Conclusion: Infantile colitis has to be considered in an infant presenting with mucoid or bloody diarrhea. Specific diagnosis can be attained by history, physical examination, and biochemical and genetic assays, endoscopic evaluation and biopsies. Genetic factors are more important than environmental ones in the onset of pediatric UC. We suggest that the onset of UC in infants should prompt a search for MEFV mutations as this association may influence the management of the disease.

PO50 WIRELESS CAPSULE ENDOSCOPY: IMPLICATIONS ON DIAGNOSIS AND THERAPY IN PAEDIATRIC ONSET CROHN’S DISEASE

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Background: Wireless capsule endoscopy (WCE) has emerged as an important imaging diagnostic tool in paediatric onset Crohn’s Disease (CD); however, its impact on therapeutic approach and clinical outcome has not been thoroughly investigated.

Objectives: We assessed changes in diagnosis and therapy in a series of paediatric onset CD based on WCE findings.

Methods: The medical records and WCE of 50 consecutive patients (28M, 22F, mean age 12.5y, range 3–24y) with paediatric onset CD were reviewed. Data were collected for demographics, clinical and laboratory presentation, upper and/or lower endoscopy (UE/LE) and biopsy. Specific attention was given to therapeutic and diagnostic impact of WCE.

Results: Two patients were excluded from the study due to insufficient data. 22/48 of the remaining cases were known CD patients undergoing WCE at follow-up (FU). Among them, 21 patients underwent WCE at diagnosis. Compared to UE and LE, the overall sensibility of WCE was 96.6%. WCE affected the diagnosis in 7/48 (14.5%) cases. 5 patients (10.4%) were negative both at UE and LE but presented lesions at WCE. One patient (2%) thought to be affected by Ulcerative Colitis was reclassified as CD following WCE. In 3 cases WCE revealed greater severity of the disease than initially thought. 7 patients underwent exclusively WCE at FU showing evidence of active disease not seen at UE or LE in 4 cases while in 3 it confirmed remission. WCE influenced the therapies in 27/48 (56.2%) patients.

Conclusion: WCE allowed better diagnostic definition and a more appropriate therapeutic approach in a significant number of both known and newly diagnosed CD patients.

PO51 INFLAMMATORY BOWEL DISEASE: DIFFERENT AGE CLASSES IN COMPARISON

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Background: It hasn’t been completely established whether Inflammatory Bowel Diseases (IBD) including Crohn’s Disease (CD), Ulcerative Colitis (UC) and Indeterminate Colitis (IC) are similar or not in different age classes patients.

Objectives: To compare IBD patients by analysis data from childhood-onset patients (<18 years) and adulthood-onset patients.

Methods: Retrospective and prospective analyses of data were followed by a descriptive analysis using Chi-Square and Student’s t tests. Multivariate analysis was used to determine paediatric phenotypic features and therapeutic strategies at onset and follow-up.

Results: 324 patients of a unique Hospital (Padua, Italy) were analysed: 145 children (49% CD, 43% UC and 8% IC) and 179 adults (56% UC, 36% CD, 8% IC). At diagnosis, the localization of disease was at the upper gastrointestinal tract in 41.8% of the paediatric CD patients (59% of 6–12 year children; 41% of 13–17 year children) vs 15.4% of the adult ones (P = 0.001). Among UC cases, pancolitis was observed in 74.6% of patients (14/17 of <8 yr children) vs 63.4% of adult ones (P = 0.0001). At diagnosis, corticosteroids were prescribed more frequently to childhood-onset CD patients (38.4% vs 25.7%) than to the adult ones (P = 0.02), as well as thiopurines (24.8% vs 13.9%) (P = 0.0001). Among patients with IC, anti-TNF were needed at onset in 33% of the children vs 67% of the adults (P = 0.05).

Conclusion: Paediatric patients with IBD are phenotypically different than the adult ones.

PO52 CHARACTERISTICS AND PECULIARITIES OF CHILDHOOD-ONSET IBD

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Background: Childhood-onset Inflammatory Bowel Diseases (IBD), comprehending Crohn’s Disease (CD), Ulcerative Colitis (UC) and Indeterminate Colitis (IC), have been increasing in the last decades.

Aim: To determine the peculiarities of IBD children, analyzing in particular the early-onset IBD patients (<8 years).

Methods: Data collected from childhood-onset IBD patients were analyzed retrospectively and prospectively. Chi-Square and Student’s t tests were used to compare CD, UC and IC paediatric patients of different age classes.

Results: 145 children were enrolled: 49% had diagnosis of CD (35.1% of <8 year children), 43% of UC (53.1% of <8 year children) and 8% of IC. The mean interval between onset of symptoms and diagnosis was longer for CD (9.4 months) and IC patients (9.3 ms), than for the UC ones (5.7 ms). At onset, 81.8% of UC patients presented bloody diarrhea whereas 85.9% of CD patients abdominal pain. Extraintestinal manifestations were more frequent among CD patients at onset (73.7%) and during the follow-up (57.6%) than among UC patients (26.3% and 42.4%) (P < 0.05). At diagnosis of CD, in 40.9% of patients the localisation of disease was at ileo-colon and at the upper-gastrointestinal tract (upper GI-tract: 26/60 of <8 year children vs 3/11 of <8 year children). Among UC cases, pancolitis was observed in 74.6% of patients (14/17 of <8 yr children vs 63.4% of adult ones).

Conclusion: In the paediatric age, IBD phenotypic expression presents characteristics which vary within different onset age classes.

PO53 TWO INDEPENDENT ASSOCIATIONS ON THE IBDS LOCUS WITH CROHN’S DISEASE IN THE CZECH POPULATION

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Crohn’s disease (CD) has been associated with variants in the CARD15, IL23R and ATG16L1 genes. The role of other genes is questionable: the IBDS locus on 5q21 including SLC22A4 and SLC22A5 genes is one of the most studied. We examined the association in the Czech population of following variants: rs10500152 (SLC22A4), rs2631367 (SLC22A5), four SNPs tagging previously shown haplotype blocks 4, 7, 9, 10 of 5q21 of IBDS locus (OR = 1.92, CI 1.30–2.82, P = 0.003). A haplotype constructed from minor alleles rs2631367 (SLC22A5), rs10500152 (SLC22A4), rs6596075 strongly associated with CD in the WTCCC study. Genotype, phenotype and allelic frequencies were compared retrospectively and prospectively. Chi-Square and Student’s t tests were used to determine paediatric phenotypic features and allelic frequencies.

Results: 145 children were enrolled: 49% had diagnosis of CD (35.1% of <8 year children), 43% of UC (53.1% of <8 year children) and 8% of IC. The mean interval between onset of symptoms and diagnosis was longer for CD (9.4 months) and IC patients (9.3 ms), than for the UC ones (5.7 ms). At onset, 81.8% of UC patients presented bloody diarrhea whereas 85.9% of CD patients abdominal pain. Extraintestinal manifestations were more frequent among CD patients at onset (73.7%) and during the follow-up (57.6%) than among UC patients (26.3% and 42.4%) (P < 0.05). At diagnosis of CD, in 40.9% of patients the localisation of disease was at ileo-colon and at the upper-gastrointestinal tract (upper GI-tract: 26/60 of <8 year children vs 3/11 of <8 year children). Among UC cases, pancolitis was observed in 74.6% of patients (14/17 of <8 yr children vs 63.4% of adult ones).

Conclusion: In the paediatric age, IBD phenotypic expression presents characteristics which vary within different onset age classes.

PO54 GUT INFLAMMATION IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS

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Aim: The study aim was to evaluate the histopathological features in JIA gut mucosa.

Methods: All cases of JIA who underwent OGD/colonoscopy were identified from a single paediatric specialist centre over a 6-year period. Histopathology features, JIA-types, GI-symptoms, treatment and presence of autoantibodies were reviewed.

Results: 30 children (9 female) had endoscopy: 7 oligoarthritis, 9 polyarthritis, 5 systemic-onset arthritis, 8 enthesis-related arthritis and 1 psoriatic arthritis. All had one or more gastrointestinal symptoms, abdominal pain (n = 15), abnormal bowel motions (n = 8), vomiting (n = 2), rectal bleeding (n = 7) or failling growth (n = 7). 3/30 (10%) had abnormal histology. 23/30 (77%) patients had chronic active immune inflammation of the gut. 7/23 (30%) had predominant eosinophilic gastrointestinal disease, 6/23 (26%) had active colitis/IBD. 29/30 (97%) had colitis, 10/23 (43%) duodenitis, 5/23 (22%), terminal ileitis and 3/23 (13%) gastritis/oesophagitis. 61% (14/23) were on Immunosuppression and 17% (4/23) on non-steroidal. 43% had positive autoantibodies.
Conclusion: This is the largest paediatric series describing mucosal changes in the gut of children with JIA. The type of gut inflammation was mainly chronic active with a quarter having active IBD. The presence of erosive gastritis I in 30% of our study group is an important novel finding and may be used to guide therapy such as dietary exclusion, particularly in those with ongoing inflammation despite being on immunosuppressive therapy.

P055

INDETERMINATE COLITIS (IC) – A SINGLE CENTER EXPERIENCE
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Aim: A single center experience of paediatric IC with its presentation, disease distribution, progression and outcome.

Methods: We reviewed data of children with IC over a 7-year period. Patient follow up was at least 2 years. Disease distribution was identified on the basis of histology.

Results: 29 children were diagnosed with IC (n = 307 for total IBD), 22 males, mean age 7.4 years (range 1.9 to 15y). No cases were reclassified as UC or CD. 17 had a pancolitis at diagnosis, 10 had left-sided disease and remaining 2 had right sided colitis. Four left sided colitis progressed to pancolitis, and 2 pancolitis became one sided colitis on follow up. 10 cases had significantly increased mucosal eosinophils and 6 of these cases were pancolitis. 23 patients received Prednisolone and all were steroid responsive, 7 cases became frequently relapsing or steroid dependent. Azathioprine and 5-ASA was used in 21 cases. Other immunosuppressive agents were used in 7 cases because of failure to respond. Infliximab was used in 4, of which only 2 responded. Surgery was required only in 1 case (pancolectomy and later proctectomy). In cases with immunosuppressive infiltration additionally dietary restriction or elemental diet were used in 6/10 cases.

Conclusion: Most of IC-patients did not change distribution with time. No child was later reclassified as UC or CD, this may be due to shorter follow up. Most children responded to standard treatment with Prednisolone and Azathioprine. Coexisting eosinophilic inflammation may suggest allergic aetiology. Longitudinal studies are needed to determine the clinical implications of this paediatric IBD subgroup.

P056

EVALUATION OF METALLOPROTEINASE 3 AND 9 CONCENTRATION IN SERUM OF CHILDREN WITH ULCERATIVE COLITIS
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Background: Matrix metalloproteinases (MMPs) are a group of zinc-dependent proteolytic enzymes participating in the metabolism of connective tissue. It has been suggested that MMPs can be elevated in inflammatory bowel disease.

Objective: To evaluate the correlation between MMP-3 and -9 serum concentration and the activity of ulcerative colitis (UC) in comparison to the control group (C).

Methods: The studies were conducted on 31 children diagnosed with UC, in various clinical stages of disease and 37 healthy children in the C. The disease activity was estimated using the Truelov-Witts scale and the patients were classified into moderate or mild groups. MMP-3 and -9 concentrations in sera of patients were determined using commercially available tests. The results are presented as means±SD.

Results: The mean MMP3 concentrations were: 25.68±17.9 ng/ml for moderate UC, 6.11±4.6 for mild UC and 2.53±1.9 for C. There were statistically significant differences between moderate and mild UC, moderate UC and C and mild UC and C (p < 0.001). The mean MMP9 concentrations were: 37.6±17.9 ng/ml for severe UC, 13.6±10.0 for moderate UC, 6.39±8.6 for mild UC and 2.66±3.6 for C. There were statistically significant differences in MMP9 concentrations between groups: severe and mild CD, severe and mild UC, moderate and C, moderate and CD and C (p < 0.001).

Conclusion: The elevation of MMP3 along with the exacerbation of disease was observed. In case of MMP3 the concentration of the enzyme was increasing along with disease activity up to the moderate stage with subsequent decrease in the group of children with the severe form of disease.

P057

LUNG MEMBRANE DIFFUSION AND CAPILLARY VOLUME IN CROHN’S DISEASE: A PILOT STUDY
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Aim: The aim of this study was to assess capillary blood volume in Crohn’s disease.

Methods: Forced vital capacity (FVC), forced expiratory volume in 1 sec (FEV1), residual volume (RV), and total lung capacity (TLC) were measured by body plethysmography in 10 patients with Crohn’s disease. Diffusing capacity of carbon monoxide (DLCO) and its constituents, i.e. membrane diffusion capacity (Dm) and pulmonary capillary blood volume (Vc) were measured by the method of simultaneous transfer of carbon monoxide and nitric oxide. Results (% of normal values) were compared to the Pediatric Crohn’s Disease Activity Index (PCDAI).

Results: Patients (7M, 3F), aged of 13.5 years, were investigated at the time of diagnosis in 4 children or after a 22 month-duration (1–42 months) of disease course in 6 children who were treated with 5-aminosalicylate (n = 1), corticosteroids (n = 3) and/or azathioprine (n = 4). Median PCDAI score was 35 (range: 10–50). Two children had dyspnea during sport, and one had asthma. Capillary blood gases (PaO2, PaCO2), FVC, FEV1, RV, and TLC were normal in all infants. DLCO was decreased (-80%) in 1/10 children (median: 92%, range: 79–117%), Dm in 2/10 children (median: 93%, range: 69–103%), and Vc in all children (median: 46%, range: 42–74%). Vc was inversely correlated to PCDAI.

Conclusion: It is suggested that changes in alveolo-capillary diffusion observed in Crohn’s disease could be due to a decrease of the pulmonary capillary bed. These changes are related to the disease activity.

P059

INCREASING CUMULATED PREVALENCE OF INFLAMMATORY BOWEL DISEASE IN CHILDREN AT NORTH-WESTERN MEXICO: EPIDEMIOLOGICAL TRANSITION.
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Background: IBD in children may be considered as one of the entities of the epidemiological transition that is taking place in Mexico.

Objective: To report the cumulative prevalence of IBD in children in North-Western Mexico.

Methods: Design: Descriptive, longitudinal. Setting: A GI Department at a pediatric referral hospital. Diagnosis was based on current clinical endoscopic and histopathologic criteria. Cumulative prevalence: number of previous cases plus new cases divided by the number of children admitted to the GI Department per year evaluated.

Results: n = 24, mean age 10.1 years, 53.3% females. Diagnosis: Ulcerative colitis was diagnosed in 21 (85%) and Crohn’s disease in 3 (15%). Cumulated prevalence: There was 20X increase in cases with IBD in the study period; comparison of frequencies showed a significant difference (p < 0.001). Cumulative prevalence per 100 admissions through the period evaluated was 2000± 0.2, 2001± 0.4, 2002± 1.2, 2003± 2.4, 2004± 3.0, 2005± 3.9, 2006± 4.2, 2007± 4.3, 2008± 5.1.