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**POSTPRANDIAL HYPERINSULINEMIA, CORTISOL AND DYSLIPIDEMIA IN PATIENTS WITH ARTERIAL HYPERTENSION**

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**The aim** of study was to investigate the relationship between cortisol plasma concentration and some markers of metabolic state in patients of arterial hypertension.

**Design and method.** 80 patients with arterial hypertension (49 females and 31 males) and 12 healthy persons (7 females and 5 males) were enrolled in the study. The cortisol plasma concentration was determined by immunoenzyme assay. The insulin plasma concentration was determined by radioimmune assay. The degree of obesity was determined by body mass index. Data are presented as mean±standard deviation.

**Results.** The cortisol plasma level was lower in males than in females in the group of hypertensives ( $225.9 \pm 78.3$  vs.  $480.6 \pm 166.5$  nmol/l,  $p < 0.001$ ) and in the control group ( $172.5 \pm 38.2$  vs.  $475.6 \pm 157.0$  nmol/l). Moreover, hypertensive females, included in this study, had higher level of plasma insulin after 2 h of 75 glucose intake ( $56.8 \pm 40.2$  vs.  $39.0 \pm 27.8$   $\mu$ U/ml,  $p < 0.05$ ) and also higher body mass index ( $31.5 \pm 6.1$  vs.  $28.0 \pm 2.3$  kg/m<sup>2</sup>,  $p < 0.01$ )

In hypertensive females cortisol correlates positively with low density lipoprotein cholesterol ( $r = 0.36$ ,  $p = 0.011$ ) and negatively with high density lipoprotein cholesterol ( $r = -0.41$ ,  $p = 0.004$ ). In males such significant correlations were not found.

**Conclusions.** Cortisol can be considered as one of factors which regulate metabolic background of essential arterial hypertension. Its plasma concentration is dependent of gender and probably is associated with atherogenic dyslipidemia in hypertensive females.