

from 12.8 ± 12.96 to 27.4 ± 41.17 ; $p=0.07$; the mean of neutrophils increased from 4.45 ± 1.52 to 6.86 ± 12.11 ; $p=0.59$). The *T*-test showed that the means of procalcitonin increased from 0.21 ± 0.07 to 0.23 ± 0.08 , $p=0.04$, the mean of lymphocytes increased from 1.35 ± 0.54 to 1.54 ± 0.62 , $p=0.1$. Pearson correlation coefficient showed statistically insignificant positive correlation between the dose of medication and variation of procalcitonin.

Conclusion: The study has showed that inflammatory indicators increased after the intravenous iron therapy to patients on hemodialysis.

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PS038

Distribution and quantification of elements of the enteric nervous system in the distal rectum of neonates and infants



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Aim: Analysis of variations in the ENS of distal rectum in neonates and infants under the age of 6 months, with no previous history of intestinal dysmotility.

Introduction: The enteric nervous system (ENS) consists of numerous ganglia along the gastrointestinal tract. The most common disorder of ENS is Hirschsprung's disease (HD). Diagnostic problems may occur due to insufficient knowledge of the normal distribution of ganglion cells (GC) in the distal rectum.

Methods: The study analyzed ENS of distal rectum in autopsy samples of infants. The sections were stained with hematoxylin and eosin (H&E) and immunohistochemistry using the MAP-2 antibodies. All sections were analyzed at three levels: the level of anorectal junction (ARJ0), at 1 cm (ARJ1) and 2 cm (ARJ2) proximal to the ARJ0. We analyzed number of ganglia and GC, their distribution and thickness of the bundles of nerve fibers (BNF).

Results: GC were found at ARJ0 mainly within BNF of the intramuscular zone. Number of GC within BNF of intramuscular zone were lower at ARJ2 than ARJ1 (H&E: $p=0.021$; MAP-2: $p=0.017$). Number of GC in submucosal ganglia were significantly higher in ARJ1 and ARJ2 compared to ARJ0. In myenteric ganglia the number of GC were higher at ARJ1 compared to ARJ0 (H&E: $p=0.002$; MAP-2: $p=0.014$). Number of GC were significantly higher at ARJ2 compared to ARJ1 only in MAP-2 staining ($p=0.009$). In submucosal plexus we observed higher number of ganglia at ARJ1 and ARJ2 ($p=0.014$, both) compared to ARJ0 at MAP-2. In myenteric plexus there were higher number of ganglia at ARP1 compared to ARP0 (H&E: $p=0.006$; MAP-2: $p=0.014$). Individual thicker BNF were found in submucosa.

Conclusion: In distal rectum of neonates and infants there are significant variations in number of ganglia in the submucosal plexus up to ARJ2 and in myenteric plexus up to ARJ1.

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PS220

Inflammatory bowel diseases: Nutritional status and its significance for the course of the disease



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Aim: The aim of the study was to evaluate the association between the Body Mass Index (BMI) and the disease course of IBD patients.

Introduction: Inflammatory Bowel Disease (IBD) may lead to the underweight and malnourishment. However, the number of overweight and obese patients increases. Excess body weight connected with a pro-inflammatory state can modify the disease course.

Methods: Medical records from the University Hospital in Cracow Electronic System were screened from August 01, 2015 to December 31, 2016 in search of patients diagnosed with IBD. Data regarding the disease extension, occurrence of intestinal and extra-intestinal complications, number of days spent in the hospital annually and type of treatment was collected. The results were analyzed in the groups based on BMI ($1 < 18.5$; $2: 18.5-25$; $3 > 25 \text{ kg/m}^2$).

Results: 150 patients with Crohn's disease (CD) and 151 with ulcerative colitis (UC) were included. The median number of days spent in the hospital annually was significantly higher in the underweight group (13 (IQR: 11) vs 7 (IQR: 17) vs 7 (IQR: 12); $p < 0.01$). Overweight patients were less likely to receive anti-TNF or immunosuppressive treatment [anti-TNF (1: 35% vs 2: 38.36% vs 3: 18.29%; 1 vs 3; $p=0.02$; 2 vs 3; $p < 0.01$); immunosuppressive (1: 40.00% vs 3: 23, 17%; $p=0.03$)]. Patients with BMI $> 25 \text{ kg/m}^2$ developed fistulas and bowel strictures less often [fistulas (1: 33.33% vs 2: 27.04% vs 3: 12.20%; 1 vs 3; $p < 0.01$; 2 vs 3; $p < 0.01$); strictures (1: 25% vs 2: 22, 64% vs 9.76%; 1 vs 3; $p=0.01$; 2 vs 3; $p < 0.01$)]. Underweight UC patients had more extensive disease [left sided (1: 25% vs 2: 52.63% vs 3: 49.02%; 1 vs 2; $p=0.02$; 1 vs 3; $p=0.04$); pancolitis (1: 58.33% vs 2: 26.32% vs 3: 31.37%; 1 vs 2; $p < 0.01$; 1 vs 3; $p=0.02$)].

Conclusion: Overweight seems to be associated with a milder clinical course of the disease in IBD patients. It is related to lower incidence of intestinal complications among CD and to less extensive intestine involvement in UC patients.

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PS023

Influence of glycoregulation and chronic degenerative complications of diabetes on bone mineral density



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Aim: The aim of this study is to determine the correlation between duration of diabetes, glycoregulation and chronic degenerative complications of diabetes, on one side, and bone mineral density, on the other side.

Introduction: Diabetes mellitus is a state of chronic hyperglycaemia. In late stages of the disease, especially if it is not regulated well, chronic complications may occur, dominating the clinical picture. Osteoporosis is characterized by bone loss per volume unit leading to microarchitectonics disorder of the bone. Connection between diabetes and osteoporosis is very complex.

Methods: Medical documentation collected at daily hospital of Clinic of endocrinology, diabetes and metabolic disorders is used in this study. Sample includes 60 patients which have been diagnosed with diabetes mellitus, with or without complications, who underwent densitometry measurement (DEXA). Glycosylated hemoglobin (HbA1c), fasting glucose and postprandial glucose are used as parameters of glycoregulation.

Results: Average duration of diabetes is 15.61 ± 9.63 years. Average value of HbA1c is $8.5 \pm 1.79\%$, average value of fasting glucose is 9.23 ± 2.94 mmol/l and average value of postprandial glucose is 11.35 ± 4.27 mmol/l. 67% of patients have one or more complications. Bone mineral density (g/cm^2) of femoral neck and total have significant negative correlation with HbA1c ($p < 0.01$). Bone mineral density of lumbosacral spine and femoral neck (g/cm^2 , *T*-score) have light negative correlation with postprandial glucose.

Conclusion: Bone mineral density and parameters of glycoregulation have negative correlation. Statistically significant correlations between bone mineral density and chronic degenerative complications of diabetes were not found.

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PS022

Effect of autologous stem cell transplantation in patients with hematological malignancies



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Aim: The aim of this study is to analyse available medical data of patients diagnosed with multiple myeloma (MM), lymphoma Hodgkin (MB) and non-Hodgkin (NHL) and acute leukemia (AL), who underwent ASCT, and to compare the results with the results from other scientific works.

Introduction: Autologous stem cell transplantation (ASCT) with high dose chemotherapy is effective and safe approach in the treatment of different hematological malignancies. Nowadays, it is the standard therapy for multiple myeloma, lymphomas and acute leukemias.

Methods: Retrospective study included 84 patient diagnosed with MM, MH, LNH and AL who underwent ASCT in the period from 2004 to 2016. Data are presented in table and charts.

Results: In relation to the underlying disease, the distribution of respondents was as follows: 35 patients with MM, 24 with NHL, 20 with MH and 6 with AL. Large volume apheresis procedure had to 75 patients (89.3%), and 9 patients (10.7%) had conventional two-day procedure. The mean value of processed blood volume amounted to 13050 ml. The average number of MNC in the apheresis product was $7.8 \times 10^8/\text{kg}$ bw, a CD34+ cells was $12.11 \times 10^6/\text{kg}$ bw. After the application of conditioning regimens, depending on the underlying disease, neutrophils engraftment occurs at 11 day and platelets engraftment at 14 day.

Conclusion: Analyzing data of the patients with hematological malignancies and ASCT conducted, we conclude that the mentioned procedure is successful method of treatment, with low

transplant mortality and complications caused by the mentioned procedure.

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PS237

Polymorphism of Kibra gene in patients with terminal renal insufficiency



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Aim: The aim of this study was to determine whether there is a difference in frequencies of genotypes and alleles of KIBRA gene polymorphism, rs17070145 between patients with terminal renal insufficiency and normal population.

Introduction: KIBRA gene has a role in signal transmission that regulates apoptosis, proliferation, and movements of the cytoskeleton of cells. Due to its most common expression in kidney and brain, the name of this protein is Kibra (Kidney, BRAin). Polymorphism rs17070145 (substitution of thymine with cytosine in the ninth intron of the gene) is associated with Alzheimer's disease and memory, while its connection with kidney's diseases has not been tested yet. It is thought that allele C is the factor of predisposition in TRI.

Methods: Polymorphism rs17070145 was analyzed with Real Time PCR method using TaqMan probes and 50 people with TRI were involved. Results of gene analysis for the control group were taken from previous research. Frequencies of genotypes and alleles between patients with TRI and healthy examinees was compared with χ^2 (chi-square) test.

Results: The frequency of CC genotype among patients with TRI is 76%, CT genotype 22% and TT genotype 2%. Based on frequencies of genotypes, we found that frequency of C allele is 87%, while the frequency of T allele is 13%.

Conclusion: Results of χ^2 test show extremely statistically significant difference in frequencies of genotypes and alleles in patients with TRI in comparison with healthy people ($P < 0.0001$). These results indicate that C alleles on locus rs17070145 in KIBRA gene are probably the significant factor of predisposition in the pathogenesis of TRI.¹⁻³

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Neurosciences Poster Session
Thursday, September 14th, 16h00

PS088

D-Galactose high-dose administration and oral epigallocatechin-3-gallate effects on the dendritic trees of developing neurons of young male rats



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