
Improvement of Therapeutic Tactics for Purulent Surgical Diseases against the Background of Endemic Goiter

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Abstract: In our Republic, according to studies conducted in 2020-2021, the prevalence of type 2 diabetes mellitus in Uzbekistan is 8.7% among people over the age of 35. Along with diabetes mellitus, diseases of the thyroid gland now occupy a leading place in the structure of all endocrinopathies. First of all, this is explained by the breadth of prevalence of diffuse goiter in iodine-deficient regions, to which Uzbekistan also belongs. Complications of infection surgical diseases and diffuse toxic goiter is an important problem for the Republic of Uzbekistan, both from a medical and socio-economic point of view. . Likewise, it is well known that a higher latitude of surgery allows for better control of thyroid disease, but may be accompanied by a greater number of complications. All these prompts a number of authors to analyze the complications of surgical treatment in our patients according to well-known criteria, with the hypothesis that a higher radicality of surgery does not increase the incidence of complications.

Keywords: purulent surgical diseases of soft tissues, thyroid gland, diffuse toxic goiter, features of the clinical course, nodular goiter.

Diseases of the thyroid gland currently occupy a leading place in the structure of all endocrinopathies. First of all, this is explained by the breadth of prevalence of diffuse goiter in iodine-deficient regions, which include vast territories of the Russian Federation, many other states, including Uzbekistan. The study of the operating material showed that endemic goiter is a heterogeneous concept and includes diffuse colloid goiter, nodular (multinodular) goiter and diffuse nodular goiter. The most common form of endemic goiter is nodular goiter (61.3%), which is characterized by the presence of a node with a fuzzy pronounced capsule, structural polymorphism, a violation of the histological structure, epithelial proliferation, and secondary changes. Misiakos EP, Liakakos T, Macheras A, Zachaki A. (2006) A retrospective analysis of patients who underwent thyroid surgery over the past 11 years was carried out. The study period was divided into two parts: phase A (1995-1999) and phase B (2000-2005). Patient characteristics, type of surgery, histological diagnosis and postoperative complications were compared in two study periods depending on the type of surgery. During the study period, 264 patients aged 18 to 89 underwent thyroid surgery (133 in phase A and 131 in phase B). General histopathological diagnoses: nodular goiter (54.9%), hyperplastic nodules (14.7%), adenoma (8.3%), thyroid cancer (18.2%) and Hashimoto's thyroiditis (3.8%). Total thyroidectomy was performed in 91 patients in phase A compared with 115 patients in phase B ($P < 0.001$), whereas the use of subtotal thyroidectomy and lobectomy decreased over time. Benign nodular goiter is endemic in Germany and diagnostic thyroidectomy is one of the most common surgical procedures.

German scientists (Müller PE, Schmid T, Spelsberg F.) show that the degree of goiter resection can be difficult due to the large multinodular transformation. Total thyroidectomy

for goiter is discarded due to the expected increase in complications. The high recurrence rate of goiter, together with an increased risk of complications, indicates problems with insufficient resection. This study examines the complication rate after total thyroidectomy for goiter. 4767 surgical interventions (partial thyroidectomy, hemithyroidectomy, or complete thyroidectomy) of goiter were investigated. Retrospectively, the incidence of postoperative complications (bleeding, wound infection, recurrent nerve palsy, hypocalcemia) after strumectomy or hemithyroidectomy was analyzed in patients and compared with literature data. Total thyroidectomy (n = 176) did not cause a higher complication rate (bleeding: 0.6%, hypocalcemia: 0.6%; recurrent nerve palsy: 0.6%) compared with the control group and the literature. Thus, complete thyroidectomy may be an effective treatment option for large multinodular goiter [3, 12, and 24].

The aim of the study: Improvement of the results of treatment of purulent wounds in patients with combined pathology of thyrotoxicosis with other type of infection surgical diseases

Materials and methods: In the clinical base of the Bukhara State Medical Institute, for the period from 2020 to 2021, 619 patients with purulent wounds suffering from various forms of infection surgical diseases were hospitalized. Of these, 104 (16.8%) patients were diagnosed with thyrotoxicosis. The age of the patients ranged from 20 to 64 years, with an average age of 42 years. Men-364 (58.8%), women-255 (41.2%). The examined patients were divided into the following two groups I, group - 515 patients with purulent wounds of various localizations on the background of diabetes mellitus without thyrotoxicosis. Group II - 104 patients with purulent wounds on the background of diabetes mellitus and thyrotoxicosis, 47 men (45.2%), 57 women (54.8%). In all patients in dynamics, pH-metry of wound exudate was performed.

Mathematical processing of the results obtained was carried out by the methods of variation statistics. The significance of the differences was determined using the Student's test. Differences were considered significant at $P < 0.05$. The data obtained were processed using standard statistical methods of correlation analysis. As can be seen from Table 1, in the first group there were 515 (83.2%) patients, of which 307 (59.6%) were men and 208 (40.4%) were women aged 19 to 80 years (the average age was 48, 4 ± 2.1 years). In group II - 47 (45.2%) and 57 (54.8%) aged 19 to 75 years (the average age was 49.4 ± 1.8 years).

Table. one. Characteristics of patients by sex and age

groups	Age										total
	till 19 y		20-44 y		45-59 y		60-75 y		75 y and older		
	M	F	M	F	M	F	M	F	M	F	
I	14	8	112	81	143	92	23	18	15	9	515
II	2	3	15	17	16	21	11	12	3	4	104

Total	27 (4,4%)	225(36,3%)	272(44%))	64 (10,3%)	3 1 (5 %))	619
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Most of the patients (74.4%) were at the most working age. (from 20 to 59 years old). At the same time, the following types of purulent surgical diseases were noted: Abscesses-127 (20.5%), phlegmon of various localizations 104 (16.8%), purulent diseases of soft tissues of various localizations (panaritium, phlegmon of the hand and foot, phlegmon of the perineum, hydradenitis, purulent lymphadenitis, festering cyst of the coccyx, festering echinococcus of the liver) - 302 (48.7%), postoperative purulent wounds - 86 (13.4%) patients. All patients with purulent surgical diseases underwent traditional methods of treatment - opening a purulent focus, debridement of the wound, and applying a water-soluble ointment under a bandage. The scope of surgical interventions consisted of opening, sanitation and drainage of purulent cavities under general anesthesia, taking into account the anatomical location, size and stage of the purulent process. All patients underwent a generally accepted complex of examination: clinical blood and urine tests, biochemical blood test, coagulogram, blood group and Rh factor, plain chest fluoroscopy.

Results and discussion:

Decreased resistance to infection and the frequent occurrence of pyoinflammatory diseases in diabetic patients are caused by disorders of immunological and plastic processes in tissues. Hyperglycemia and insulin deficiency have an active effect on metabolic processes that lead to a violation of protein metabolism. Of the total number of patients (619), diabetes of varying severity was identified. So, of these, 214 (34.5%) patients with mild diabetes mellitus, 315 (50.8%) moderate severity patients, and 90 (14.5%) severe patients with complications. Diabetic history revealed that out of 619 patients diabetes mellitus was diagnosed for the first time in 412 (66.5%) patients, 207 (33.4%) patients had 4 or more years, the average duration of the disease was 11 years.

Severity	Glycemia (mmol / L)
Mild degree (214)	8,3 – 9,9
Moderate (315)	10,1 - 16,7
Severe (90)	16,7 – 20,5

Purulent surgical diseases associated with infection surgical diseases are often asymptomatic and the cause is unclear. They can be single, multiple, limited, extensive and widespread. All patients complained of hyperthermia from 38 to 41 degrees, chills, and general weakness. Many were worried about the pain in the area of the purulent focus. Along with clinical manifestations, the indicators of hyperglycemia were analyzed. At the same time, these patients were found to have persistent hyperglycemia and glucosuria. Patients with a mild form of the disease did not develop glucosuria. In severe diabetes mellitus, the development of a purulent process was accompanied by an increase in temperature to 39-40 C. In some patients, the consciousness was darkened. The purulent process preceded with high hyperglycemia, expressed by glucosuria, ketonuria. There were also pronounced functional disorders of the kidneys and liver, a significant increase in the number of leukocytes in the peripheral blood and an increase in ESR. The indicators of the clinical analysis of blood did not always correspond to morphological changes: in 18 patients (43%) the leukocytosis was below $9.0 \times 10^9 / l$, and in 14 patients (32%) the percentage of stab forms did not exceed 10,

which in most cases was observed in elderly and senile patients and, possibly, this is due to the unresponsiveness of the body during this period of life and due to the presence of diabetes mellitus. The maximum values of these parameters in other patients reached: leukocytosis - 26.4×10^9 g/l, metamyelocytes - 2%, stab - 32%, toxic granularity ++. Among biochemical parameters, the most frequently increased parameters were creatinine, urea, ALT and AST - in 27 patients (49%). The total bilirubin levels increased in 113 patients (23.6%) to $25.8 \mu\text{mol} / \text{L}$. All this leads to a slowdown in regeneration and reparative processes in the wound. Clinically, when diabetes is combined with thyrotoxicosis, the complaints of patients, in addition to those associated with the underlying pathology, were palpitations, sometimes a feeling of lack of air, stuck in the throat, insomnia, neurosis, weakness and rapid fatigue. We divided the patients into three groups according to the clinical course: mild thyrotoxicosis, moderate and severe thyrotoxicosis with combined pathology with purulent surgical diseases and diabetes mellitus. With a severe degree of goiter, patients with purulent surgical diseases showed strong excitability of the nervous system, severe irritability. Complete loss of performance. Weight loss by 50%, tachycardia, and pulse more than 120 beats per minute, arrhythmia. Basal metabolism increases by more than 60%, heart failure, paroxysmal tachycardia. Liver damage. Psychoses, delusions and hallucinations. Severe ophthalmopathy. Big difference in systolic and diastolic pressure, the difference is more than 40%. Along with clinical manifestations, the data of hormonal tests of the thyroid gland (Table 2) in patients with purulent surgical diseases associated with endocrine pathologies were analyzed. At the same time, in patients with a mild degree of thyrotoxicosis, there were no particularly pronounced hormonal disorders. However, with moderate goiter, the decrease in TSH (thyroid-stimulating hormone) activity was accompanied by an increase in the level of T-3 (triiodothyronine) and T-4 (thyroxine). An increase in the activity of antithyroid peroxidase (Anti TPO) in these patients indicates an autoimmune nature of the disease, i.e. the immune system is suppressed with thyrotoxicosis. More pronounced hormonal disorders were observed in severe goiter with thyrotoxicosis. Thus, with a decrease in TSH activity, the level of thyroid hormones T-3 and T-4 increased sharply, while an increase in the activity of Anti TPO was observed. All the disorder aggravated the course of the wound process, which was manifested in the slowing down of the wound clearing time, the transition of the wound process from the first to the second phase. These disorders were aggravated by the combination of diabetes mellitus with thyrotoxicosis, so with an increase in TSH, total protein and total bilirubin decrease ($r = -0.3$, $p < 0.05$), and with an increase in T4 and toxins in the blood (urea and creatinine: $r = 0.3$ $p < 0.05$, $r = 0.4$, $p < 0.05$, respectively). In general, the data

Conclusion.

Thyroid surgery today is not burdened with a high incidence of major complications. Different surgical institutions with different surgical approach, surgical technique and radicalism have published reports with a large discrepancy in the incidence of complications, analyzing those using different methods of diagnosis and evaluation of the results. Likewise, it is well known that higher latitude of surgery allows for better control of thyroid disease, but may be accompanied by a greater number of complications. All these prompts a number of authors to analyze the complications of surgical treatment in our patients according to well-known criteria, with the hypothesis that a higher radicalism of surgery does not increase the incidence of complications, and that this frequency correlates with the results published in the world literature.

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