**ASSOCIATION OF NESFATIN-1 ACTIVITY WITH RENAL FUNCTION IN HYPERTENSIVE PATIENTS**

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Background:

Chronic kidney disease is often caused or progressed by such risk factor as hypertension. A neuropeptide nesfatin-1 is considered to be related to occurrence of hypertension as well as accompanied metabolic disturbances. But its possible contribution to renal impairment remains unclear.

Objective:

The study aimed at identifying the relationship between nesfatin-1 activity and kidney function in patients with essential hypertension.

Methods:   
106 patients with essential hypertension at the median age of 61 [55;66] years were examined. 68 % of patients had accompanied obesity and 39 % had dysglycemia (prediabetes or type 2 diabetes mellitus). Nesfatin-1 plasma levels (ng/ml) were measured using ELISA method. GFR was calculated using CKD-EPI creatinine equation. According to GFR categories all patients were divided into 2 groups: A (57 patients with normal or mildly decreased GFR ≥ 60 ml/min/1.73 m2) and B (49 patients with moderately or severely decreased GFR < 60 ml/min/1.73 m2). Obtained data were analyzed with the methods of nonparametric statistics by Statistica10.0 software with the significance (p) < 0.05.

Results:

The hypertensive patients of the group A had higher nesfatin-1 levels compared with the group B (7.63 [6.79;9.71] vs 7.26 [6.57;8.16], p = 0.03). Nesfatin-1 positively correlated with GFR in all hypertensive patients (r = 0.228; p < 0.001) and in particular in the group A (r = 0.249; p < 0.01).

Data analysis of hypertensive patients with obesity showed associations of nesfatin-1 with GFR (r = 0.185; p < 0.01) and creatinine (r = -0.172; p < 0.05).

Conclusions:

Nesfatin-1 may have contribution to occurrence of renal impairment in hypertensive patients in case of decreasing of its level, while hypernesfatinemia shows renoprotective features. These findings are more prominent in case of accompanied obesity than disturbances of carbohydrate metabolism.