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# Improvement of the Method of Diagnosis and Treatment of Polypous Rhinosinusitis against the Background of Allergic Rhinitis in Children

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**Abstract:** This article presents data on the problem of polypous rhinosinusitis associated with allergic rhinitis in children. Current views on the causes, risk factors, and pathogenic mechanisms of disease development are substantiated. Current concepts and approaches to the diagnosis and treatment of polypous rhinosinusitis associated with allergic rhinitis in children are also discussed.

The aim of the work: to improve the results of diagnosis and treatment of polypous rhinosinusitis against the background of allergic rhinitis in children.

Material and methods: The study included 148 children with polypous rhinosinusitis with and without allergic rhinitis who visited the Bukhara Regional Multidisciplinary Children's Center between 2019 and 2024. The results of diagnosis and treatment were analyzed.

Results: After treatment, all children experienced a significant reduction in their symptoms, which did not impair their quality of life. In particular, the turmeric solution in the second, main group of patients significantly improved their condition compared to the control group. The number of hospital days in patients of the main group was reduced by 2.0±2.5 days compared to patients of the control group.

**Key words:** nasal polyp, rhinitis, rhinosinusitis, allergy, allergic rhinitis.

## Introduction.

Polypous rhinosinusitis is a chronic disease of the nasal mucosa and paranasal sinuses, the pathogenesis of which is based on an inflammatory reaction characterized by the formation and recurrent growth of polyps with a predominance of eosinophils or neutrophils [6]. Chronic rhinosinusitis is divided into two subgroups depending on the presence or absence of polyps in the middle nasal passage[13].

Allergic rhinitis (AR) is a heterogeneous disease caused by IgE-mediated hypersensitivity reactions, which is characterized by the presence of one or more symptoms: sneezing, itching, nasal discharge and nasal congestion [16,17].

According to international data, AR is observed in an average of 10–25% of the population of developed countries, and in some regions in 40% [10]. Moreover, AR occupies one of the leading places in terms of socio-economic damage [1, 4, 12, 14]. In developing countries, AR is less common but is becoming an increasingly pressing problem [11]. Despite the fact that the problem of allergic rhinitis is being studied in various directions [12], much remains unresolved, in particular, specific diagnostics have not been sufficiently studied, and the influence of seasonal allergic reactivity on its indicators has not been clarified. The results of epidemiological studies conducted in different regions of the Russian Federation show that AR affects 4 to 30% of the general population [1, 9]. The incidence of AR is steadily increasing [4, 10, 14, 18]. Currently, AR is characterized by early onset,

often continuously recurring course and resistance to traditional antiallergic therapy (antihistamines, cromones, nasal corticosteroids) [4, 5, 7]. Even after a full course of antiallergic therapy, one in five patients continues to experience AR symptoms [15].

The basic treatment regimen proposed in clinical guidelines does not always allow for the achievement of stable remission of the atopic process, and therefore patients are forced to constantly take hyposensitizing and corticosteroid drugs, which significantly worsens their quality of life and places a persistent burden on the family budget [2, 3].

The chronic course of the disease, unstable remissions and frequent exacerbations, and a tendency towards complications suggest that the disease occurs against a background of immunodeficiency. Under conditions of impaired immune homeostasis, the microbial landscape of the nasal mucosa is characterized by polymorphism; bacterial agents can act as an infectious antigen.

However, to date it has not been fully clarified whether there is a regular change in the composition of the microflora of the upper respiratory tract in atopy [8].

Thus, there is a need to develop new, comprehensive methods for the diagnosis and treatment of polypous rhinosinusitis against the background of allergic rhinitis.

**The aim of the work:** to improve the results of diagnosis and treatment of polypous rhinosinusitis against the background of allergic rhinitis in children.

**Material and methods:** The study included 148 children with polypous rhinosinusitis with and without allergic rhinitis who visited the Bukhara Regional Multidisciplinary Children's Center between 2019 and 2024. The results of diagnosis and treatment were analyzed. The patients were divided into two groups: the control group included patients (n=73) with polypous rhinosinusitis, and the main group (n=75) included patients with polypous rhinosinusitis against the background of allergic rhinitis. All patients were examined according to the standard: objective examination of the ENT organs, additionally laboratory and instrumental examination methods. Instrumental methods included: radiography, computed tomography, endoscopic rhinoscopy, magnetic resonance imaging (only for the purpose of clarifying diagnostics). When examining the nose, attention was paid to its shape, the condition of the septum, the mucous membrane of the turbinates, the nasopharyngeal space, as well as the oral cavity and pharynx, the hard and soft palate, the ostia, the palatine tonsils, the moisture of the tongue, plaque, the opening of the auditory tubes, the mucous membrane of the larynx, the epiglottis, the vocal cords, the subglottic space and the trachea. During rhinoscopy, special attention was paid to the presence of swelling of the nasal mucosa, the nature of the color and discharge.

An important point is the differential diagnosis of polypous rhinosinusitis (especially in recurrent cases) and tumors of the paranasal sinuses. Two morphological forms are distinguished: soft eosinophilic polyps and dense (fibrous, neutrophilic) polyps.

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The duration of illness was determined based on the anamnesis:

up to 3 years - 17 (22.7%); from 3 to 6 years - 25 (33.3%); more than 6 years - 33 (44.0%) (Fig. 1).

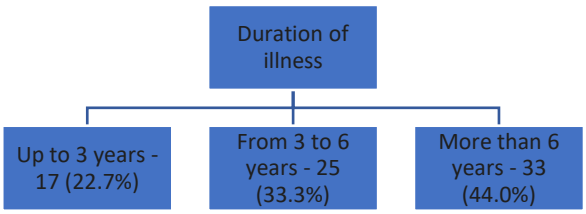


**Fig. 1. The duration of illness was determined based on the anamnesis.**

**Results and discussions**

Patients in the control group were prescribed conventional treatment: antibiotics, antihistamines, and intranasal glucocorticosteroids. Patients in the study group were prescribed a turmeric solution for topical nasal irrigation in addition to conventional treatment. Turmeric has over 150 medicinal properties, including antimicrobial, anti-inflammatory, and immunomodulatory ones. Most of its beneficial properties are due to its content of curcumin, an active component that regulates inflammation and destroys damaged molecules.

Curcumin helps clear the sinus cavity and airways. Its anti-inflammatory action makes it one of the most effective natural treatments for sinus infections.

**Conclusion**

The medical and social significance of chronic polypous rhinosinusitis against the background of allergic rhinitis is due to its high prevalence, decreased quality of life, and the presence of resistant and recurrent forms.

The specialist must be proficient in modern diagnostic and treatment methods and apply topical treatment with turmeric solution, which has a wide range of medicinal properties.

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