

WAYS TO IMPROVE RESIDUAL THYROID TISSUE AFTER SURGERY FOR DIFFUSE TOXIC GOITER IN THE ELDERLY AND SENILE PEOPLE

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Abstract: one of the pressing problems of modern medicine and endocrine surgery is the problem of the approach to surgical treatment of patients with toxic goiter. The relevance of this problem is associated with many issues affecting both the choice of surgical intervention and ways to reduce postoperative complications and relapse of the disease. Surgical treatment of nontoxic goiter and thyroid nodules leads to a significant improvement in the quality of life of patients. The article examines the results of treatment of 128 patients for non-toxic goiter and thyroid nodules. An analysis of the effectiveness of operations was carried out.

Keywords: thyroid gland, non-toxic goiter and thyroid nodules, autoimmune thyroiditis.

ПУТИ УЛУЧШЕНИЯ ОСТАТОЧНОЙ ТИРЕОИДНОЙ ТКАНИ ПОСЛЕ ОПЕРАЦИИ ДИФФУЗНО-ТОКСИЧЕСКОГО ЗОБА У ПОЖИЛЫХ И ЛИЦ СТАРЧЕСКОГО ВОЗРАСТА

Аннотация: одной из актуальных проблем современной медицины и эндокринной хирургии является проблема подхода к хирургическому лечению больных с токсическим зобом. Актуальность данной проблемы связана с множеством вопросов, затрагивающих как выбор оперативного вмешательства, так и способы уменьшения послеоперационных осложнений и рецидива заболевания. Хирургическое лечение нетоксического зоба и узловых образований щитовидной железы приводит к существенному улучшению качества жизни пациентов. В статье рассмотрены результаты лечения 128 больных по поводу нетоксического зоба и узловых образований щитовидной железы. Проведен анализ эффективности операций.

Ключевые слова: щитовидная железа, нетоксического зоба и узловых образований щитовидной железы, аутоиммунный тиреоидит.

INTRODUCTION

Issues of diagnosis, treatment tactics and indications for surgery for various nosological forms of damage to the thyroid gland (TG) are far from being finalized and are constantly being discussed. Initially, patients with thyroid pathology most often turn to an endocrinologist, but currently not a small number of patients seek salvation under the surgeon's scalpel. These are patients with thyrotoxicosis syndrome in the absence of proper competence in conservative therapy, and patients with a narrow pathology, regardless of the functional state of the thyroid gland, driven by the fear of cancerous degeneration of the nodes, and patients with autoimmune thyroiditis and significant goiter sizes or without them, but again, with oncological alertness. Autoimmune diseases of the thyroid gland, which often occur with thyrotoxicosis syndrome and its complications in the form of various rhythm disturbances and circulatory failure, significantly worsen the patient's quality of life, which often forces the endocrinologist to resort to the help of a surgeon. The current widespread use of fine-needle puncture biopsy for various thyroid diseases makes it possible to clearly determine the algorithm of treatment tactics and avoid "unnecessary"

surgical treatment. A highly qualified surgeon does not always protect against the development of a number of postoperative complications and even relapses of some non-oncological thyroid diseases. We are not talking about postoperative hypothyroidism, which is often the desired goal of surgical treatment. Often, surgical treatment does not end with a complete recovery of the patient, and for endocrinologists, both the functional and morpho-structural state of the residual thyroid tissue, both in the early postoperative period and in the longer term, are of professional interest.

MATERIALS AND METHODS

Purpose of the study. Studying the dynamics of the functional state of postoperative residual thyroid tissue and parathyroid glands.

Materials and methods of research. We conducted a comparative analysis of the postoperative state of thyroid function in patients operated on for diffuse toxic goiter (DT) and thyroid nodules (NO), treated in the surgical department of the Samarkand City Medical Association during 2018-2023. A retrospective analysis was performed on the medical histories of patients who underwent surgical treatment in 2000, followed by monitoring of postoperative clinical and laboratory data. The state of thyroid function in patients operated on in 2018-2022, were analyzed as they were received both at the preoperative stage and after the operation. The study population (64) patients included 48 women and 16 men, 75% and 25%, respectively, aged from 60 to 80 years. The average age was 68.6 ± 5.3 years, which is due to the peculiarity of the spread of thyroid diseases, more than four times more often in women of working age.

At the preliminary stage, the functional state of the thyroid gland in the examined patients was assessed according to the hormonal profile with the determination of TSH and T₃, T₄, and mandatory ultrasound of the thyroid gland.

According to the structure of morbidity at the preoperative stage, thyroid ultrasound dominated -

36 patients (56.3%), diagnosed with nodular goiter, multinodular goiter, autoimmune thyroiditis (AIT), its nodular form (2 patients - 3.1%). A smaller proportion was made up of diffuse changes in the thyroid gland - 10 (15.6%) in the form of diffuse toxic goiter (DTG) in 9 patients and 1 case of AIT. Of these, 3 patients (4.7%) were operated on for recurrent DTG. Thyroid cysts were removed in 15 patients (23.4%) (Table 1).

Table 1. Structure of diseases in accordance with preoperative examination of the hormonal spectrum and ultrasound data

| Preliminary diagnosis | Thyrotoxicosis | Hypothyroidism | Eothyridids' |
|-----------------------|----------------|----------------|--------------|
| DTZ | 4(6,25%) | - | 6(9,4%) |
| Relapse of DTZ | 3(4,7%) | - | - |
| Nodular goiter | 2(3,1%) | 1(1,6%) | 33(51,6) |
| Diffuse-multinodular | - | 1(1,6%) | 4(6,25%) |
| Cystic goiter | - | - | 5(7,8%) |
| AIT | - | 1(1,6%) | 4(6,25%) |

From the table presented above it follows that in three operated patients complications in the early postoperative period were provoked due to insufficient therapeutic preparation. In 2 patients with uncompensated thyroid hyperfunction in the early postoperative period, heart rhythm disturbances and “fresh” ischemic changes on the ECG were noted, which required additional treatment. A decrease in thyroid function was detected in 3 patients with thyroid nodules (4.8%). Of all patients, a state of euthyroidism was observed in -81.3% of cases.

All patients with a preliminary diagnosis of DTG, diffuse multinodular goiter, and AIT underwent subtotal subfascial strumectomy. Nodular formations (depending on the size of the node) were operated on as a hemithyroidectomy with resection of the thyroid isthmus. Results of the study and their discussion: Currently, the presence of any focal formation in the thyroid gland requires a puncture biopsy at the preoperative stage, which makes it possible to clearly determine the tactics of further treatment. This may have been the reason for the discrepancy between clinical and final (histological) diagnoses in 100% of the analyzed cases (Table 2).

Table 2. The histological examination led to a change in the structure of the diseases

| Histological report | Amount | % |
|----------------------------|---------------|----------|
| DTZ 4 | 9 | 14,1 |
| Adenomas | 21 | 32,8 |
| Cystic goiter | 16 | 25 |
| Cancer | 2 | 3,1 |
| Nodular goiter | 14 | 21,9 |
| AIT | 2 | 3,1 |
| Total | 64 | 100 |

According to the histological analysis, shortcomings of the preoperative stage of the examination were revealed: in 2 cases, thyroid cancer was detected, but atypical cells were not found in the puncture biopsy. All the same, in these patients the tactics and scope of surgical treatment of the thyroid gland was completed fully and adequately.

In addition, complications were recorded in the early postoperative period (possibly transient, caused by post-traumatic inflammatory changes in tissue with compression of nearby formations); laryngeal paresis - 3 cases, postoperative hypoparathyroidism - 1, with preservation of clinical manifestations.

The functional state of the thyroid gland in the postoperative period (in the early and late periods) was studied in accordance with the required monitoring algorithm. Postoperative hypothyroidism was verified in 3 patients (4.7% of those operated on) and was mainly due to a significant amount of intervention - subtotal strumectomy, or hemithyroidectomy against the background of a goitrous thyroid. There were 52 (81.3%) patients in euthyroidism.

CONCLUSIONS

A year later, in the previously operated and observed patients who were able to clarify the functional state of the thyroid gland, 1 of them (1.6%) had laboratory-verified, subcompensated hypothyroidism, which can be explained by non-compliance with treatment recommendations, lack of proper control over the adequacy of prescribed therapy during the year, less often with insufficient doses of prescribed therapy. The lack of endocrinologist consultations in the

postoperative period with the proper frequency and inpatient rehabilitation, if necessary, led to such a high percentage of detected decompensated hypothyroidism.

Hyperthyroidism was detected in 2 (3.1%) patients, but its cause cannot be the lack of competence of the patients or defects in medical examination. This dysfunction is most likely due to the insufficient scope of surgical intervention, which could result from the lack of preoperative verification of the morphological diagnosis. The remaining 16 patients (25%) were in a state of euthyroidism (mainly drug-induced).

The lack of proper study of the hormonal spectrum and its control and dynamics caused non-surgical complications in the early postoperative period - clinically significant rhythm disturbances were registered in 2 patients, and "fresh" focal ECG changes were registered in 3 patients.

Conclusions:

1. The analysis indicates the implementation of the preoperative diagnostic algorithm in patients with planned surgical intervention on the thyroid gland, not only changes in the structure of the diseases, but also an adequate volume of surgical intervention.
2. Morphological changes in the structure of the thyroid tissue make it possible to reliably predict the course of the autoimmune process in the thyroid remnant and determine the required volume of surgical intervention.
3. Three or more prognostic factors for the persistence of euthyroidism in the postoperative period, then it is possible to carry out subtotal resection by compiling a clinically significant volume of thyroid tissue.
4. In the postoperative period, patients should be observed by an endocrinologist or endocrine surgeon, undergo dynamic monitoring of ultrasound and hormonal status, and, if necessary, receive hormone replacement therapy.

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