EFFICACICY OF TREATMENT OF ALLERGIC RHINITIS COMBINED WITH ADENOID VEGETATION IN CHILDREN

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Abstract. *Allergic rhinitis (AR) is widespread among the world's population, tends to increase, and represents a serious problem due to decreased quality of life and frequent complications. The economic damage from AR amounts to billions of dollars and almost half of this amount is spent on drugs that keep patients in remission and, as a rule, do not cure. It is known that allergic rhinitis (AR) significantly reduces the quality of life of patients, provoking the development of other diseases of the ENT organs (sinusitis, otitis media, eustachitis, nasal polyposis, upper respiratory tract infections).*

A comorbid association between adenoid hypertrophy in upper respiratory tract allergies, which is called inflammation of the upper respiratory tract mucosa due to IgE-mediated hypersensitivity, has been shown in many studies.

Keywords: *allergic rhinitis, adenoid vegetation, rhinosinusitis, children.*

Relevance. Allergic rhinitis (AR) is an urgent problem in practical healthcare, occupying one of the first places in terms of socio-economic damage [1,2,8]. The incidence of AR is steadily increasing [5,4,6].

There is a steady increase in the prevalence of allergic diseases throughout the world. According to medical statistics from various countries of the world, they affect from 10 to 30% of the urban and rural population living in economically developed countries, and in environmentally unfavorable areas this figure reaches 50% or more [3,10].

Adenoid hypertrophy (AH) and allergic rhinitis (AR) are the leading factors of difficulty in nasal breathing in children. It has been estimated that 2% to 3% of children may experience apnea/hypopnea due to obstruction of hypertrophied adenoid tissue, and 20–40% of children worldwide suffer from AR [9,7].

Purpose of the study:studying the effectiveness of treatment of allergic rhinitis combined with adenoid vegetation in children.

Material and research methods: The study was conducted from 2021 to 2023 on the basis of the TashPMI in Tashkent.

The study included28patients who have previously been repeatedly treated with conservative therapy. However, at the stage of inclusion in the study, almost all children experienced an exacerbation of the inflammatory process, and they needed another course of conservative treatment, which consisted of standard conservative therapy for AR, elimination measures, according to the severity of the course. Conservative therapy was carried out to reduce inflammation in the nasal cavity and nasopharynx, improve nasal breathing, reduce microbial contamination, relieve AR symptoms, and normalize rhinomanometry data.

Research results: We examined 28 children with AR and AV.

For the purpose of comparative analysis, patients with AR and AV were divided into 2 subgroups: 1a - subgroup (n=14), who received traditional conservative therapy for allergic rhinitis

according to ARIA, and also underwent surgical treatment - adenotomy. This operation was performed under general intubation anesthesia using the method of endoscopic adenotomy. Children with AR and AV 1b - subgroup (n=14), along with conservative and surgical therapy, were prescribed inhalation therapy using the PARI-SINUS inhaler. In this type of therapy, a glucocorticosteroid (GCS) - budesonide (pulmicort) was used using a pulsating aerosol supply through a device. Conservative therapy was also carried out with the aim of stopping the allergic exacerbation of the process, and as a stage of preoperative preparation.

When assessing the clinical effectiveness after 1 month, a pronounced regression of symptoms was observed in both groups; significant differences were identified when comparing complaints before and after the therapy received: nasal congestion ($p<0.001$), sneezing ($p<0.001$), nasal discharge ($p<0$,01) (Table 4.1.). Noteworthy is the fact that in both comparative groups, patients noted a significant improvement in issues related to night sleep, the number of complaints with night awakenings, difficulties falling asleep, and lack of a full night's sleep decreased ($p < 0.001$). The same positive results, according to parents, were obtained on issues related to ability to work, weakness after waking up, fatigue, decreased concentration, irritability ($p <0.001$). Regarding complaints: lacrimation, itching in the eyes, cough, the need for a handkerchief, a feeling of pressure in the face, a feeling of mucus running down the back wall, then a significant difference was found in subgroup 1b ($p <0.001$), which was not achieved in subgroup 1a ($p>0.05$). Despite the marked improvement in the general condition of the patients, there were no significant differences in issues related to a decrease in the sense of smell in both groups.

Thus, a significant improvement in quality of life indicators on all scales was observed in children of both groups, but in subgroup 2b, who underwent aerosol inhalation including corticosteroids (budesonide) using the PARI-SINUS device, to a greater extent.

Table 4.1.

FREQUENCY OF COMPLAINTS AFTER TREATMENT IN CHILDREN WITH ALLERGIC RHINITIS COMBINED ADENOID VEGETATION

	AR+AV before treatment		After trad. Treatment		After complete treatment		R	
	M	m	M	m	M	m	T1/T2	T1/T3
Nasal congestion	2.68	0.09	0.71	0.13	0.43	0.14	0.000	0.000
Sneezing	1.89	0.18	0.43	0.14	0.21	0.11	0.000	0.000
Nasal discharge	0.96	0.15	0.43	0.14	0.07	0.07	0.012	0.000
Watery, itchy eyes	0.43	0.12	0.14	0.10	0.00	0.00	0.071	0.001
Cough	0.21	0.08	0.07	0.07	0.00	0.00	0.187	0.010
Sensation of mucus running down the back wall	0.36	0.09	0.29	0.13	0.07	0.07	0.649	0.019
Thick nasal discharge	0.11	0.06	0.00	0.00	0.00	0.00	0.079	0.079
Ear congestion	0.79	0.14	0.14	0.10	0.14	0.10	0.001	0.001
Dizziness	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Need for a handkerchief	0.18	0.07	0.14	0.10	0.00	0.00	0.771	0.020
Earache	0.11	0.06	0.00	0.00	0.00	0.00	0.079	0.079

Pain/pressure in the face	0.14	0.07	0.07	0.07	0.00	0.00	0.471	0.040
Decreased sense of smell	0.29	0.12	0.07	0.07	0.07	0.07	0.143	0.143
Difficulty falling asleep	0.75	0.18	0.21	0.11	0.07	0.07	0.017	0.001
Night awakenings	1.86	0.13	0.50	0.14	0.14	0.10	0.000	0.000
Lack of a full night's sleep	1.82	0.14	0.43	0.14	0.21	0.11	0.000	0.000
Feeling tired after waking up	1.18	0.22	0.36	0.13	0.21	0.11	0.003	0.000
Fatigue	2.21	0.15	0.50	0.14	0.29	0.13	0.000	0.000
Decreased ability to work	2.39	0.14	0.50	0.14	0.14	0.10	0.000	0.000
Decreased concentration	1.39	0.14	0.29	0.13	0.07	0.07	0.000	0.000
Frustration, anxiety, irritability	0.96	0.10	0.29	0.13	0.07	0.07	0.000	0.000
Confusion	0.57	0.10	0.21	0.11	0.50	0.14	0.021	0.673

According to the study, there was a positive dynamics of clinical symptoms during treatment of AR combined with adenoid vegetation: in both subgroups there was a decrease in complaints, an improvement in the general condition of children, however, in the subgroup receiving intranasal GCS using a pulsating supply of the drug, relief of symptoms was observed in a larger number of children (%).

It should be noted that in the second subgroup of children after complex therapy, no sneezing was observed (Diagram 4.1.).

Diagram 4.1.

Dynamics of symptoms after prescribed therapy

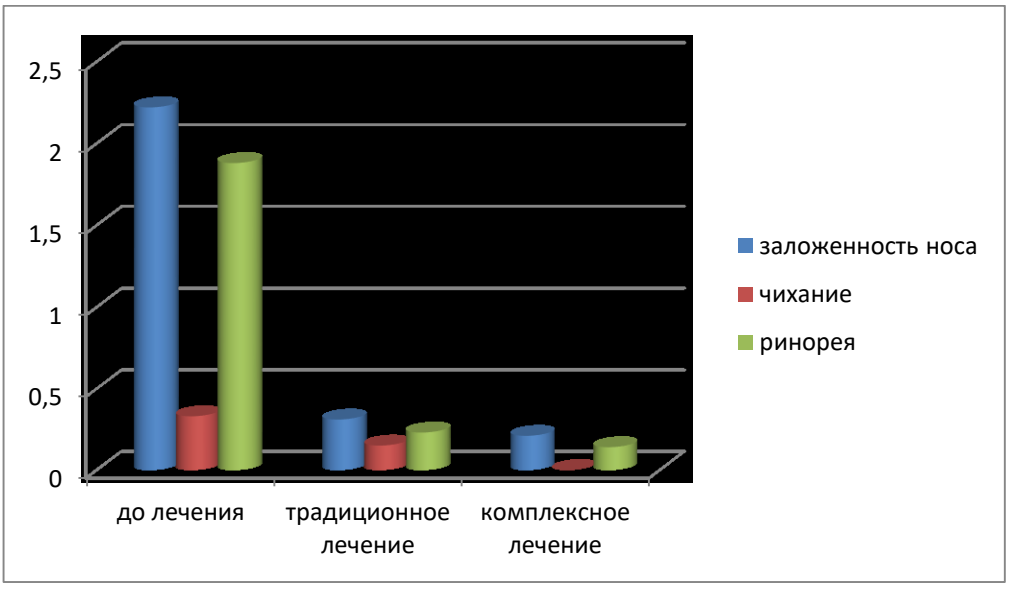

Table 4.2.

Dynamics of objective symptoms of AR combined with adenoid vegetation before and after treatment

Symptoms	Before treatment	traditional	comprehensive
Swelling of the nasal mucosa	2.07±0.28	1.07±0.17*	0.57±0.17*
Presence of discharge in the nasal cavity	1.93±0.17	0.76±0.16**	0.28±0.12*
Changes in the ears	1.93±0.17	0.57±0.13	0.0±0.0*

According to objective symptoms, after treatment, AR symptoms decreased in both subgroups. However, against the background of therapy with the help of pulsating aerosol supply through PARI-SINUS (subgroup 1b), swelling of the mucous membrane decreased by 68% from the original (2.07±0.28 to 0.57±0.17), and the narrowing of the nasal passages by 87% from initial (1.93±0.17 to 0.28±0.12), and such a symptom as changes in the ears was negative in all examined children after complex therapy (1.93±0.17 to 0.0±0.0*) (Table 4.2 .).

Based on the above studies, we recommended the inhalation method using the Parisinus device containing the glucocarticosteroid budesonide. According to our study, children who received complex treatment using aerosol inhalation with corticosteroids (budesonide) using the PARI-SINUS device showed positive dynamics of symptoms, and relief of symptoms was noted in the majority of children.

In conclusion, we can conclude that after complex therapy in children with allergic rhinitis combined with adenoid vegetation or sinusitis, there is an improvement in all indicators of nasal breathing, including anterior rhinopneumometry, which naturally has a positive effect on external respiration indicators. Complex treatment has a pronounced effect and thereby contributes to faster relief of the allergic process in the body of children.

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