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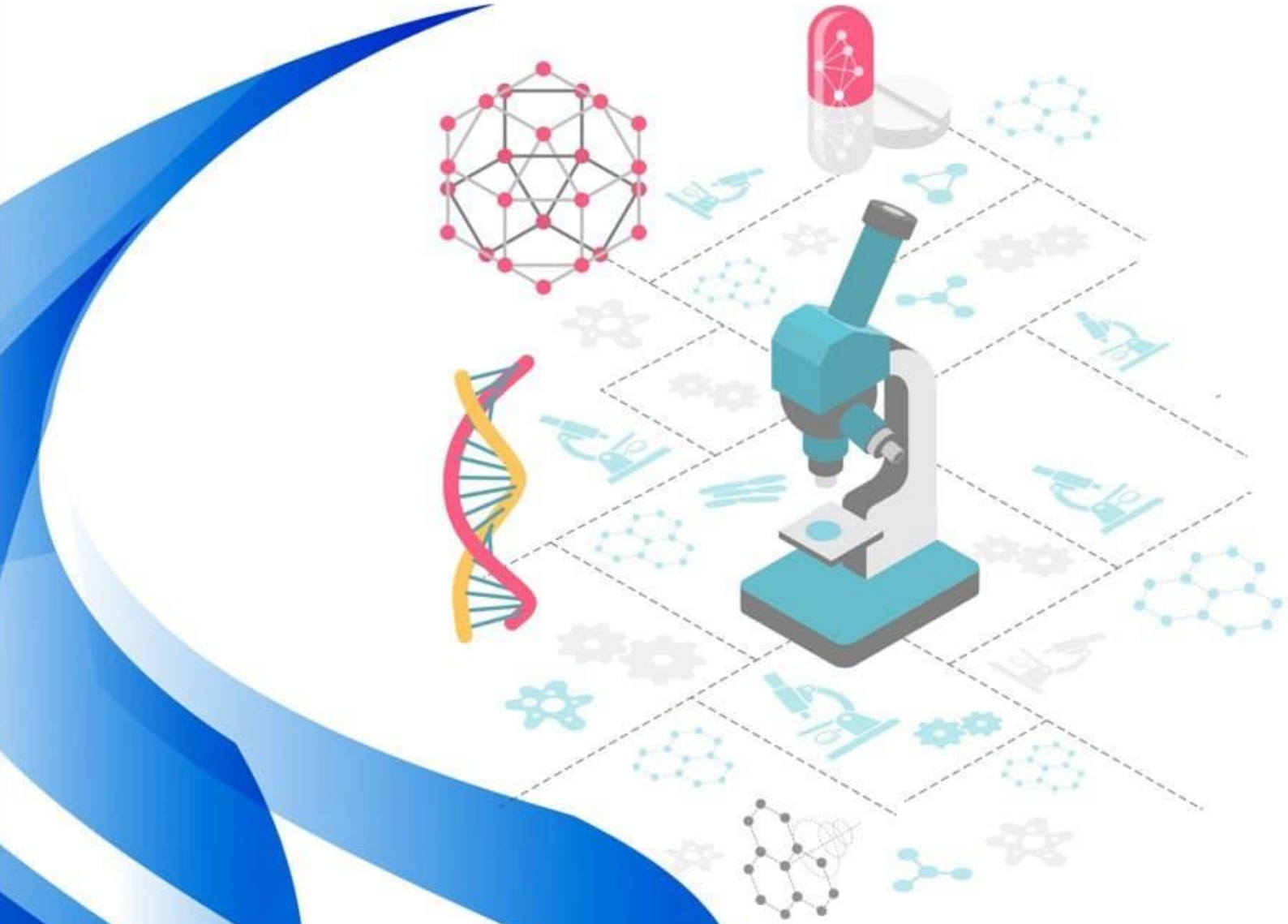

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NEW METHODS OF TREATMENT OF CHRONIC RECURRENT RHINOSINUSITIS

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Abstract. Chronic sinusitis is a chronic inflammation of the mucous membrane of the nasal cavities. The study was conducted in the otolaryngology department and 110 patients treated with chronic recurrent rhinosinusitis (CRRS) in stationary conditions for 2021 years were selected. The average age of patients: up to 17-70 years. During the examination, all patients were divided into 3 groups depending on the degree of remission of the disease: I group – mild remission (n=46), II – moderate severity (n=33), III – severe remission (n=31). For the purpose of CRRS treatment, patients were divided into two groups: group I patients were treated only with standard therapy, group II patients were treated with a drug of derinat and pomegranate seed oil (to drink 6 drops of pomegranate seed oil per day) in addition to standard therapy.

Keywords: chronic rhinosinusitis, cytokines, interleukin, derinate.

Introduction. Chronic sinusitis is a chronic inflammation of the mucous membrane of the nasal cavities. According to modern classifications, chronic sinusitis is divided into primary and secondary sinusitis, respectively, these categories are also divided into local and diffuse sinusitis, depending on the anatomical distribution. Currently, great attention is paid to the structures that control the immune system. The ratio of CD4+ and CD8+ T lymphocytes in peripheral blood is called the "immunosuppressive index". Depending on the disease, the scaling or reduction of this indicator varies from side to side [1,2,3].

It is also very important to determine the degree of heaviness in the passage of rhinosinocytes. One method of determining the degree of severity of the course of the disease is the visual analog scale (VAS). According to the procedure for conducting this method, patients are shown VAS and are asked to mark the symptoms from 0 to 10 points. EPAS 2012 [4,5,6,7], the level of light weight is considered when patients accumulate from 0 to 3 points, while the level of medium weight – from 3 to 7 points, the level of theft – from 7 points to 10 points. Rhinosinusitis can also be determined by the degree of severity, depending on the clinical symptoms. At a mild degree, rhinosinusitis have a slight lack of temperature, a clear cleavage flows from the nose, a runny nose, cough has little effect on the quality of life of patients, there will be no pain in the area of the lateral cavities of the nose and complications will not be observed. To the moderate degree of severity of the disease, the following symptoms are suitable: body temperature is not higher than 38°C. a pronounced runny nose is formed when the head is shaken or bent, a feeling of heaviness in the area of the nasal

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lateral cavities flows and coughing, which clearly affects the quality of life of patients, complications are observed in the At a severe level of the disease, the following symptoms are detected: high body temperature above 38°C, pronounced painful symptoms of rhinosinusitis, which clearly affect the quality of life of patients (runny nose, the appearance of detachment from the nose, cough), constant pain in the area of the lateral cavities of the nose, when shaking the head, bending and percussion intensifying, intracranial and orbital complications are observed [8-15].

Thus, depending on the nature of the disease and the severity of its course, the question of the correct choice of methods of treatment of chronic recurrent rhinosinitis remains topical.

Purpose of the study. To determine the degree of severity of the course of the disease in chronic recurrent rhinosinusitis and accordingly, to recommend a method of treatment.

Research material and methods. The study was conducted in the otolaryngology department and 110 patients treated with chronic recurrent rhinosinusitis (CRRS) in stationary conditions for 2021 years were selected. The average age of patients: up to 17-70 years. During the examination, all patients were divided into 3 groups depending on the degree of remission of the disease: I group – mild remission (n=46), II – moderate severity (n=33), III – severe remission (n=31).

Clinical examinations of all patients, including collection of complaints and anamnesis, general examination, palpation and percussion of the nasal side heads, laboratory (general blood analysis, biochemical analysis of blood, immunogram: immunoglobulins in serum (IgM, IgG, IgA, IgE), interleukins (IL-1β, IL-4, IL-6, IL-8, IL-10, TNFα, IFN), instrumental methods of examination – rhinoscopy and endoscopic rhinoscopy of nasal cavities of the company "Stema" 0°,30°,45°,70° in order to determine the intensity of pain, imaging solid endoscopes with viewing angles were used visual analog scale (VAS).

Results of the study. In the first group, it was found that the amount of anti-inflammatory IL-10 cytokines increased significantly compared to the II, III and control groups ($p<0,001$). It was found that the amount of IL-1β cytokines called inflammatory response decreased significantly compared to the II, III and control groups ($p<0,001$). Accordingly, the inflammatory reaction also corresponds to a mild degree. IL-10 and IL-1β cytokines in the second group of patients were found to have increased in comparison with I, III and control groups ($p<0,001$). In patients of the second group, clinical signs are manifested in accordance with the inflammatory reaction, which corresponds to the moderate severity of the disease. It was found that IL-1β ($p<0,001$), which causes inflammation in patients in the tertiary group, increased cytokines, which in turn releases and controls the immune response, and also activates a systemic inflammatory reaction. It has been observed that anti-inflammatory IL-10 cytokines decreased significantly compared to other groups ($p<0,001$), which is evidenced by the activity of the inflammatory process.

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For the purpose of CRRS treatment, patients were divided into two groups: group I patients were treated only with standard therapy, group II patients were treated with a drug of derinat and pomegranate seed oil (to drink 6 drops of pomegranate seed oil per day) in addition to standard therapy. In order to normalize the amount of pro-inflammatory and anti-inflammatory cytokines in patients, the drug derinat and pomegranate seed oil were used (table 1).

Table 1

Post-treatment results of cytokines in chronic recurrent rhinosinusitis (m ± m)

Cytokines	**I group (before treatment, n=110)**	**II group (after standard treatment, n=55)**	**III group (standard treatment+derinate+pomegranate seed oil, n=55)**	**Control group (n=20)**
IL-1β	36,6±3,81	26,1±4,9	17,11±7,5	4,05±0,3
p-compared with group I		p<0,001	p<0,0001	
p-compared with the group II			p<0,001	
p-compared with the control group	p<0,001	p<0,001	p<0,001	
Comparison of many	**p<0,001**			
IL-4	11,04±1,42	9,12±2,5	7,02±1,28	1,65±0,2
p-compared with group I		p<0,001	p<0,0001	
p-compared with the group II			p<0,001	
p-compared with the control group	p<0,001	p<0,001	p<0,001	
Comparison of many	**p<0,001**			
IL-6	15,18±2,3	20,28±1,9	38,96±6,4	6,87±0,5
p-compared with group I		p<0,001	p<0,0001	
p-compared with the group II			p<0,001	
p-compared with the control group	p<0,001	p<0,001	p<0,001	
Comparison of many	**p<0,001**			
IL-8	13,11±2,5	19,6±2,61	28,1±2,53	7,16±1,7
p-compared with group I		p<0,001	p<0,0001	
p-compared with the group II			p<0,001	
p-compared with	p<0,001	p<0,001	p<0,001	

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the control group				
Comparison of many	**p<0,001**			
IL-10	30,13±4,18	19,32±4,31	11,18±2,26	3,11±0,4
p-compared with group I		p<0,001	p<0,0001	
p-compared with the group II			p<0,001	
p-compared with the control group	p<0,001	p<0,001	p<0,001	
Comparison of many	**p<0,001**			
INTα	22,08±1,2	17,01±2,5	13,98±0,74	4,45±0,6
p-compared with group I		p<0,001	p<0,0001	
p-compared with the group II			p<0,001	
p-compared with the control group	p<0,001	p<0,001	p<0,001	
Comparison of many	**p<0,001**			

In patients with SQRS, it was found that the amount of anti-inflammatory IL-1β and anti-inflammatory IL-10 cytokines decreased after standard therapy, while in the group of patients who received the recommended drug derinate and pomegranate seed oil in addition to standard therapy, it was found that these indicators decreased significantly.

Conclusion. It was found that it is important to determine the amount of cytokines in patients with CRRS and, accordingly, to choose a method of treatment. In order to normalize the amount of IL-1β and IL-10 cytokines in patients, in combination with standard therapy, the drug derinate and pomegranate seed oil were recommended. A re-examination with the aim of comparing the amount of cytokines after the end of the course of treatment showed that when looking at standard therapy, it was found that the drug derinate and pomegranate seed oil additionally significantly reduced the amount of cytokines in the recommended group. The effectiveness of the above recommended method of treatment was proved by a reduction in the number of days of inpatient treatment and a decrease in the number of hospitalized patients.

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