BIOCHEMICAL AND HORMONAL CHARACTERISTICS OF PATIENTS WITH NODULATION IN THE THYROID GLAND AND UTERUS

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Abstract: This study investigates the biochemical and hormonal characteristics of patients presenting with nodulation in both the thyroid gland and uterus. Nodules in these organs are common findings, often necessitating thorough evaluation and management. Understanding the biochemical and hormonal profiles associated with such nodules could provide valuable insights into their pathogenesis and clinical implications. The study aims to elucidate potential correlations between thyroid and uterine nodulation and explore the relevance of biochemical and hormonal markers in their assessment.

Keywords: тhyroid gland, uterus, nodulation,biochemical characteristics, hormonal profiles, thyroid nodules, uterine nodules, thyroid hormones

Background. Taking into account the high incidence of thyroid nodules in patients with uterine myoma (MM), adenomyosis (AM) and endometrial hyperplasia (EH), one cannot underestimate their significant role in the pathogenesis of DGMD

[Artymuk N.V., 2004; Budanov P.V., 2004; Akhmetova E.S., 2006; Gusaeva Kh.Z., 2009; Stanoevich I.V., 2009; Kiselev V.I., 2010].

Benign nodules of the thyroid gland and uterus (DGSM) are the most important medical and social problem, due to the steady increase in the incidence, which does not tend to decrease [Strizhakov A.N., Davydov A.I., 1996; Adamyan L.V., 2006; Manukhin I.B., 2006; Sidorova I.S., 2010].

The above was the reason for the present study.

The aim of the study was to study the features of biochemical and hormonal disorders in patients with nodulation in the thyroid gland and uterus.

Material and research methods. We examined 75 women with nodules in the thyroid gland and uterus at the age of 18 to 55 years. the vast majority of patients were females were aged 18 to 44 years: 54 (72%), that is, young and able-bodied age.

The patients were divided into 3 groups: group 1 - 25 patients with thyroid nodules, group 2 - 25 patients with nodular and hyperplastic processes of the uterus, group 3 - 25 patients with nodular formations of the thyroid gland and uterus. 20 healthy women made up the control group.

All patients underwent a study of the levels of TSH, free thyroxine, antibodies to TPO, antibodies to the levels of LH, FSH, progesterone, E2, VEGF-A, TNF-alfa, TG-binding globulin, insulin, steroid hormones, as well as a study of the functional state of the thyroid glands (ultrasound of the thyroid gland, uterus, appendages, fine-needle aspiration biopsy of the thyroid gland), etc.

Results and its discussion. The lipid fluctuations ranged from normal values to their significant deviations in the 3rd group of patients.

Mean TSH values in groups 1 and 3 corresponded to the state of overt hypothyroidism ($p < 0.005$). At the same time, the levels of free thyroxine in groups 1 and 3 were significantly below the norm, while in group 2 they were within the normal range. Antibodies to TPO were significantly elevated in groups 1 and 3 ($p < 0.005$). In addition, in all groups there was a significant decrease in the average levels of LH, FSH compared with the control ($p < 0.005$, $p < 0.0001$).

The mean values of progesterone and estradiol were significantly lower than in the control group ($p < 0.005$).

Conclusions. 1. Most of the patients were aged 18 to 44 years: 54 (72%), that is, young and able-bodied age 2. It was found that patients of group 1 had subclinical hypothyroidism (84%), hyperprolactinemia (92%), while with associated nodulation of the thyroid gland and uterus, a decrease in the levels of estradiol (92%), progesterone (72%) against the background of hyperprolactinemia (68%) prevailed.

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