Abstract: **P1835**

**Personifying role of natriuretic peptides in patients with essential hypertension**

**Authors:**
I Gubareva¹, N Kryukov¹, E Gubareva¹, ¹Samara State Medical University, Internal Medicine Department - Samara - Russian Federation,

**Topic(s):**
Hypertension - Other

**Citation:**
The aim of the research: to study NT-proBNP in patients with essential hypertension (EH).

Object and methods of research 420 male patients in age of 30-60 years old were studied, they were divided in 4 groups: group 1 (n=180) – patients with EH without heart failure (HF), group 2 (n=86) – patients with EH and HF, group 3 (n=74) – patients with HF without EH, group 4 (n=80) – the group of control. NT-proBNP (fmol/ml) was measured.

In the prospective part of the study patients of group 1 and 2 (n=60) formed subgroups of 25% (3,8 fmol/ml) and 75% (22,0 fmol/ml) of NT-proBNP percentiles. The results of echocardiography, brachiocephalic trunk ultrasound, heart rate variability were compared in these subgroups at baseline and after 24 months of follow-up.

The results. Patients in group 3 had the highest level of NT-proBNP comparing to the group of control (? =0,046), group 1 (?=0,037) and group 3 (?=0,046). The duration of EH didn’t affect the level of NT-proBNP (r=0,186;?=0,537). In the group of patients with EH plasma NT-proBNP was lower in patients with grade 2 and 3 of arterial hypertension (AH) comparing to the patients with grade 1 of AH (?<0,05). In the group of patients with EH and HF the same pattern wasn’t observed (p>0,05). In group 1 NT-proBNP correlated with the grade of AH (r=–0,624; ? =0,023), in group 2 the same correlation wasn’t discovered (r=0,151; ?=0,294), NT-proBNP interconnected with the functional class of HF (r=0,215; ?=0,049).

In the prospective part of the study in both groups of patients of subgroup 2 in comparison with group 1, at the beginning of the study, the structural remodeling of myocardium was more pronounced, sympatheticotonia prevailed, left ventricle mass index, relative wall thickness index were increasing in the dynamics; however, in patients of the subgroup 1, were more expressed, hypertrophic type of diastolic disorders, dilatation of common carotid artery and thickening of the IMT were progressing. In patients of subgroup 2 dilatation of the right ventricle, the tendency to pseudonormalization of diastolic disorders, thickening of IMT, decreasing of sympatheticotonia were observed.

Thus, the results of the study illustrate our assumption about the personifying role of the level of natriuretic peptides in patients with EH: the insufficiency of it in patients with EH is associated with an increase in the degree of AH and the progression of target organ defeat.