prevalence of anemia was 90%. Only two patients received nutritional support.

Conclusion Malnutrition in the hospital is common in Tunisia but remains under diagnosed and insufficiently supported. This entity deserves further study to determine its impact on health expenditures and to improve its screening and management.

269 HOW MANY CALORIES ARE ENOUGH?

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Because of disease complexity, it is challenging to realistically estimate energy needs of cystic fibrosis (CF) patients. During regular dietitian's check-ups, we noticed that CF patients who gained weight or maintained BMI targets consume more calories than are estimated as enough, following the ECFS and ESPEN guidelines. Therefore, we question if 100% increase of recommended energy intake is enough for some patients.

To support this doubt we calculated patients' energy needs based on Harris-Benedict formula and the level of physical activity, increased them following ESPEN guidelines and compared the recommended to actual intake and thriving.

Best example is a malnourished, picky-eater 12-year girl with poor appetite and impaired lung function (FEV1 29-43% p.v.). The girl finally agreed to PEG tube in order to increase feeding possibilities when the BMI was 13 kg/m² (-3.03 SD) and FEV1 35%p.v. At that point, her estimated energy needs were 1900 kcal and according to ESPEN guidelines, the recommended intake was doubled. Because of poor food-intake (1000-1500 kcal), this was achieved mainly through enteral nutritional supplements either orally or via PEG. She still didn't gain weight over a period of 9 months. During her last hospitalisation we reviewed the dietary approach. Her daily energy intake from food didn't surpass 1500 kcal so we increased the enteral feeds to 5000 kcal daily thus mounting energy intake to ≈ 6500 kcal/22.5 kg. After the lung function stabilized again (FEV1 37%p.v.), this high intake was necessary to retain weight gain. Following the same protocol at home, she gained 4 kg in a month (16.7% of weight at discharge). Her BMI is now 15.3 kg/m² (-1.68 SD).

Our patient consumes 300-330% of energy needs of healthy peers. This example emphasizes the importance of the dietitian in the CF team, an individual approach to each patient and 'thinking out of the box'. Maybe it is time to revise the guidelines regarding energy requirements for CF patients.

270 ACUTE ESOPHAGEAL NECROSIS IN A 15-YEAR OLD BOY – A CASE REPORT

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Acute esophageal necrosis (black esophagus, Gurvits syndrome) is a rare clinical entity which leads to upper gastrointestinal bleeding. First description dates to 1990, with around 115

cases described in the literature. The condition has pathognomonic endoscopic appearance characterized by circumferential black mucosa in the distal esophagus, and discontinuing abruptly at the gastroesophageal junction. The pathogenesis is unclear, apparently multifactorial mucosal ischemia due to low flow vascular state or microvascular thrombosis is predisposing to topical damage by gastric content reflux. It's commonly seen in elderly men, with risk factors like diabetes, malignancy, alcohol consumption, shock, major surgery.

Diagnosis is made endoscopically.

Management requires hemodynamic stabilization, acid suppressive medication with avoidance of nasogastric tube placement. The condition has very poor prognosis, with mortality rate up to 35%, and various complications including strictures and stenosis, perforation with mediastinitis and abscess formation.

Our patient, a 15 year old boy underwent surgery for scoliosis. During the immediate post surgical period he had hematemesis with consequent hemorrhagic shock. He was stabilized (IV fluids, packed red blood cells), nasogastric tube was inserted with evacuation of around 160 mL of blood and he was referred to our ICU. He required mechanical respiratory support and inotropic medications. Continuous parenteral PPI therapy was commenced.

Black, charcoal-like content was draining from the nasogastric tube, with further deterioration in hemoglobin levels.

Esophagogastroduodenoscopy showed black mucosa of lower esophagus, partly circumferential, partly linear, with cut-off at gastroesophageal junction.

There were no radiological signs of esophageal perforation, bilateral lung consolidates were surrounded by ground-glass interstitial changes.

Patient was kept NPO, on parenteral nutrition, with PPI and antibiotic treatment. He was weaned mechanical ventilation after three days, followed by brief stint of non-invasive respiratory support.

Unfortunately, significant stenosis with stricture formed in the area overlying initial necrosis. After several attempts of endoscopic balloon dilatation, refractory strictures reemerged. Surgical gastrotomy was performed to enable sufficient enteral caloric intake, and bring the patient to ideal physical condition for further treatment.

Planned colonic interposition surgery was not performed because of inadequate length of colon, hence thoracic surgeons performed retrosternal esophagogastroplasty. Our patient had no further postoperative complications and was able to establish adequate oral feeding.

Acute esophageal necrosis should be considered as one of the causes of upper gastrointestinal bleeding, especially because its high mortality and complications rate requires immediate and aggressive early management.

271 RISK FACTORS OF AUTOIMMUNE GASTRITIS IN CHILDREN WITH CELIAC DISEASE

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The aim was to determine the risk factors of autoimmune gastritis (AG) in children with celiac disease (CD) Materials and

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).