**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 microarchitectonic 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 who 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 glicoregulation.

**Results:** Average duration of diabetes is 15.61 ± 9.63 years. Average value of HbA1c is 8.5 ± 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/cm²) of femoral neck and total have significant negative correlation with HbA1c (p < 0.01). Bone mineral density of lumbar spine and femoral neck (g/cm², T-score) have light negative correlation with postprandial glucose.

**Conclusion:** Bone mineral density and parameters of glicoregulation 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**

A. Kovačić* , M. Džeba

Medical Faculty, University of Novi Sad, Serbia

E-mail address: alex.ak.bb@gmail.com

(A. Kovačić).

**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 effectible 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, LN 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 × 10⁸/kg bw, a CD34+ cells was 12.11 × 10⁶ 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**

N. Paovica *, D. Bajovic, I. Novakovic

Institute of Human Genetics, Faculty of Medicine, University of Belgrade, Serbia

E-mail address: 2carry.out2@gmail.com

(N. Paovica).

**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 χ² (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 χ² 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

**References**


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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**

F. Barreto 1,2, *, R. Rodrigues 1,2, A. Cardoso 1,2, J.P. Andrade 1,2

1. University of Coimbra, Portugal
2. University of Minho, Portugal

**Aim:** The aim of this study was to analyse the effects of d-galactose high dose administration and oral epigallocatechin-3-gallate (EGCG) on the dendritic trees of developing neurons in young male rats.

**Introduction:** D-Galactose is a natural compound found in plant and fruit products and is known as an excitotoxin that can lead to neurodegeneration. Previous studies have shown that d-galactose administration can cause hyperglycaemia, glomerulosclerosis, and kidney damage. Furthermore, it has been suggested that d-galactose may induce oxidative stress in the brain, leading to neuronal death and neurodegeneration.

**Methods:** Male Sprague-Dawley rats were divided into four groups: control, d-galactose, EGCG, and d-galactose + EGCG. The control group received water only, while the other groups received d-galactose or EGCG. The treatment period was 8 weeks, and the rats were sacrificed at 8 weeks post-treatment. The brains were harvested, and the dendritic trees of the developing neurons were analysed using immunohistochemistry.

**Results:** The results showed that d-galactose administration caused a significant reduction in the number of dendritic trees and a decrease in the complexity of the dendritic trees. In contrast, EGCG administration had a protective effect, preventing the reduction in the number of dendritic trees and maintaining the complexity of the dendritic trees. The combination of d-galactose and EGCG had a synergistic effect, further improving the number and complexity of the dendritic trees.

**Conclusion:** These findings suggest that d-galactose administration can induce neurodegeneration, but EGCG administration can prevent this effect. The combination of d-galactose and EGCG has a synergistic effect, further improving the number and complexity of the dendritic trees. These results have important implications for the development of therapeutics for neurodegenerative diseases.