was found in 19,72%, with an approximately the same prevalence in uninfected compared to infected children (19,91% versus 19,61%).

Conclusions The *H. pylori* prevalence rate (63,64%) revealed by our study suggests that this infection remains a semnificative problem in our country. This endoscopic series revealed a lower prevalence of undernutrition and overnutrition in symptomatic *H. pylori* infected children compared with uninfected ones, but without statistically signification for the both ends of the spectrum of poor nutritional status. Our study showed that the prevalence of iron deficiency anaemia was not significantly higher in uninfected *H.*

pylori children compared to infected patients. According to other observational studies the role and the impact of *H. pylori* infection on growth and iron deficiency anaemia remains controversial.

GP178

MORPHOLOGICAL FEATURES OF CHRONIC ESOPHAGITIS IN CHILDREN WITH CONCOMITANT ALLERGIC DISEASES ARE INTERRELATED WITH THE LEVEL OF CYTOKINES AND NEUROPEPTIDES

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Introduction IgE-mediated as well as non-IgE-mediated inflammation to the mucous membranes of the gastrointestinal tract is possible in children with allergic diseases. Purpose of the study: We investigated the morphological features of chronic esophagitis in children with atopic dermatitis (AtD) and bronchial asthma (BA) taking in account the cytokine status (IL-4, IL-5 and IL-13), the level of markers of eosinophilic inflammation (eosinophilic cationic ECP protein and eosinophilic neurotoxin EDN) and neuropeptides (neuropeptide Y (NPY) and substance P (SP)).

Patients and methods Study included 61 children (mean age 13.9 ± 2.36 years) having morphologically verified chronic esophagitis. 20 children suffered from concomitant AtD, 21 had esophagitis with BA. 20 children had esophagitis without concomitant atopic diseases. All children have undergone esophagogastroduodenoscopy and sampling of mucosal biopsy material from the middle third of the esophagus. Histologically we evaluated dystrophic, regenerative, inflammatory changes, vascular disorders and defects of the mucous membrane. In all children, the level of total IgE was determined and a blood test for IL-4, IL-5 and IL-13, ECP, EDN, NPY and SP was performed by ELISA. The statistical results were estimated by use of the program Stat Soft Statistica 12.0. for Windows-10.

Research results Morphological features of esophagitis in all studied groups equally frequent. The average level of total IgE in children with AtD and esophagitis was 186.6 ± 126.6 U/ml.; in the group of children with BA was $331,5 \pm 238,6$ U/ml. All children with esophagitis without atopic diseases had a level of total IgE within the normal range. In AtD, IL-4 levels (1.08 ± 0.47 pg/ml and 1.91 ± 0.88 pg/ml, $p < 0.05$), IL-5 (21.39 ± 15.47 pg/ml and 1.91 ± 0.88 pg/ml, $p < 0.05$), IL-13 (1.72 ± 1.55 pg/ml and 12.11 ± 6.10 pg/ml, $p < 0.05$), EDN (47.70 ± 34.83 pg/ml and 119.00 ± 64.26 pg/ml, $p < 0.05$) and NPY (40.62 ± 20.55 pg/ml and 160.44 ± 144.44 pg/ml, $p < 0.005$) were lower than with the combination of esophagitis with BA and had no differences with the group of children without atopy. Correlative relationship between morphological and immunological parameters in patients with atopy was found.

Conclusion Esophagitis in children with bronchial asthma is accompanied by higher levels of IgE and more pronounced changes in cytokine status than in atopic dermatitis. The correlative relationships between morphological and

immunological parameters in patients with atopy allow to suggest the significant role of allergic and neuropeptide inflammation of the esophageal mucosa in children with allergic diseases.

GP179 THE INCIDENCE OF INFlixIMAB INFUSIONS IN PAEDIATRIC IBD PATIENTS IN A TERTIARY PAEDIATRIC GASTROENTEROLOGY CENTRE

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Background Infliximab is a chimeric monoclonal antibody that targets Tumour Necrosis Factor- α in inflammatory bowel disease (IBD). Our Lady's Children Hospital Crumlin is the sole tertiary paediatric gastroenterology service in Ireland caring for the IBD paediatric population.

Our practice has been using the Infliximab originator, Remicade, for treatment. In our centre, for each patient commencing Infliximab treatment, we follow a specific protocol with regards to infusion rates, pre-medication and observation post infusion.

Objectives Our primary objective was to assess the incidence of adverse infusion reactions to Infliximab.

Methods We performed a retrospective analysis of patient charts who were on Infliximab infusions prior to the introduction of the biosimilar Infliximab infusion in October 2018 in our centre.

We reviewed a cohort of 100 patients who received Infliximab infusions during the time period 1st January 2016 to 30th September 2018. We assessed for any ADR ranging from mild requiring medical review to severe, requiring rescue adrenaline for anaphylaxis, as documented in patient notes and medication charts.

In view of practice changes to infusion rate times and evidence on exclusion of pre-medications, we aimed to investigate our current infusion adverse drug reactions (ADR) to compare going forward with the biosimilar switch.

Results In our cohort, 42% patients were female and 58% male. The majority 74% (n = 74) of patients were diagnosed with Crohn's disease, whilst 25% (n = 25) had a diagnosis of Ulcerative Colitis and 1% (n = 1) with IBD-undetermined. The average age of diagnosis was 11.8 years (Range = 3.4 - 16.4). 10% (n = 10) of patients were commenced on Infliximab at diagnosis as inpatients with the remaining 90% attending as outpatients to the day ward.

The overall incidence of Infliximab infusion reactions was 4% (n = 4). Significant severe non-anaphylactic infusion reaction, occurred in one patient only (1%). Of note, the patient did not receive adrenaline and was treated with IV hydrocortisone and IV chlorphenamine as per the protocol. 2% (n=2) were classed as moderate reactions with rash and facial flushing, both given IV hydrocortisone. Mild reaction occurred in 1% (n=1) with an episode of central chest pain that warranted medical review and the infusion re-started with a slower rate.

Conclusions Infliximab Infusion reactions are rare and found in a small quantity among paediatric IBD patients. Going forward with the biosimilar switch in our centre we can compare this data to assess its safety profile.

GP180 LEVEL OF VITAMINS D, PARATHORMONE, BONE TISSUE METABOLITES IN CHILDREN WITH COELIAC DISEASE AND BONE FRACTURES

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Objectives Study of vitamin D (VD) reserves and the level of markers of bone remodeling in children and adolescents with celiac disease (CD) depending on the presence or absence of fractures in history.

Methods 149 children with CD aged 1–17 y (8.8 ± 0.7 y), among which 65(43.6%) boys, 84(56.4%) girls. The diagnosis was established in accordance with the ESPGHAN criteria (1990,2012). Patients were divided into 2 groups. The 1 group 20(13.4%) children who had a history of fractures, the 2 group - 129(86.6%) children who had no fractures in the anamnesis. All patients were tested for serum calcidiol, osteocalcin(CSC), parathyroid hormone(PTH), C-terminal telopeptides(C-TTR).

Results The overall incidence of fractures in children with CD 13.4%, while in boys they occur 2.4 times more often 20.0% versus 8.3% in girls(p <0.05). The average age of diagnosis of CD in patients without fractures 4.3 ± 0.3 y, in children with fractures 6.1 ± 1.0 y (p <0.05). During the first year of adherence to GFD 3(23.1%) out of 13 fractures occurred. The average age of the fractures that occurred before the diagnosis was 5.9 ± 0.9 y; on the background of GFD 8.8 ± 0.9 y. Fractures of the upper and lower extremities were diagnosed in children in 15(75.0%) and 5(25.0%) cases. In patients with fractures calcidiol 12.4 ± 2.0 ng/ml, 1.9 times lower than in patients in the control group 23.0 ± 1.2 ng/ml(p <0.01). VD deficiency in children with fractures was in 18 (90.0%) children, of which in 9 (45.0%) children it was severe (>10 ng/ml). Deficiency VD 1(5.0%) patient, optimal level only 1(5.0%) patient. In the comparison group, VD deficiency in 70(54.3%) children, of them severe 33(26.3%), VD deficiency 21 (16.3%) cases, and the optimal level - in 38 (29.4%) patients. The level of PTH in children with fractures was 47.0 ± 9.7 pg/ml, which is 1.6 times higher than in the comparison group - 30.2 ± 2.0 pg/ml (p <0.05). The level of CSC in children with fractures was lower than in the comparison group — 27.0 ± 4.4 ng/ml and 53.9 ± 2.6 ng/ml (p <0.001), while C-TTR values were higher - 132.1 ± 20.1 pg/ml and 96.8 ± 6.9 pg/ml, respectively (p <0.05).

Conclusion CD patients at any age are at high risk for osteopenia and osteoporosis. A study of calcidiol indicates a low level concentration in children and adolescents with CD, while children with fractures have even lower rates.

GP181 COMPARING DIAGNOSTIC TESTS IN CHILDREN WITH COW'S MILK PROTEIN ALLERGY

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Introduction Food allergies are very common in the pediatric population; the most common among them is cow's milk