

## RESULTS OF MESOPHARYNGOSCOPY IN CHRONIC TONSILLITIS

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**Abstract:** This article presents the results of a pharyngoscopic study of patients with chronic tonsillitis. Despite the accumulated experience, the problem of tonsillar pathology remains unresolved. The prevalence of chronic tonsillitis (CT) not only remains high, but also does not show a downward trend: compared with the 50s of the 20th century, the prevalence increased from 2.8-4.1% to 10-15% among population. According to some reports, the prevalence can reach 37-63%. Despite the constant improvement of methods for the diagnosis and treatment of chronic tonsillitis, this pathology continues to occupy a leading place in the structure of diseases of the pharynx. According to the Department of Monitoring, Analysis and Strategic Health Development of the Ministry of Health of Russia, the prevalence of chronic diseases of the tonsils and adenoids is 1,154.4 per 100,000 population.

**Keywords:** chronic tonsillitis, pharynx, pharyngoscopy.

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## SURUNKALI TONZILLITDA MEZOFARINGOSKOPIYA NATIJALARI

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**Annotatsiya:** Ushbu maqolada surunkali tonzillitli bemorlarni faringoskopik tekshirish natijalari keltirilgan. To'plangan tajribaga qaramay, tanglay murtaqlari patologiyasi muammosi hal qilinmagan. Surunkali tonzillitning (ST) tarqalishi nafaqat yuqoriligicha qolmoqda, balki pasayish tendentsiyasini ham ko'rsatmaydi: 20-asrning 50-yillari bilan taqqoslaganda, aholi orasida tarqalish 2,8-4,1% dan 10-15% gacha ko'tarildi. Ba'zi ma'lumotlarga ko'ra, tarqalish 37-63% ga yetishi mumkin. Surunkali tonzillitni tashxislash va davolash usullarini doimiy ravishda takomillashtirishga qaramay, bu patologiya halqum kasalliklari tarkibida etakchi o'rinni egallashda davom etmoqda. JSST monitoring qilish, tahlil qilish va strategik rivojlantirish boshqarmasi ma'lumotlariga ko'ra, bodomsimon bezlar va adenoidlarning surunkali kasalliklarining tarqalishi 100.000 aholiga 1154,4 ni tashkil qiladi.

**Kalit so'zlar:** surunkali tonzillit, halqum, faringoskopiya.

### Iqtiboslik uchun:

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## INTRODUCTION

Currently, there are various methods for diagnosing chronic UI pathology, such as: determination of the level of interleukin in saliva by enzyme-linked immunosorbent assay for the quantitative determination of cytokines [4]; study of the cytogram of smears-imprints from the mucous membrane of the NM to determine the percentage of segmented neutrophils; examination of the detachable lacunae of the tonsils; measurement of the electrical impedance of the mucous membrane of the NM using electrodes in the oral cavity and on the surface of the NM; study of saliva using infrared

spectroscopy, in various ranges; determination of the gas composition of exhaled air; fine needle aspiration biopsy of NM; determination of the degree of circulatory disorders by rheotonomography [8].

A common disadvantage of existing research methods is the complexity of the examinations, the need to use non-serial equipment, in some cases the invasiveness of the study, the impact of other pathological conditions (laryngopharyngeal reflux, postnasal syndrome) and the anatomical features of the structure of the oropharynx on the diagnostic results.

Traditionally, it is proposed to take into account

the results of microbiological studies of NM in chronic tonsillitis. Bacteriological research methods are among the most common in this pathology. According to the results of most studies, group A  $\beta$ -hemolytic streptococcus (GABHS) plays a leading role in the pathogenesis of chronic tonsillitis. Such a wide prevalence of this diagnostic method is primarily associated with the determination of the antibacterial sensitivity of various microorganisms sown from the surface of the NM. However, the significance of this method for diagnosing the severity and form of chronic tonsillitis remains debatable due to the fact that GABHS is found not only in patients with chronic tonsillitis, but in healthy carriers [1-5].

In this regard, at present, the results of assessing the clinical picture of the disease play a leading role in the diagnosis of chronic tonsillitis: anamnesis data, complaints and mesopharyngoscopy of the pharynx [6].

However, despite the variety of clinical symptoms of chronic tonsillitis, none of the known signs of this disease is typical, much less pathognomonic [7-10]. The methods of laboratory research are not sufficiently informative [5].

Thus, at the moment there is an obvious need to search for new, informative methods for the differential diagnosis of clinical forms of chronic tonsillitis.

From a practical point of view, an important characteristic of such methods should be accessibility for a wide range of doctors, high specificity of tests, their safety and non-invasiveness.

**THE AIM** of the study was to study the mesopharyngoscope picture of patients with chronic tonsillitis.

#### **METHODS OF RESEARCH**

A total of 147 people were examined. In accordance with the objectives of the study, all patients included in the study were divided into 2 groups:

group 1 - patients with uncomplicated (simple) form of chronic tonsillitis (61 patients);

Group 2 - patients with complicated (toxic-allergic stage 1-2) form of chronic tonsillitis (86 patients).

Group I included patients with only local signs of

CT:

- congestive hyperemia of the anterior palatine arches (giza's sign);
- swelling of the upper edges of the anterior and posterior palatine arches (Zak's sign);
- roller-like thickening of the edges of the anterior arches (sign of B.S. Preobrazhensky);
- fusion and adhesions of the tonsils with arches and a triangular fold;
- loosened surface of the palatine tonsils;
- liquid pus or caseous-purulent plugs in lacunae.

Group II included patients who, in addition to complaints from

pharynx, complained of a general nature:

- periodic functional disorders of cardiac activity, palpitations, cardiac arrhythmia, pain in the region of the heart without exacerbation;
- pain in the joints without exacerbation;
- prolonged subfebrile temperature, abscess, parapharyngitis and general diseases, which were confirmed by the corresponding diagnoses: rheumatism, arthritis, acquired heart defects, diseases of the urinary system.

o Criteria for inclusion in the study:

- the presence of chronic inflammation of the palatine tonsils;
- age over 18 years;
- signed informed consent to participate in research and processing of personal data.
- o Criteria for exclusion from the study:
- inflammatory diseases of other localization;
- decompensated course of concomitant pathology;
- conditions that impede the implementation of the study;
- refusal of the subject to participate in the study;
- history of tonsillectomy;
- under 18 years of age.

The study was conducted in the otorhinolaryngology department of the TMA multidisciplinary clinic from 2021-2022.

#### **RESULTS OF RESEARCH AND DISCUSSION**

When examining a patient with CT, after assessing subjective signs (complaints of the patient, anamnesis), an assessment of the local status (pharyngoscopy of the pharynx) is carried out. According to the literature, the most characteristic signs for CT are: purulent and caseous contents

Table 1

The frequency of occurrence of pharyngoscopic signs of CT in patients with simple and toxic-allergic form of CT

subjective manifestations	Patient groups				Accurate criterion Fisher	
	Simple form n=61		TAP (n=86)		Meaning Criteria	Level significance (R)
	n	%	n	%		
Purulent / caseous contents in lacunae	53	86,89±4,32	82	95,35±2,27	0.07492	p>0,05
Purulent cysts or microabscesses of the tonsils	50	81,97±4,92	80	93,02±2,75	0.06436	p>0,05
Congestive hyperemia of the anterior palatine arches (Gize's sign)	58	95,08±2,77	85	98.84±1,15	0.30744	p>0,05
Swelling of the upper edges of the anterior and posterior palatine arches (Zack's sign)	58	95,08±2,77	86	100	0.06939	p>0,05
Roll-like thickening of the edges of the anterior arches (sign of B.S. Preobrazhensky)	59	96,72±2,28	86	100	0.17053	p>0,05
Adhesions of the tonsils with the anterior arches, especially with their upper part	57	93,44±3,17	84	97,67±1,63	0.23299	p>0,05
Change in the consistency of the tonsils	57	93,44±3,17	85	98,84±1,15	0.16040	p>0,05
Hypertrophy of the tonsils	46	75,41±5,51	62	71,03±3,52	0.70739	p>0,05
Hyperemia of the posterior pharyngeal wall	51	83,61±4,74	80	93,02±2,75	0.10516	p>0,05
Granular changes on the posterior wall of the pharynx	56	91,8±3,51	83	96,51±1,98	0.27678	p>0,05
The presence of exudate (mucous, purulent) on the back of the throat	58	95,08±2,77	84	97,67±1,63	0.64930	p>0,05
Hypertrophy of the lateral lymphatic folds	45	73,77±5,63	75	87,21±3,6	0.05130	p>0,05
Hypertrophy of the lingual tonsil	4	6,56±3,17	6	6,98±2,75	1.00000	p>0,05
Hypertrophy of the pharyngeal tonsil	1	1,64±1,63	1	1,16±1,15	1.00000	p>0,05
Hypertrophy of tubal folds	5	8,2±3,51	8	9,3±3,13	1.00000	p>0,05

in the lacunae, purulent cysts or microabscesses of the tonsils, changes in the consistency of the tonsils, congestive hyperemia of the anterior palatine arches (Gize's sign), swelling of the upper edges of the anterior and posterior palatine arches

(Zack's sign), roller-like thickening of the edges of the anterior arches (a sign of B.S. Preobrazhensky), adhesions of the tonsils with the anterior arches, especially with their upper part, hyperemia of the posterior pharyngeal wall, granular changes on the

Table 2

Severity of pharyngoscopic signs of CHT in points on the VAS scale

Pharyngoscopy Signs	Sign severity (in points)		Mann-Whitney U test	
	Patient groups		Meaning criteria	Level significance (p)
	Simple form n=61	TAP (n=86)		
	Median (Q <sub>25</sub> ; Q75)	Median (Q25; Q75)		
Purulent / caseous contents in lacunae	4 (3; 5)	4(3; 5)	2 945,500	p>0,05
Purulent cysts or microabscesses of the tonsils	2(1; 4)	3(1; 5)	3 034,500	p>0,05
Congestive hyperemia of the anterior palatine arches (Gize's sign)	4 (3; 5)	5 (3; 6)	2 897,500	p>0,05
Swelling of the upper edges of the anterior and posterior palatine arches (Zack's sign)	4(2; 5)	4(3; 6)	2 897,500	p>0,05
Roll-like thickening of the edges of the anterior arches (a sign B.S. Preobrazhensky)	3 (2; 5)	4 (2,25; 6)	3 045,000	p>0,05
Adhesions of the tonsils with the anterior arches, especially with their upper part	4 (3; 5)	5 (4; 7)	3 103,500	p>0,05
Change in the consistency of the tonsils	3 (2; 5)	3 (2; 4,75)	2 555,5000	p>0,05
Hyperemia of the posterior pharyngeal wall	4 (2; 5)	4 (2; 5)	2 726,000	p>0,05
Granular changes on the posterior wall of the pharynx	4 (3; 5)	3 (2; 5)	2 269,500	p>0,05
The presence of exudate (mucous, purulent) on the back of the throat	2 (0; 3)	2 (1; 3)	2 563,500	p>0,05
Hypertrophy of the lateral lymphatic folds	0 (0; 0)	0 (0; 0)	2 625,500	p>0,05
Hypertrophy of the lingual tonsil	0 (0; 0)	0 (0; 0)	2 611,000	p>0,05
Hypertrophy of the pharyngeal tonsil	0 (0; 0)	0 (0; 0)	2 651,000	p>0,05

posterior pharyngeal wall, the presence of exudate (mucous, purulent) on back wall of the pharynx and hypertrophy of the lateral lymphatic ridges.

The presence or absence of these signs was recorded during pharyngoscopy in patients with a simple and toxic-allergic form of chemotherapy. Table 1 presents the results of this survey.

As can be seen from the presented data, all studied pharyngoscope signs of CT occurred among patients with both simple and toxic-allergic forms and did not show statistically significant differences between the studied groups ( $p>0.05$ ).

The absence of statistical significance of differences between the main pharyngoscopic signs of CT between the studied groups is clearly demonstrated in the histogram.

In addition to simply identifying the presence of various pharyngoscopic changes, their severity was determined. Each feature was rated on a scale

from 0 to 10, where 0 is the complete absence of the feature and 10 is the most severe feature.

Table 2 reflects the severity of pharyngoscopic signs of CT on the VAS scale.

From the data presented in Table 2, it follows that none of the pharyngoscopic signs evaluated in points characteristic of CT (purulent or caseous contents in the lacunae, purulent cysts or microabscesses of the tonsils, congestive hyperemia of the anterior palatine arches (Gize's sign), swelling of the upper edges of the anterior and posterior palatine arches (Zak's sign), roller-like thickening of the edges of the anterior arches (B.S. Preobrazhensky's sign), adhesions of the tonsils with the anterior arches, especially with their upper part, changes in the consistency of the tonsils, hyperemia of the posterior pharyngeal wall, granular changes on the posterior pharyngeal wall, the presence of exudate (mucous, purulent) on the posterior pharyngeal wall, hypertrophy of the lateral

lymphatic folds, hypertrophy of the lingual tonsil, hypertrophy of the pharyngeal tonsil, hypertrophy of the tubal folds) did not show statistically significant differences ( $p > 0.05$ ).

#### CONCLUSION

In terms of frequency of occurrence, pharyngoscopic changes that are traditionally considered in simple and toxic-allergic forms of chronic tonsillitis (pathological contents in the lacunae of the palatine tonsils -  $86.89 \pm 4.32\%$  and  $95.35 \pm 2.27\%$ , festering follicles of the palatine tonsils -  $81.97 \pm 4.92\%$  and  $93.02 \pm 2.75\%$ , swelling of the upper edges of the anterior and posterior palatine arches -  $95.08 \pm 2.77\%$  and  $100\%$ , roller-like thickening of the edges of the anterior palatine arches -  $96.72 \pm 2.28\%$  and  $100\%$ , congestive hyperemia of the anterior palatine arches -  $95.08 \pm 2.77\%$  and  $98.84 \pm 1.15\%$ , cicatricial adhesions palatine tonsils with anterior arches -  $93.44 \pm 3.17\%$  and  $97.67 \pm 1.63\%$ , the change in the consistency of the palatine tonsils -  $93.44 \pm 3.17\%$  and  $98.84 \pm 1.15\%$ ) did not differ statistically ( $p > 0.05$ ).

#### CONFLICT OF INTERESTS

The authors declare the absence of obvious and potential conflicts of interest related to the publication of this article.

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Авторы заявляют, что данная работа, её тема, предмет и содержание не затрагивают конкурирующих интересов.

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Авторы заявляют об отсутствии финансирования при проведении исследования.

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Все авторы внесли свой вклад в подготовку исследования и толкование его результатов, а также в подготовку последующих редакций. Все авторы прочитали и одобрили итоговый вариант рукописи.

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