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DEPENDENCE OF ARTERIAL PRESSURE IN PATIENTS WITH RHEUMATOID ARTHRITIS ON THE GENOTYPE OF BCL1 POLYMORPHISM IN GLUCOCORTICOID RECEPTOR GENE

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STUDY OBJECTIVES The objective is to study the incidence of arterial hypertension in patients with rheumatoid arthritis in regard to the genotype of BCL1 polymorphism in the glucocorticoid receptor gene.

METHODS AND MATERIALS. 161 subjects with rheumatoid arthritis aged 40 years and older were investigated by means of instrumental, clinical and laboratory examinations. Rheumatoid arthritis was diagnosed according to ACR/EULAR Classification Criteria (2010). Arterial hypertension was diagnosed, when systolic arterial pressure was at or above 140 mmHg and diastolic arterial pressure – at or above 90 mmHg. Bcl1 polymorphism in exon 2 was defined by means of polymerase chain reaction with subsequent analysis of restriction fragment length polymorphism by I. Fleury et al. (venous blood was taken for the study). Statistical analysis was performed using SPSS–17 program.

Results. The patients with rheumatoid arthritis revealed the following: 10 patients had hypotension (6.2%); 60 subjects had normal arterial pressure (43.5%); 91 patients had arterial hypertension (56.5%). Of those having hypotension, 4 patients had C/C genotype (8.9%), 4 individuals presented with C/G genotype (5.1%) and 2 – with G/G genotype. Among the patients with normal pressure, 22 subjects were homozygous for the C allele (48.9%), 32 were heterozygous (40.5%) and 6 were homozygous for the G allele (16.2%). In the hypertensive group 19 individuals were homozygous for the C allele (42.2%), 43 were heterozygous (C/G allele) (54.4%) and 29 were homozygous for the pathologic G allele (78.4%). A significant difference was determined by Pearson's chi-squared test ($p=0.02$) as for the genotype distribution in patients with rheumatoid arthritis and different levels of arterial pressure. Analysis of frequency of arterial pressure levels in these patients demonstrated an association between arterial hypertension and G/G genotype.

CONCLUSION. An association was found between the Bcl1 polymorphism in glucocorticoid receptor (GCR) gene and arterial pressure level in patients with rheumatoid arthritis. A strong association between arterial hypertension and G/G genotype was proved.

The most gorgeous in doctors and researcher carrier - is possibility to continue studies through the all life and I'm pretty sure that EULAR congress is an exciting proof of this statement. One of my dream is to become the part of this high scientific event and translate all of the new knowelge into clinical and research experience.