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Some biochemical parameters in patients with chronic tonsillitis and myocarditis.

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Relevance. The most important problem of otorhinolaryngology in the Republic of Uzbekistan is currently chronic inflammatory diseases of the palatine tonsils. Its relevance is associated with a significant spread of this pathology among the population, a high frequency of unfavorable outcomes, progressive forms of the disease and disability [3,4]. Secondary changes in internal organs during chemotherapy are well known. They are caused by the influence of neuro-reflex, bacteremic, toxic and allergic factors. The significant influence of chronic tonsillitis on the formation of heart pathology has long been known to practitioners, but there are no generally accepted views on this problem.

Numerous studies have established that active synthesis of biologically active substances is carried out in the palatine tonsils, which are directly involved in many protective reactions of the body [1,2,5]. Based on the above, we have set ourselves.

Purpose of the study: to study the biochemical parameters of blood in patients with chronic tonsillitis and myocarditis.

Research objectives:

1. To study the spread of chronic tonsillitis among patients with myocarditis
2. To study the biochemical parameters of blood in patients with chronic tonsillitis.

Research material and methods:

In order to solve the set tasks during 2019-2020, on the basis of the 7th clinical hospital of the city of Tashkent, 52 patients with toxic-allergic form of chronic tonsillitis, hospitalized for inpatient treatment, were examined.

Of the patients studied, 33 (63%) were men, and 19 (37%) were women. All examined were divided into 2 groups:

Group 1 - control group (30 patients) - patients with toxic-allergic form of chronic tonsillitis without concomitant pathology.

Group 2 - main (22 patients) - patients with toxic-allergic form of chronic tonsillitis in the presence of concomitant diseases of the cardiovascular system.

The age of the patients in the study ranged from 18 to 50 years and averaged 42.32 ± 6.37 years.

The average duration of chemotherapy from the anamnesis in the study group was 6.2 ± 7.5 years.

The diagnosis of myocarditis was established during an interview with the patient on the basis of an extract from the medical history, archival ECG films.

Biochemical blood test - cholesterol, LDL, HDL, triglycerides, fasting blood glucose, glycated hemoglobin, insulin and the study of inflammation markers (C-Reactive protein, fibrinogen), ECG with calculation of QT interval dispersion, Doppler echocardiography, 24-hour ECG monitoring, general ENT examination. Laboratory and instrumental studies were carried out according to the standard method; the interpretation of the results was carried out according to generally accepted standards.

Research results and discussion.

[SJIF 2020: 6.224](#)

[IFS 2020 4.085](#)

According to the results of studies, general ENT examination, pharyngoscopic examination and instrumental studies, chronic tonsillitis of the toxic-allergic form was revealed in all 52 patients. This difference, according to the results of multivariate analysis of variance, did not depend on the presence of diabetes mellitus. In both diabetic and non-diabetic patients, a history of chronic tonsillitis was associated with higher glucose levels.

At admission, patients of group 2 were diagnosed with high blood glucose levels, which had a direct correlation with the severity of myocarditis, which is consistent with the data (Deedwania P. et al., 2008; Lavi S. et al., 2008; Blanco P., Benzadon M., AraziHC. Etal. ., 2012). In addition to the above, an increased glucose level on admission is considered as an independent predictor of not only the severity of myocarditis, but also heart failure as a consequence of impaired glucose utilization (Ceriello A. et al., 2008; Shiweil Y., Yujiel Z., Dayi H. et al., 2010). Perhaps this can partially explain why patients with a history of chronic tonsillitis were significantly more likely to develop acute heart failure.

Table 1. Comparative laboratory parameters of the main and control group (M±SD).

Parameters	ChT without myocarditis (n=30)	ChT with myocarditis (n=22)	P
Glucose mmol/L	5,97±0,22	7,58±0,62*	0,004
CPK-MB IU/L	80,35±10,01	101,30±13,47	0,319
Cholesterol mmol/L	5,75±1,12	5,86±1,41	0,641
HDL mmol/L	1,36±0,41	1,95±0,26	0,123
LDL mmol/L	3,58±0,92	3,84±1,40	0,748
Triglycerides mmol/L	1,31±0,95	1,65±0,71	0,316
Fibrinogen g/L	4,2±0,1	4,9±0,8*	0,031
CRP, mg/L	10,17±7,63	14,20±6,78*	0,013
Neutrophils/Lymphocytes	2.27(1.86; 4.314)	3.17(1.98;5.01) **	0,045

Note: *– significance of differences (p<0,05); ** – median and quartiles.

It also cannot be ruled out that a previous long-term focal chronic infection in the tonsils could have contributed to a weakening of the function of the islet tissue of the pancreas and the release of a proteolytic enzyme that destroys endogenous and exogenous insulin.

As a result, myocarditis can provoke decompensation of carbohydrate metabolism disorders already existing in the body, which are a consequence of chronic tonsillitis.

Serum fibrinogen concentrations in patients with ChT + myocarditis also slightly exceeded normal, and the values of this indicator were significantly higher than in patients with chronic tonsillitis without myocarditis.

The concentrations of other markers of inflammation: C reactive protein, as well as the ratio of neutrophils / lymphocytes, in the blood of patients with ChT + myocarditis also significantly exceeded normal values and were significantly higher in patients with chronic tonsillitis without myocarditis.

It should be noted that the association of an increased level of fibrinogen, C reactive protein and the neutrophil / lymphocyte ratio in patients with ChT + myocarditis, in particular, with chronic tonsillitis without myocarditis, have significant differences.

In all patients with chronic tonsillitis and myocarditis, total cholesterol concentrations

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[IFS 2020 4.085](#)

exceeded optimal levels, but no increase in the mean values of this indicator depending on the presence of chronic tonsillitis in the anamnesis was found. There were also no significant differences in patients with myocarditis and chronic tonsillitis in history in terms of triglycerides, CPK-MB.

Conclusions:

1. Chronic tonsillitis toxic-allergic form with myocarditis occurs more often in men 15 (68%) than in women 7 (32%) age.
2. In chronic tonsillitis with myocarditis, there was a significant increase in the amount of glucose in the blood, as well as changes in the indicators of fibrinogen, C-reactive protein and neutrophils.

[SJIF 2020: 6.224](#)

[IFS 2020 4.085](#)

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