Patients with UC most commonly had pancolitis (E4) (53.6%), and 7.1% presented with ever severe form of the disease (S1). The recommended complete diagnostic algorithm was performed only in 29.4% of our patients.

First line therapy used in CD was exclusive enteral nutrition (EEN) for remission induction (84.2%) and azathioprine for remission maintenance (73.7%). In patients with UC, aminosalicylates were the most common drug used (89.3%). By the end of the first year 41.2% of CD and 53.9% of UC patients had a relapse and required escalation of treatment. Median time to the first relapse was 5 (5-11) months. Following potential risk factors for relapse were examined: age ($p = 0.769$), gender ($p = 0.091$), Z - score body mass index for age ($p = 0.914$), Z - score height for age ($p = 0.087$), Pediatric Crohn's Disease Activity Index ($p = 0.947$), Pediatric Ulcerative Colitis Activity Index ($p = 0.245$), EEN ($p = 0.605$), but none of them were statistically significant.

Our data confirm extensive intestinal involvement in pediatric IBD and relatively high relapse rate during the first year of follow-up. More effort should be invested on the national level to implement more stringent adherence to the current European guidelines.

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NUTRITIONAL STATUS IS IMPAIRED, AND NUTRITION INTAKE IS INSUFFICIENT IN CHILDREN HOSPITALIZED IN A TERTIARY REFERRAL CENTRE OF A DEVELOPED COUNTRY

Tena Nisetee*, Nistee Tena, Hojsak Iva, Kolacek Sanja. *Children's hospital Zagreb*

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The prevalence of malnutrition in hospitalized children in the last ten years notable decreased. However, the issue of nutritional status deterioration during hospitalization remains. The aim of this study was to determine the impact of hospitalisation on nutritional and functional status of hospitalised paediatric patients, and to evaluate their energy intake during hospitalization.

We conducted prospective longitudinal cohort study during the period of 1 year in a tertiary University children's hospital. Nutritional (body weight and length/height, body mass index) and functional status (handgrip strength (HGS)) were measured on hospital admission and discharge. During hospitalization three-day food diary was recorded (from 3rd day of admission) by dietitian or educated nurse.

367 paediatric patients were included into the study (girls 184, 50.1%; mean age 7.3 years (IQR: 1 month – 18 years), and their median length of stay

(LOS) was 7.6 days (IQR: 5–48 days). LOS had a significant negative impact on weight, and 40.9% patients lost on their admission body weight during hospitalization. During the hospital stay 87 (25%) patients had energy intake $\leq$ 59% RDA, 146 (43%) had energy intake 60 – 89% RDA, and only 110

(32%) of patients had energy intake $\geq$ 90% RDA. There was no significant difference in nutritional intake between malnourished and eutrophic patients ($p=0.102$), however severely malnourished patients had significantly lower

($p=0.012$) energy intake compared to those moderately malnourished. HGS on admission had the positive correlation with BMI Z -score (0.265, $p<0,001$).

During the hospitalization 59.55% of children older than 6 years lost some of their HGS, however HGS reduction did not significantly correlate with weight loss, energy intake and LOS.

The results of this study confirm a noticeably high prevalence of malnutrition in hospitalized children. Moreover, a significant proportion of paediatric patients lose weight during hospitalization. The implementation of individualized and flexible nutritional support by providing food to the patients according to their age, needs and preferences can contribute to better nutritional intake.

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ASSESSMENT OF SERUM BONE TURNOVER MARKERS AND MYOKINES LEVELS IN CHILDREN ON VEGETARIAN AND OMNIVOROUS DIETS

Jadwiga Ambroszkiewicz*, Joanna Gajewska, Witold Klemarczyk, Grażyna Rowicka, Magdalena Chelchowska. *Department of Screening and Metabolic Diagnostics, Department of Nutrition, Institute of Mother and Child, Warsaw, Poland*

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Vegetarian diets contain many beneficial properties but also carry a risk of inadequate intakes of several nutrients important for muscle and bone health. The links between muscle and bone have been recently intensively examined. Myokines, including myostatin and irisin are cytokines synthesized and released by muscle tissue. It is known that myokines affect bone metabolism, however, the mechanisms of these interactions are not fully understood. The aim of the study was to assess serum concentrations of bone turnover markers and myokines in prepubertal children on vegetarian and omnivorous diets.

The study included 30 healthy children (aged 5-9 years) on a lacto-ovo-vegetarian diet and 30 children on an omnivorous diet, who were under medical and dietary control at the Institute of Mother and Child in Warsaw (Poland). Anthropometric measurement, body composition (fat mass, lean mass, bone mineral content) and dietary constituents were assessed in all studied children. Body composition was measured by dual-energy X-ray absorptiometry. Dietary assessment was performed using a nutritional software program Dieta5. Concentrations of bone metabolism markers (osteocalcin – OC, C-terminal telopeptide of collagen type I – CTX) and myokines (myostatin and irisin) were determined in serum samples by immunoenzymatic assay. Statistical analyses were done using Statistica software. This study was approved by the Ethics Committee at the Institute of Mother and Child.

There were no significant differences in the anthropometric parameters: weight, height and body mass index in both studied groups. Compared with omnivores, vegetarians had similar bone mineral contents but lower ($p<0.05$) lean mass and percentage of fat mass. Average daily dietary energy intake was similar in both studied groups, however, vegetarians had a lower intake of protein and higher intake of carbohydrates compared with omnivores (both $p<0.05$). The serum concentration of OC was significantly lower in children on a vegetarian diet compared with omnivores (66.9 ± 13.7 vs. 85.2 ± 20.5 ng/mL, $p<0.01$). Additionally, levels of CTX were higher in vegetarians than in omnivores (1.970 ± 0.341 vs. 1.597 ± 0.351 ng/mL, $p<0.01$). Serum myokines concentrations did not significantly differ in both studied groups of children,

but we observed slightly higher (by about 15-20%) levels of myostatin and irisin in vegetarians.

Our results show that a well-planned vegetarian diet with proper dairy and egg intake does not lead to changes in bone mass in prepubertal children.

However, children following a vegetarian diet had a higher rate of bone turnover and subtle changes in serum myokine levels.

232 DETERMINANTS OF ENERGY UNDER-REPORTING IN RURAL ADOLESCENTS

Lyubov Rychkova*, Olga Dolgikh, Anna Pogodina, Zhanna Ajurova, Tatyana Astakhova.
Scientific Centre for Family Health and Human Reproduction Problems

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To assess the extent of under-reporting (UR) in rural adolescents and investigate associated covariates.

A total of 150 adolescents aged 11–17 years were included. Food intake was reported in a 3 d diet record. Socio-economic status, sedentary behaviour and physical activity were collected by questionnaires. Weight height and waist circumference were measured. A body mass index (BMI) was calculated.

Plausibility cut-offs for reported energy intake as a percentage of predicted energy requirements were used to identify under-reporters.

Multivariate logistic regressions investigated the associations between UR and covariates.

The percentages of under- and over-reporters of energy intake were 35.3% and 3.3% respectively. Energy intake was under-reported more in older adolescents and boys. In multivariate analysis UR was associated with BMI and waist circumference Z-scores (OR 1,7 [95% CI 1,1-2,4] and OR 1,5 [95% CI 1,1-2,2] respectively) and participation in sports groups (OR 2,5 [95% CI 1,1-5,4]).

In conclusion, in rural sample under-reporters differ from plausible reporters in several characteristics related to age, sex, weight status and organized physical activity. Therefore, it is important to consider this differential UR bias when investigating diet–disease associations in adolescents.

233 TRANSITORY APLASTIC ANEMIA FOLLOWING ACUTE AUTOIMMUNE HEPATITIS IN A YOUNG BOY

Matiija Bakoš*, Vanja Ille, Matea Kovačić, Nedo Marinković, Ana Petrović Gluščić, Jadranka Kelečić, Goran Tešović, Mima Natalija Aničić, Lana Omerza, Irena Senečić Čala, Duška Tješić Drinković, Jurica Vuković. University Hospital Center Zagreb

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Introduction Acute hepatitis associated aplastic anemia (AHAAA) is a rare condition in which acute hepatitis is complicated by development of aplastic anemia. It is more common in young males, and presents with pancytopenia 2-3 months after an episode of acute hepatitis.

The etiology of hepatitis mostly remains unknown and it is thought that aplastic anemia is caused by immune dysregulation provoked by perhaps infection triggered cytokine production that injures hematopoietic stem cells. Options for treating severe AHAAA are bone marrow transplantation or

immunosuppressive therapy (corticosteroids, cyclosporin A, antithymocyte globulin, antilymphocyte globulin).

Case Report We present a case of a previously healthy 10-year old boy, admitted due to sudden onset of jaundice and nausea. Laboratory results showed highly elevated aminotransferase (AST 2089 U/L, ALT 3228 U/L), conjugated hyperbilirubinemia (total bilirubin 391 umol/L, conjugated 302 umol/L) and initially preserved synthetic liver function. Extensive workup excluded infectious, toxic and metabolic causes. Hypergammaglobulinemia was not present, but anti smooth muscle antibodies were positive in two consecutive testing (1:20). Liver biopsy showed unspecific mixed type acute inflammation. In the next few days he developed liver failure (INR 2.6) so immunosuppressive therapy for autoimmune hepatitis (AIH) was initiated (corticosteroids and azathioprine), together with symptomatic therapy (fresh frozen plasma). Due to potential adverse toxic effect (decreased activity of the enzyme thiopurinmethyltransferase) azathioprin was changed to mycophenolate mofetil. In the following weeks patient's synthetic liver function completely recovered and aminotransferase and bilirubin levels improved. Six weeks after initial onset of his symptoms patient developed severe thrombocytopenia and leukopenia followed by mild anemia. Bone biopsy showed hypoplastic to aplastic bone marrow. Screening for opportunistic pathogens revealed positive *Pneumocystis carinii*, and also CMV and VZV reactivation so treatment with trimethoprim-sulfamethoxazole and valganciclovir was started together with antifungal therapy for oral candidiasis. He also required repeated platelet transfusions. After two months his bone marrow started showing signs of recovery and he was discharged from hospital. At last follow up, his leukocyte counts was $4.3 \times 10^9/L$, hemoglobin 142 g/L and platelet count $57 \times 10^9/L$.

Discussion Our patient followed the typical presentation of AHAAA described in the scarce literature. The notable aspect of our case is potentially spontaneous recovery of bone marrow aplasia without the need for bone marrow transplantation. Mycophenolate mofetil might be viable therapeutic step in treatment for this type of disease.

234 CASE OF FOREIGN BODIES IN GASTROINTESTINAL (GI) TRACT

Paweł Józefczuk*, Izabella Łazowska-Przeorek, Katarzyna Karolewska-Bochenek.
Department of Paediatric Gastroenterology and Nutrition, Medical University of Warsaw, Poland

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Rationale Foreign Body in GI Tract is an emergency state commonly treated in paediatric gastroenterology as well as paediatric surgery departments. Removal techniques (endoscopy vs. surgery) should be always carefully considered.

Patient An 8 year old boy was admitted to our Department because of intentional swallowing 9 magnetic balls (before 5 days). Abdominal pain, numerous vomiting and lack of appetite had been presented.

Intervention After X-Ray he was qualified to gastroduodenoscopy. 9 linearly connected magnetic balls were found. One boarder coated by pyloric mucosa and the second superficially fused with anterior wall of duodenal bulb.

Foreign bodies were successfully removed with Roth net. We discovered horizontal transmucosal ulcer in pylorus and deep penetrating ulcer of duodenal bulb with suspicion of its microperforation.