methods: We examined 107 children with a histologically verified diagnosis of chronic gastritis (CG) in combination with CD. The first group consisted of 58 children with CG and newly diagnosed CD. The second group included of 49 children with CG, CD who adhering a gluten-free diet for at least 1 year. IgG antibodies to H +/K + ATPase of parietal cells of gastric mucosa -APCA (U/ml) and IgG antibodies to Castle's intrinsic factor (U/ml) were determined by the enzyme-linked immunosorbent assay. We performed multivariate correlation and regression analysis, using IBM SPSS Statistics 3 software package.

Results AG was diagnosed in children only in group 1 – 12,1%, in group 2nd AG wasn't detected – 0,0% ($p < 0,01$). Multivariate correlation and regression analysis made it possible to identify a number of significant factors and criteria for AG in children with CD: the presence of symptoms of CD for 3 or more years before the diagnosis ($r = 0,262$; $p < 0,05$); concomitant autoimmune thyroiditis ($r = 0,390$; $p < 0,001$); concomitant type 1 diabetes mellitus ($r = 0,390$; $p < 0,001$); family autoimmune pathology history ($r = 0,298$; $p < 0,05$); epigastric pain on palpation ($r = 0,364$; $p < 0,001$); the presence of dyspeptic complaints ($r = 0,417$; $p < 0,001$) and fasting abdominal pain ($r = 0,336$; $p < 0,01$); white coating of the tongue ($r = 0,349$; $p < 0,01$); goitre ($r = 0,422$ $p < 0,001$); severe lymphocytic infiltration of gastric mucosa ($r = 0,289$; $p < 0,05$), focal destruction of the gastric glands ($r = 0,698$; $p < 0,001$); atrophy of the gastric glands ($r = 0,573$; $p < 0,001$), neutrophilic infiltration in the fundus of the stomach ($r = 0,441$; $p < 0,001$); the presence of atrophy of the glands ($r = 0,441$; $p < 0,001$) and fibrosis of the stroma ($r = 0,296$; $p < 0,05$) of the antrum; the small intestine atrophy according to Marsh ≥ 2 grade ($r = 0,291$; $p < 0,05$) and the presence of the HLA-DQ8 haplotype ($r = 0,588$; $p < 0,01$). Simple logistic regression equation revealed a high likelihood of AG in patients with CD, who has 9 and more described factors. Visual assessment by the ROC-curve of the obtained mathematical model presented significant predictive ability (area under the curve = 0,987).

Conclusion detection of the revealed risk factors promotes early diagnosis of AG in children with CD.

272 INTEGRATION OF A CHILD WITH CELIAC DISEASE INTO A PRESCHOOL INSTITUTION

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Introduction Celiac disease is a small intestine disease of chronic etiology that arises as inflammatory response of intestinal mucosa to gliadin, gluten protein component contained in wheat, rye, barley and oats. Celiac disease is necessary lifetime implementation of a gluten-free diet. Preschool institution provides conditions for each child to achieve individual needs, opportunities and interest. The aim of the research was to determine the attitudes of educators, examine their knowledge of celiac disease and gluten-free diet and evaluate competences to work with children suffering from celiac disease.

Subjects, methods and results The survey was conducted with a survey of 20 questions in nine preschool institutions in Primorsko-Goranska County. A total of 260 educators were surveyed, of which 167 valid questionnaires on which survey was based. 97.6% of educators surveyed know what celiac

disease is. Most have answered that celiac disease cannot get over (66.47%). 73.65% had no experience of working with children with celiac disease, while 56.29% of educators rated themselves competent to work. That they are not sufficiently informed about celiac disease answered 77.25% of educators. 39.52% of educators have encountered literature related to celiac disease, while only 10.18% participated in education. Caring for a child who suffers from celiac disease 53.89% do not experience demanding, while 55.69% respond that the inclusion of a child suffering from celiac disease in the regular group does not requires changes in educational work. The attitude of educators to kindergarten there are good conditions for the care of a child suffering from celiac disease 61,68%. Out of a total of 93 educators who were rated competent to work with children suffering from celiac disease, 66.67% completed some form of professional training that provides them with safety in their work.

Conclusion Research shows that there is awareness among educators about celiac disease, anyone with experience in working with children with celiac disease evaluates it positive, and educators who are considered competent to work with children's patients with celiac disease have completed some form of education. Integration a child suffering from celiac disease requires cooperation between educators, parents, kitchen workers and the health manager. Adapting educational groups and kindergarten kitchens are key in integration planning. It's important ensure support for educators and carry out continuous training on the topic of celiac disease with the aim of strengthening the competences of educators to work with children with celiac disease, adapt the space of the educational group for the stay child, carry out professional development of kitchen workers for the preparation of gluten-free meals, adjust the kitchen area and draw up instructions for preparation of gluten-free meals with the aim of preventing contamination of meals, and encourage continuous cooperation with the Association of Celiac Patients.

273 PREVALENCE OF UPPER GASTROINTESTINAL TRACT ENDOSCOPIES AT THE PEDIATRIC CLINIC OF THE CLINICAL HOSPITAL CENTER RIJEKA FROM 2007 TO 2017

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Aim The aim of the study was to determine the frequency of individual indications, total number of esophagogastroduodenoscopies (EGDS) and pathohistological (PH) findings at the Pediatric Clinic, Clinical Hospital Center (CHC) Rijeka. The frequency of therapeutic interventions for foreign body extraction, the most common types of ingested objects, the frequency of ingestion of acid and alkalis, and the placement of PEG were also considered.

Materials and Methods The medical records of all patients undergoing EGDS from January 2007 to December 2017 were reviewed retrospectively. In the analysis of the obtained data, the reasons for performing EGDS in each patient were recorded. The sample for PH analysis was taken based on the assessment of the physician who performed the examination (pediatric gastroenterologist).

Results The total number of examinations performed was 1022. The most common indications for EGDS were: dyspepsia 32% (n = 327), abdominal pain 21% (n = 211), and celiac disease 16% (n = 166). The most common endoscopic findings were: gastritis 50% (n = 450), normal findings 35% (n = 325) and esophagitis 9% (n = 84). The most common PH findings were: normal 43% (n = 390), gastritis 23% (n = 210), and duodenitis 15% (n = 133). Of the total number of examinations, endoscopy was therapeutic in 10% (n = 98) of cases. The most common therapeutic indications were: foreign body ingestion 5% (n = 51), PEG placement 3% (n = 35), and acid and alkali ingestion 1% (n = 12).

Conclusion The results obtained are consistent with those of other studies and may indicate areas for additional education of staff and a starting point for future research on the topic.

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SCREENING FOR CELIAC DISEASE AMONG FIRST-GRADE PUPILS USING RAPID POINT-OF-CARE TEST, A PROSPECTIVE STUDY

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Celiac disease (CD) is an autoimmune disease triggered by gluten in genetically predisposed individuals with reported global prevalence in children from 0.31% to 0.9%. Despite the increasing prevalence of CD, many patients remain undiagnosed. Several point-of-care tests (POC) for CD have been developed that can be used as useful screening tool. We aimed to determine the prevalence of CD in first-grade pupils in Primorje-Gorski Kotar county, Croatia using POC test. Methods: Biocard celiac test that detects IgA antibodies to tissue transglutaminase in whole blood was used to screen for celiac disease in healthy first-grade children born in 2011 and 2012 who consumed gluten without restrictions. Results: 1478 children were tested and none of them were tested positive with rapid test. In 10 children (0,6%) IgA deficiency has been suspected; only 4 of them agreed to be tested further for total IgA, anti-tTG and anti DGP antibodies. IgA deficiency was confirmed in 3 patients and in all 4 children CD has been excluded. Conclusion: In this, to our knowledge first prospective study in Croatia, we haven't found children with celiac disease. Further research is needed to establish the true epidemiology of CD in Primorje-Gorski Kotar County and to confirm the value of rapid test in comparison with standard antibody CD testing.

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FOOD PROTEIN INDUCED ENTEROCOLITIS SYNDROME (FPIES)

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Objective The goal is to present epidemiological, clinical and laboratory characteristics of children with FPIES and the association with other allergic comorbidities and outcomes.

Methods Data of children with FPIES, diagnosed according to clinical criteria and monitored in Helena clinic over a 6-year period (1/2014 to 1/2020), was retrospectively analyzed.

Results In the specified time period, 22 children with FPIES were identified, 12 (54,5%) boys, and 10 (45,5%) girls. The median age of the first presentation was $8,45 \pm 3,96$ months. An equal number of patients, 11, had early (before 9 months), and late onset FPIES. Cow's milk was the most common cause in patients with early onset, while in late it was fish. 59,1% of patients reacted to a single food, 22,7% to 2 or 3 different foods, 18,2% to 4 or more. According to clinical features, 81,8% of patients had acute manifestation, 63,6% of them mild to moderate, and 22,7% severe. 18,2% had chronic clinical presentation. 2 patients had acute and chronic symptoms induced by different foods. 36,4% of episodes were triggered by fish, 23,8% by cow's milk, 22,7% by meat and fruits, 18,2% by cereals, 9,1% by eggs and vegetables, and 4,5% by soy. The allergic comorbidities were recognized in 16 (72,2%) children: dermatological in 54,5%, gastrointestinal in 40,9%, and respiratory in 4,5%. 17 (77,3%) children underwent allergy testing. Total IgE was tested in 95,5%, and was found positive in 6 (28,6%) patients. Most of them, 5 (83,3%), had coexisting allergy comorbidities. Atypical FPIES with positive specific IgE to trigger food was identified in 2 children. 9 (37,5%) children underwent skin prick and atopy patch test to the food that was reported as the cause. Skin prick test was negative in all, while atopy patch was positive in 2 (28,6%) patients. The children were followed in our clinic for a period of $17,32 \pm 10,59$ months. 7 (31,8%) children underwent oral food challenge (OFC), at the median age $17,86 \pm 7,49$ months. 5 patients (48%) achieved tolerance. The median period from the last episode was $12,28 \pm 6,24$ months. We didn't find any association between the age of the patients when OFC was done, and the outcome of challenge ($r = -0,488$, $p = 0,266$), neither between the duration of elimination diet and the outcome ($r = -0,578$, $p = 0,173$).

Conclusion The obtained epidemiological, clinical and laboratory characteristics were similar to data from other centers. The most common identified trigger food were fish and cow's milk, which was identical to results shown in the Mediterranean countries (Italy and Spain). The outcome data also matched.

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ENTEROBIUS VERMICULARIS COLITIS IN CHILDREN

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Objective Infestation with pinworm (*Enterobius vermicularis*) is common in young children, and the most common typical symptoms are perianal itching, nocturnal restlessness, and irritability. Although the clinical presentation is usually mild or completely asymptomatic, the infestation rarely can present with non-specific colitis, weight loss, and the formation of perianal abscesses or granulomas.

Methods We retrospectively analyzed data (including medical history, age, sex, anthropometric characteristics, laboratory parameters, macroscopic and microscopic findings of ileocolonoscopy) of all patients with macroscopically proven *Enterobius vermicularis*. These patients were referred for diagnostic workup due to suspected inflammatory bowel disease or a bleeding polyp, from January 2010 to January 2020 at the Children's Hospital Zagreb.