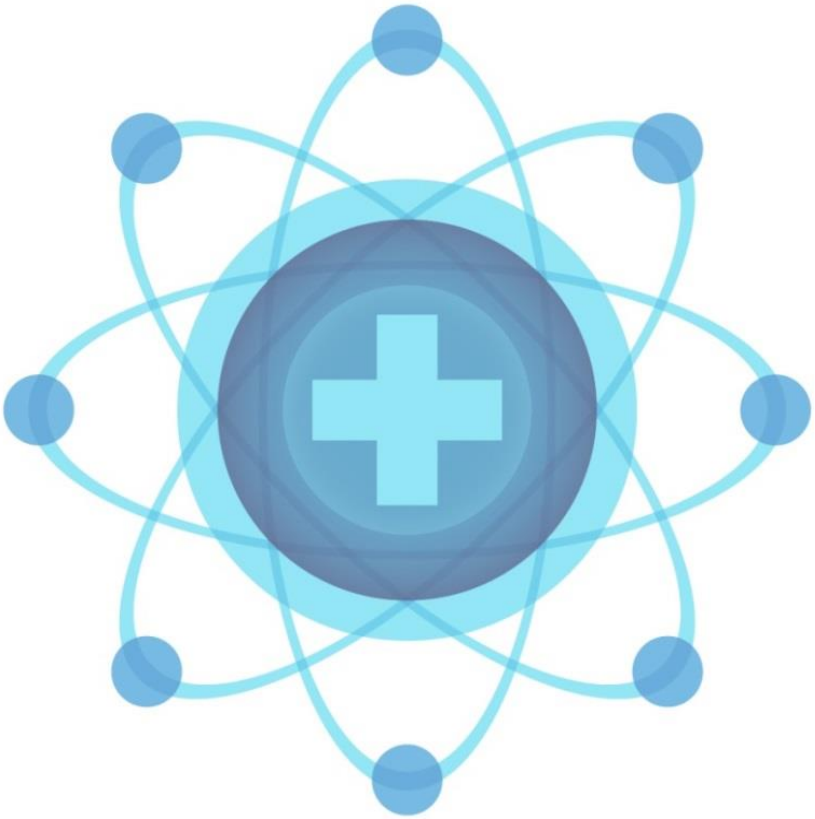

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ALLERGIC RHINITIS IN THE PATHOGENESIS OF SINUSITIS DEVELOPMENT

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The relevance of research. One of the most common diseases among children is acute sinusitis, the largest number of patients is between the ages of 4 and 15 years, and over the past 10 years, the disease has accounted for 35-37% of all diseases of the upper respiratory tract (1,2,4,5,7)

Currently, the incidence of acute and chronic rhinosinusitis is high, as the prevention of them and their complications is not fully developed. The occurrence and course of acute sinusitis is significantly influenced by various endogenous and exogenous factors , such as allergens, environmental irritants, and it can also have an infectious, viral, bacterial or fungal etiology.

Acute rhinosinusitis in 2-10% of cases has a viral etiology, and in 10-12% allergic and in 80-88% of cases is caused by bacteria. Allergic rhinitis (AR) is one of the first predisposing factors for the development of acute sinusitis. According to a number of authors, 94%-97% of children with AR have inflammation of the paranasal sinuses (3.7).

In recent years, AR as a problem has become increasingly important due to its high prevalence among the population (from 10% to 40%), especially in the pediatric population. According to official statistics, AR occurs in 9%–25% of children aged 5–8 years.

Inflammation and swelling of the nasal mucosa in children with allergic rhinitis can lead to obstruction of the sinus drainage pathways and subsequent attachment of bacterial flora. Against the background of allergies, infectious and purulent-inflammatory processes proceed rapidly and often give severe complications. Currently, for the treatment of children with acute sinusitis against the background of AR , there are various effective methods of therapy (1,3,6), however, despite the success achieved, the frequency of transition to the chronic form does not decrease, severe complications often occur, which ultimately lead to disability. .

Thus, the problem of studying the formation, clinical course, and treatment of acute sinusitis in children with AR is one of the significant aspects in otorhinolaryngology.

Purpose of the study: To study the features of the course and develop new approaches to complex treatment, prediction of acute sinusitis in children with allergic rhinitis.

Material and research methods. We observed 46 patients with acute sinusitis against the background of AR, aged from 5 to 18 years. When diagnosing AR and determining its form, ICD-10 and the WHO classification were followed.

Among the examined patients, 29 (63%) were diagnosed with acute sinusitis, 14 (30.4%) sinusitis and 3 (6.6%) hemisinusitis. The complex examination of patients

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included the collection of anamnesis, endoscopic examination of the ENT organs, endoscopy of the nasal cavity and radiography of the paranasal sinuses. In order to clarify AR, a linico-allergological examination was carried out according to medical standards (protocols) for the diagnosis and treatment of patients with allergic diseases and immune system disorders.

Acute rhinosinusitis (ARS) against the background of AR is an acute inflammation of the mucous membrane of the nasal cavity and paranasal sinuses, for which the presence of two or more symptoms is mandatory, such as nasal congestion, nasal discharge and discharge from the back of the throat, and additional signs of pain or facial pressure and hyposmia or anosmia.

Endoscopically: the mucous membrane of the nasal cavity is edematous, mucopurulent discharge in the region of the middle and common nasal passage. In children, in addition to difficult nasal breathing, sinusitis may be indicated by a cough that occurs when irritated by a mucopurulent discharge of the posterior pharyngeal wall.

The clinical course of severe sinusitis has a number of features: in older children, the disease proceeds as in adults, and in younger children it often has few symptoms, they are worried about periodic difficulty in nasal breathing without sneezing attacks and copious nasal discharge.

To assess the clinical manifestations of the disease, the European guidelines for rhinosinusitis (European position paper on rhinosinusitis and nasal polyps) EPOS were used. At the same time, it is proposed to use a visual-tax 10-point scale. A mild degree of the disease corresponds to a scale value from 0 to 3 points, a moderate degree of severity - from 4–7 points, a severe course of more than 7 points.

In the first group, 29 (63%) patients with a mild course (up to 3 points on a scale) complained of mild headache, weakness , hyposmia, nasal congestion, mucopurulent discharge from the nose and nasopharynx, body temperature within 37 C. On radiographs, parietal thickening of the sinus mucosa.

Moderate course in 14 (30.4%) patients (average 5 points), headaches were more intense, pain was noted on palpation in the projection of the affected sinus. Constant nasal congestion, purulent discharge from the nose, weakness, hyposmia and body temperature in the aisles of 37-38 C. On radiographs, the sinus is completely darkened, and some of them even had a fluid level in the projection of the affected sinus.

In severe cases, in 3 (6.5%) patients (10 points on a scale), constant headache and pain in the projection of the affected sinus, purulent discharge from the nose and nasopharynx were constant, body temperature was 38 C and above, general weakness, anosmia. On radiographs, total darkening of more than two sinuses. At the same time, these patients had orbital complications in the form of reactive orbital edema. In blood tests, leukocytosis, accelerated ESR.

Treatment of acute OSAR was carried out according to the severity of the disease. Currently, one of the effective methods of treating acute sinusitis is nasal lavage with saline solution, and it has become part of the treatment standards of the European and American communities of otorhinolaryngologists. Based on this, in

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order to eliminate viruses and bacteria from the nasal cavity and paranasal sinuses in the treatment of patients, the nasal cavity was irrigated with saline "Dolphin". For this, a saline solution was injected into one half of the nose. “Dolphin”, and from the other half it was sucked off with the help of an electric suction. Manipulation was carried out 2 times a day, the course of treatment required 6-8 procedures.

According to the recommendation of EPOS-2012 (European position paper on rhinosinusitis and nasal polyps) , topical endonasal corticosteroid therapy remains the main direction in the treatment of sinusitis, especially in patients with a history of allergic rhinitis. The pronounced anti-inflammatory and anti-allergic effect of these drugs leads to a decrease in swelling of the nasal mucosa, restores the patency of the lumen of the fistulas of the paranasal sinuses. Due to its high efficacy in reducing severe inflammation and pain in severe cases of sinusitis, the EPOS (2012) guidelines recommend the use of short course oral corticosteroids. As a topical and intranasal corticosteroid (ICS) recommended a number of drugs . One of them is Forinex nasal spray. Unlike other ICS , we did not observe any undesirable manifestations during the use of Forinex (headache, dry nose, nosebleeds) during the course of treatment. During treatment, Forinex spray was injected into each nostril once a day for 4-6 days.

Recently, in the literature () the issues of systemic and especially local use of antibiotics in acute sinusitis have been repeatedly discussed. It is strongly not recommended to introduce antibiotic solutions into the paranasal sinuses after their puncture, since they are intended for intramuscular or intravenous administration.

For local use, special forms of antibiotics are recommended, endonasal administration in the form of a spray. Intranasal administration of the drug contributes to its penetration into hard-to-reach areas of the sinus and, the antibiotic directly contacts the microflora in the focus of inflammation. In our practice, in order to influence the pathogenic microflora, we used Sinulor nasal antibacterial topical spray. The drug belongs to the antibiotics of the aminoglycoside group and has a bactericidal effect against bacteria, causative agents of inflammation of the upper respiratory tract.

After washing the nasal cavity, sinulor spray was injected into each nasal passage 3 times a day for 4-6 days.

In the group of sick children with a severe course (3 patients) of the disease, in addition to the above treatment, an amoclan suspension of 10 ml was additionally administered orally. 2 times a day for 5 days.

Amoklan - a combined antibacterial drug consisting of amoxicillin and clavulanic acid, has a wide spectrum of antibacterial action. The drug is well absorbed from the gastrointestinal tract and is recommended for use in children of any age.

To assess the effectiveness of the therapy, we used indicators on a scale of subjective sensations: first of all, the dynamics of the main symptoms of sinusitis (headache and pain in the projection of the affected sinus, nasal discharge, difficulty in nasal breathing, body temperature), objective data (edema and hyperemia of the

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nasal mucosa , the presence of purulent discharge from the nose) and the general condition of the patient in dynamics.

The results of the therapy. On the 4th day of the therapy, nasal congestion and discharge disappeared in all patients with mild and moderate severity. Only 2 sick children with a severe course still had periodic nasal congestion and mucous discharge. At the end of the course of treatment (6th day of treatment), there was a clear positive dynamics, objective data, decreased hyperemia and swelling of the nasal mucosa, the nature of the discharge of the nasal cavity. Only in 3 patients of moderate severity and in 3 patients with severe course, a slight swelling of the mucosa, periodic mucous discharge from the nose, was still observed, although they had purulent discharge before treatment. After treatment in 44 patients, the general condition improved significantly: headaches, weakness and hyposmia completely disappeared, breathing through the nose was restored, discharge from the nose and nasopharynx stopped, and body temperature returned to normal . At rhinoscopy: the mucous membrane of the nasal cavity is pink, the nasal passages are clean. Improvement was achieved in 2 patients, the above symptoms also disappeared, but mucous discharge from the nose was periodically observed, and nasal congestion was disturbed at times.

Conclusions: 1. Allergic manifestations in the nasal cavity in children have a significant impact for the occurrence of acute sinusitis and the course of the disease Against the background of allergies, swelling of the mucous membrane of the nasal cavity occurs, while ventilation and mucociliary function of the mucous membrane are disturbed, which leads to accumulation of secretions in the sinuses, which contributes to secondary infection.

2. The main direction of the treatment of acute sinusitis against the background of AR is the elimination of the phenomenon of allergy, the achievement of a stable bactericidal concentration in the nose of the paranasal sinuses, the improvement of the drainage and ventilation function of the paranasal sinuses.

3. Achieving a good and lasting effect in severe diseases can be achieved by using amoklan in the form of a suspension. The drug is well tolerated even by young children, which can be recommended. As the drug of choice in children with acute purulent sinusitis due to allergies.

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