

## **Optimization of the Effectiveness of Treatment of Allergic Rhinitis, Which is Complicated by Adenoiditis in Children**

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**Abstract:** Between 2020 and 2022, scientific research was carried out on 60 children who applied to the LOR-Department of the Bukhara region children's Multidisciplinary Medical Center. The first group included 30 patients: allergic rhinitis, persisting form. Adenoiditis. Hypertrophy of the pharyngeal tonsil has been the subject of a traditional conservative treatment with Grade II-III diagnosis. Patients of the second group: allergic rhinitis, persisting form. Adenoiditis. Endonasal flutynex spray was adopted as the traditional treatment with hypertrophy of the pharyngeal tonsil Grade II - III diagnosis did not benefit.

Complex stepwise conservative treatment of children with adenoiditis and allergic rhinitis, including the use of topical corticosteroids and cephalosporins of the second generation, demonstrated a high therapeutic effect in 55.9% of patients, which was confirmed by reliable improvements in the indicators of anterior active rhinomanometry and endoscopic picture and allowed to cancel the adenotomy.

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

**Relevance.** The data presented in the literature indicate that the tactics of treating children with 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 children 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 children 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].

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].

For this reason, most authors recommend the inclusion of adenotomy in complex treatment measures for chronic adenoiditis, in children over 7 years of age with allergic rhinitis, since it is clinically proven and considered appropriate that high clinical efficacy can be achieved through this [3]. On the other hand, most authors put forward the idea that even despite hypertrophy of the palatine tonsils, AR is individually considered a factor for the development of bronchial asthma [4,7]. 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]. 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].

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]. 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]. 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.** Therapeutic effect of fluticasone propionate nasal spray in the treatment of AR, which is complicated by adenoiditis in children.

**Materials and methods.** Between 2020 and 2022, scientific research was carried out on 60 children who applied to the LOR-Department of the Bukhara region children's Multidisciplinary Medical Center. The first group included 30 patients: allergic rhinitis, persisting form. Adenoiditis. Hypertrophy of the pharyngeal tonsil has been the subject of a traditional conservative treatment with Grade II-III diagnosis. Patients of the second group: allergic rhinitis, persisting form. Adenoiditis. Endonasal flutynex spray was adopted as the traditional treatment with hypertrophy of the pharyngeal tonsil Grade II - III diagnosis did not benefit.

**Results and their discussion.** Table No.1 presents a comparative characteristic of the effectiveness of therapy in the first and second groups of patients with AR suffering from adenoiditis, based on the sum of the scores of symptoms before and after therapy.

**Table No.1. Effect of conservative therapy in patients with AR and adenoiditis**

Patient group	Symptom score M±a (points)		The content of eosinophils in the rhinocytogram M±o(%)	
	Before treatment	After treatment	Before treatment	After treatment
Group 1	6,42±1,98	2,68±1,98*	19,7 ±13.7	8.3±6.8
Group 2	6,51±2,20	4,71±1,87*	23,5± 11.4	11,5±9,6
Confidence indicator	p=0.82	p<0.01	p=0.52	p =0.67

\*p<0.01 (between before and after treatment in the group)

In patients of the first group who received a course of conservative treatment, a significant decrease in the main clinical symptoms of AR was observed. This is especially important for the symptoms of nasal obstruction, for which the sick children were actually referred for an adenotomy. Thus, an excellent and good therapeutic effect of combination therapy, which had an effect on the relief of nasal congestion, was registered in 60.8% of patients suffering from allergic rhinitis and adenoiditis. That is, the need for surgical intervention in 27 children of the first group was eliminated. In addition, a significant decrease in the intensity of rhinorrhea was observed in 29 children of the first and 16 of the second groups. None of the children during the course had any complaints from hearing or pain in the ears. Moreover, parents noted an improvement in the hearing condition in the overwhelming number of patients.

Table No. 2 presents data on the relief of symptoms of allergic rhinitis against the background of a course of therapy.



**Table No. 2. Dynamics of clinical symptoms in patients with AR during treatment with fluticasone propionate nasal spray**

The symptom	Group 1 Points (M±W)		Group 2 Points (M±W)	
	Before treatment	After treatment	Before treatment	After treatment
Nasal congestion	1,65 ±0,01	0,49 ±0,01*	2,83 ±0,03	1,92 ±0,01*
Sneezing attacks	1,83 ±0,05	0,56 ±0,01	0,65 ±0,01	0,49 ±0,01
Rhinorrhea	2,19 ±0,02	0,73 ±0,01*	2,21 ±0,01	1,83 ±0,01*
Itching of the wings of the nose	1,23 ±0,03	0,25 ±0,01	0,94 ±0,01	0,05 ±0,01
Confidence indicator	* p<0,05			

The percentage of eosinophils in nasal secretions also underwent a positive trend after a course of combination therapy. So, if before treatment the average values of eosinophilia in the nasal secretion were 19.7% and 23.5%, in the first and second groups, respectively, then after treatment they decreased almost twice in patients of both groups. The decrease in the content of eosinophils in nasal secretions was directly dependent on the decrease in the severity of rhinitis symptoms.

**Conclusion.** Complex stepwise conservative treatment of children with adenoiditis and allergic rhinitis, including the use of topical corticosteroids and cephalosporins of the second generation, demonstrated a high therapeutic effect in 55.9% of patients, which was confirmed by reliable improvements in the indicators of anterior active rhinomanometry and endoscopic picture and allowed to cancel the adenotomy.

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