

## MICROBIOLOGICAL FEATURES OF THE NASAL CAVITY IN CHILDREN WITH ALLERGIC RHINITIS COMPLICATED BY ADENOIDITIS

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**Annotation.** All patients were divided into 3 groups: Group 1: Allergic rhinitis, persistent form. Adenoiditis. Hypertrophy of the pharyngeal tonsil of the II — III degree; group 2: Allergic rhinitis, persistent form. Adenoiditis. Hypertrophy of the pharyngeal tonsil of the II - III degree. The comparison group included patients diagnosed with adenoiditis. Pharyngeal tonsil hypertrophy of II - III degree without signs of atopy. Microbiological examination of the nasal cavity was performed in patients with adenoiditis with AR and patients with adenoiditis without atopy. Bacteriological examination of nasal secretions revealed in patients with allergic rhinitis complicated by adenoiditis, a wide species diversity of microflora with a high degree of colonization

**Key words:** allergic rhinitis, adenoiditis, hypertrophy of the pharyngeal tonsil.

**Relevance.** The data presented in the literature indicate that the tactics of treating children with taxied allergic rhinitis and adenoiditis remain open until now, in this direction, the opinions of the authors are against each other. So far, the effectiveness of adenotomy in children with allergic rhinitis has not been proven, there is no single opinion about conducting adenotomy in children with atopia, therefore, indications and contraindications for the appointment of adenotomy surgery in boas with allergic rhinitis and bronchial asthma have not been developed. It is also not known whether adenotomy affects the development of bronchial asthma, or whether this condition is an "atopic step" even in boas where adenotomy has not been performed. On the other hand, eosinophilic infiltration of the mucous membrane in the early and late phases of allergic inflammation, the production of mediators leads to the development of hypertrophy of the pharyngeal tonsil and deepens the course of allergic rhinitis [1,23,26].

Violation of the aerodynamics of the nasal cavity leads to an exacerbation of infectious complication – adenoiditis, most authors count adenoiditis as a reliable factor in the development of bronchial asthma [2,10,22,24].

For this reason, most authors recommend the inclusion of adenotomy in copmlex treatment measures for chronic adenoiditis, in children over 7 years of age with allergic rhinitis, since it is catamnesticly proven and considered appropriate that high clinical efficacy can be achieved through this [3,21,25]. On the other hand, most authors put forward the idea that even despite hypertrophy of



the palate murtacus, AR is individually considered a factor for the development of bronchial asthma [4,7,17,20]. According to various authors, bronchial asthma is observed in 20-50% of patients with rhinitis, while in 80% of patients with bronchial asthma, rhinitis is diagnosed [5,8,16,18]. A.I. Muminov analyzed the correlation between cases of allergic rhinitis and recurrence of bronchial asthma and examined the presence of eosinophilia in the nasal detachment [7,19].

The presence of atopia in patients with upper and lower respiratory tract allergic inflammatory process in one whole case has been proven through a series of examinations [6,9,12,15,13]. In children with AR, a conservative course of treatment should be carried out, which includes intranasal corticosteroid agents and/or a new generation of antihistamine agents, at the birth of an operative treatment overdose, of course in the preoperative period.

Operative treatment is required to be carried out during the period of non-escalation of AR [8,10,11,14]. It is worth noting that according to the size of the adenoid vegetasia, the age of the child, the duration of the disease and how much the inflammation of the larynx is repeated, the adenoid itself can also cause difficulty breathing through the nose and various disorders in the child. In some patients, even large-sized adenoids do not cause a pronounced respiratory disorder, while in some patients, an imperceptible enlargement of the pharyngeal tonsil causes raw oral breathing. A large number of courses of antibacterial agents do not always lead to an improvement in the child's condition, but can lead to serious complications and worsening of the outcome of the disease.

**The aim of the study.** To study the micropeisage of the nasal cavity in children with AR complicated by adenoiditis.

**Materials and methods.** All patients were divided into 3 groups: Group-1: Allergic rhinitis, persistent form. Adenoiditis. Hypertrophy of the pharyngeal tonsil of the II — III degree; group-2: Allergic rhinitis, persistent form. Adenoiditis. Hypertrophy of the pharyngeal tonsil of the II - III degree. The comparison group included patients diagnosed with adenoiditis. Pharyngeal tonsil hypertrophy of II - III degree without signs of atopy. Microbiological examination of the nasal cavity was performed in patients with adenoiditis with AR and patients with adenoiditis without atopy.

**Results and their discussion.** The study showed that the most frequent representatives of the nasal cavity microflora in the examined groups were *S. aureus*, *S. epidermidis*, *Corynobacterii* spp. Significant differences in the frequency of detection of these species were determined in different groups. *Staphylococcus aureus* was isolated 2 times more often, and *Corinobacteria* 3 times more often in patients with allergies. For patients with adenoiditis, without atopy, the most characteristic representative of the microflora was epidermal *staphylococcus*, which was often isolated in association with *Staphylococcus aureus*. In patients with *S. aureus* AR, as a rule; isolated in monoculture (Table No. 1).

**Table No. 1**

**Frequency of detection of various microorganisms in nasal secretions**

Types of microorganisms	Patients of 1-2 groups n %		Patients of 3 groups n %	
	n	%	n	%
1. <i>S aureus</i>	58	61	35	42,2
2. <i>S. Epidermidis</i>	28	29,4	32	38,5



3. Str. Millleri	6	6,3	2	2,4
4. Str. Pneumoniae	6	6,3	4	4,8
5. N. Subbava	1	1	6	30
6. Corynobacterii spp.	69	63,1	26	31,3
7. Klebsiella (pneumoniae, oxytoca)	1	1	4	4,8
8. Moraxella spp.	6	6,3	4	4,8
9. C. Albicans	1	1,0	1	1,2
10. Pseudomonas spp	2	2Д	6	30

The most severe course of the disease was distinguished by patients with infection caused by *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Klebsiella pneumoniae*, *Moraxella catarrhalis*. Patients with a complicated form of AR were characterized by the presence of abundant growth of one or many conditionally pathogenic and/or pathogenic microorganisms. According to the results of the examination, it was revealed that the most frequently isolated microorganisms were sensitive to antibiotics cephalosporins of the II - III generation, mainly (in 95.6% of patients) to cefuroxime.

It is obvious that in patients with AR, the species composition of the microflora is more diverse, in contrast to patients without atopy, in whom they were allocated 2 times less.

Thus, the study showed that micropeisage of the nasal cavity in children with AR complicated by adenoiditis is characterized by a high degree of colonization of the nasal cavity and a wide species composition of representatives of conditionally pathogenic and pathogenic microflora.

**Conclusion.** Bacteriological examination of nasal secretions revealed in patients with allergic rhinitis complicated by adenoiditis, a wide species diversity of microflora with a high degree of colonization (*Staphylococcus aureus* - 61%, *Corynobacterii spp.* - 63,1%, *S. Epidermidis* - 29,4%, *Streptococcus pneumoniae* — 6%, *Moraxella catarrhalis*- 6, 3%).

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