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AGAINST THE BACKGROUND OF ALLERGIC RHINITIS IN THE PATHOGENESIS OF SINUSITIS DEVELOPMENT

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Abstract
Relevance of the study. Acute sinusitis is one of the most common diseases among children, the largest number of patients is between the ages of 4 and 15 years, and over the past 10 years, the disease accounted for 35-37% of all diseases of the upper respiratory tract (1,2,4,5,7) Currently, the rate of acute and chronic rhinosinusitis is kept 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 infectious, viral, bacterial or fungal etiology.

Introduction

Acute rhinosinusitis has a viral etiology in 2–10% of cases, allergic etiology in 10–12% of cases, and is caused by bacteria in 80–88% of cases. Allergic rhinitis (AR) is one of the first predisposing factors for the development of acute sinusitis. According to some authors, 94%-97% of children with AR have sinus inflammation (3,7).

In recent years, AR as a problem has become more important due to its high prevalence in 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 tracts and subsequent attachment of bacterial flora. Against the background of allergies, infectious and purulent-inflammatory processes proceed rapidly and often lead to severe complications. Currently, for the treatment of children with acute sinusitis secondary to AR There are various effective therapies (1,3,6), but despite the success achieved, the frequency of transition to a chronic form does not decrease, and severe complications often occur, which eventually 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.

Objective:

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

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Material and Methods of Research

We observed 46 patients with acute sinusitis on the background of AR aged 5 to 18 years. When diagnosing AR and determining its form, ICD-10 and the WHO classification were adhered to.

Among the examined patients, 29 (63%) were diagnosed with acute maxillary sinusitis, 14 (30.4%) maxillary ethmoiditis, and 3 (6.6%) with hemisinusitis. The complex of examination of patients included anamnesis, endoscopic examination of ENT organs, endoscopy of the nasal cavity and X-ray of the paranasal sinuses. In order to clarify AR, a clinical and allergological examination was carried out in accordance with medical standards (protocols) for the diagnosis and treatment of patients with allergic diseases and immune system disorders.

Acute rhinosinusitis (ORS) secondary to AR is an acute inflammation of the mucous membrane of the nasal cavity and paranasal sinuses, which is characterized by the presence of two or more symptoms, such as nasal congestion, nasal discharge and posterior pharyngeal discharge, and additional signs of pain or pressure in the facial area and hyposmia or anosmia. Endoscopically: nasal mucosa is edematous, mucopurulent discharge in the area of the middle and common nasal passage. In children, in addition to difficulty in nasal breathing, sinusitis may be indicated by a cough, which occurs when the mucopurulent discharge of the posterior pharyngeal wall is irritated.

The clinical course of acute sinusitis has a number of features: in older children, the disease proceeds as in adults, and in younger children it is often asymptomatic, they are bothered by periodic difficulty in nasal breathing without sneezing attacks and abundant nasal discharge.

To assess the clinical manifestations of the disease, the European position paper on rhinosinusitis and nasal polyps, EPOS, was 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 of 0 to 3 points, moderate severity - from 4 to 7 points, a severe course of more than 7 points.

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

Moderate course in 14 (30.4%) patients (average 5 points), headaches were more intense, tenderness was noted on palpation in the projection of the affected sinus. Persistent nasal congestion, purulent nasal discharge, weakness, hyposmia and body temperature in the aisles of 37-38 C. Radiographs showed complete darkening of the sinuses, and some of them even showed the level of fluid in the projection of the affected sinus.

In 3 (6.5%) patients with a severe course (10 points on the 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 higher, general weakness, anosmia. Radiographs show total opacity 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, acceleration of ESR.

Treatment of acute OSAR was carried out according to the severity of the disease. Currently, one of the effective methods of therapy for acute sinusitis is nasal irrigation with saline

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solution, and it has entered the standards of treatment of the European and American communities of otorhinolaryngology. Based on this, in order to eliminate viruses and bacteria From the nasal cavity and paranasal sinuses, during the treatment of patients, irrigation of the nasal cavity with a saline solution "Dolphin" was carried out. To do this, a saline solution "Dolphin" was injected into one half of the nose, and from the other half it was sucked out using an electric pump. The 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 focus 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 the swelling of the nasal mucosa, restores the patency of the lumen of the paranasal sinuses. Due to its high efficacy, EPOS guidelines (2012) recommend the use of orally as a short course of corticosteroids to reduce severe inflammation and pain in severe cases of sinusitis.A number of medications are recommended as a topical intranasal corticosteroid (ICS). One of them is forinex nasal spray. In contrast to other ICS, we did not observe any adverse events with the use of forinex (headache, dry nosebleeds) during treatment. During the treatment, forinex spray was injected into each nostril once a day for 4-6 days.

Recently, the systemic and especially topical use of antibiotics for acute sinusitis has been discussed many times in the literature. It is strongly recommended not to inject antibiotic solutions into the paranasal sinuses, after their puncture, as they are intended for intramuscular or intravenous administration.

For topical use, special forms of antibiotics, endonasal injection in the form of a spray are recommended. Intranasal injection of the drug promotes its penetration into hard-to-reach areas of the sinuses and the antibiotic is in direct contact with the microflora in the focus of inflammation. In our practice, in order to affect pathogenic microflora, we used nasal antibacterial topical spray "Sinulor". The drug belongs to the antibiotics of the aminoglycoside group and has a bactericidal effect against bacteria that cause inflammation of the upper respiratory tract.

After nasal irrigation, 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 oral suspension of amoclan 10 ml was additionally used 2 times a day for 5 days.

Amoclan is a combined antibacterial drug consisting of amoxicillin and clavulanic acid, has a broad 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 the indicators of the 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), object data (edema and hyperemia of the nasal mucosa, the presence of purulent discharge from the nose) and the patient's general condition in dynamics.

Results of the therapy

On the 4th day of therapy, nasal congestion and discharge disappeared in all patients of mild and moderate severity. Only 2 patients with severe disease had intermittent nasal congestion and mucous discharge. At the end of the course of treatment (the 6th day of treatment) there was a clear positive trend, objective data, hyperemia and edema of the nasal mucosa, the nature of the nasal cavity discharge. Only 3 patients with moderate severity and 3 patients with a severe course still had mild mucosal edema and periodic nasal mucosal discharge, although they had purulent discharge before treatment.. After treatment, the general condition of 44 patients significantly improved: headaches, weakness and hyposmia completely disappeared, breathing through the nose was restored, discharge from the nose and nasopharynx stopped, and body temperature normalized. On rhinoscopy: the nasal mucosa is pink, the nasal passages are clear. Improvement of the condition was achieved in 2 patients, they also disappeared from the above symptoms, but periodically mucous discharge from the nose was observed, at times nasal congestion bothered them.

Conclusions:

1. Allergic manifestations in the nasal cavity in children have a significant impact on the occurrence of acute sinusitis and the course of the disease Against the background of allergies, edema of the nasal mucosa occurs, while ventilation and mucociliary function of the mucous membrane are impaired, which leads to the accumulation of secretions in the sinuses, which contributes to secondary infection.
2. The main direction of treatment of acute sinusitis on the background of AR is the elimination of the phenomenon of allergies, the achievement of a stable bactericidal concentration in the nose and 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 amoclan in the form of a suspension. The drug is well tolerated even in young children, which can be recommended. As the drug of choice in children with acute purulent sinusitis due to allergies.

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