**Introduction.** In the last decade, our understanding of the role of the hormonal function of the ovaries, the biological properties of sex hormones and their participation in the metabolic processes of the body has significantly expanded. This article discusses the often encountered in practice gynecological pathology, the cause of which is a violation of the hormonal function of the adrenal and ovaries on the background of diencephalic symptoms and progressive obesity.

**Materials and methods.** Patients with NEES make up about a third of women with a reproductive dysfunction against obesity. In 1970, V.N. Serov was identified in a special form of "postpartum obesity". With this pathology, the synthesis and release of \( \beta \)-endorphin increases in the nerve cells of the hypothalamus and the formation of dopamine decreases. Thus in ovaries the process of ovulation is disturbed, chronic anovulation leads to cystic atresia of follicles, hyperplasia of the cells and the sides responsible for the formation of androgens. In NEES, polycystic ovaries are formed as a consequence of hypothalamic and adrenal pathology. It is shown that when the body mass index is increased by one, the testosterone level is increased by 0.06 nmol / l. A distinctive feature of this pathology is a secondary disorder of the menstrual cycle after the impact of various factors (childbirth, abortions, neuroinfections, etc.). Violation of the menstrual cycle begins with delays in menstruation, which are becoming longer, and in the formation of polycystic ovaries develops oligo- or amenorrhea and chronic anovulation. As a consequence, develops infertility.

**Results of research.** With endometrial biopsy, hyperplastic processes and adenomatoses in the endometrium are noted up to 25%, which is undoubtedly associated with pronounced metabolic disturbances. Therefore, clinicians should treat these patients with oncological alertness. Treatment of neuro-exchange-endocrine syndrome presents certain difficulties, since restoration of menstrual and generative functions can be achieved only against the background of normalization of body weight. The most common mistake of practical doctors is to stimulate ovulation against obesity.

**Conclusions.** Damage to any department of the regulation of the menstrual cycle disrupts the physiological rhythm of the reproductive system as a whole, leading to the development of hormonal deficiency of the ovaries and impaired fertility. Violation of menstrual function or infertility is the reason for calling a doctor, whose task is to find the cause and conduct adequate treatment.
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