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**Clinical pathogenetic characteristics of hormonal homeostasis in women with arterial hypertension following surgical menopause**

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**Relevance**. Arterial hypertension (AH) is one of the most important factors that result in the development of ischemic heart disease, stroke and premature death. After menopause, women account for the majority of patients with hypertension.

**The purpose of the study.** To determine characteristics of hormonal homeostasis in women with hypertension following surgical menopause for further elaboration and improvement of therapeutic regimens.

**Materials and methods**. The study involved examination of 90 women. The first group included 30 women following total oophorectomy with AH. The second group consisted of 30 women following total oophorectomy with normal blood pressure. The third group involved 30 women with physiological menopause and AH. All the women underwent taking history and physical examination. The level of hormones in blood was determined by radioimmunoassay. Blood pressure and heart rate were monitored on daily basis. Results of the study were processed by methods of variation statistics using up-to-date computer programs.

**Results of the study**. Sex hormones performance analysis showed that the level of estradiol in the first group was significantly lower than in patients with physiological menopause (15.8±0.9 pg/ml and 31.6±3.7 pg/ml, respectively; p<0.05). Progesterone levels did not significantly differ between the groups (p> 0.05). Testosterone levels were significantly higher in women of the first group in comparison to the women of the second group (0.62 ± 0.08 ng/ml and 0.42±0.08 ng/ml, respectively; p<0.05) and had no reliable difference in comparison with the third group. Prolactin levels had no significant differences between the groups (p> 0.05).Luteinizing hormone levels in the first group were significantly higher compared with the third group (41.3±3.5 IU/l and 32.4±2.1 IU/l, respectively; p <0.05). The lowest value of hyperandrogenemia was determined in comparison with the second and third groups (54.7±8.0; 133.1±37.9 and 153±34.1, respectively; p <0.05).

**Conclusion**. Arterial hypertension in women of reproductive age following total oophorectomy was found to be characterized by relative hypertestosteronemia and decreased estradiol levels.