

ETIOLOGY, PATOLOGY AND EPIDIMIOLOGY OF ADENOIDITIS IN CHILDREN

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Annotation: Adenoiditis in children is a chronic inflammatory process that develops in the hypertrophied pharyngeal tonsil (adenoids). It is manifested by symptoms of adenoids: difficulty in nasal breathing, nasal voice, snoring during sleep. There are also signs of inflammation in the form of a runny nose and fever. Adenoiditis in children has a chronic course and further leads to a delay in physical and mental development. The disease is diagnosed clinically, confirmed by the results of rhinoscopy, rhinocytological examination and radiography. Treatment is aimed at eliminating the focus of infection and restoring nasal breathing.

Key words: rhinoscopy, rhinocytological examination, radiography.

Adenoiditis in children is a common reason for contacting a pediatrician and a pediatric otorhinolaryngologist. The incidence is approximately 15: 1 000, taking into account the available adenoids without inflammation. It is more often detected in children from 2-3 to 7 years old, since it is at this age that the maximum physiological size of the pharyngeal tonsil is noted. Among schoolchildren, pathology is diagnosed several times less often. The relevance of the disease in pediatrics is extremely high. Currently, adenoiditis in children is more common in comparison with the incidence rate at the end of the XX century. This is due to an increase in the number of pathologies of pregnancy and childbirth, leading to a weakening of immunity in the population, as well as the spread of antibiotic-resistant forms of microorganisms.

The inflammatory process in the overgrown lymphoid tissue of the pharyngeal tonsil is most often caused by hemolytic streptococcus, respiratory viruses, less often by fungi and conditionally pathogenic flora, Mycobacterium tuberculosis, etc. The risk of adenoiditis in children increases if the child is often ill for a long time, and also has a burdened allergic history. Narrow nasal passages (for example, when the nasal septum is curved) help to reduce the natural sanitation of the nasal cavity and the long-term persistence of pathogenic microorganisms on the pharyngeal tonsil.

Since adenoiditis in children develops on the hypertrophied pharyngeal tonsil, it is worth mentioning separately the causes of the proliferation of lymphoid tissue. Many children to varying degrees have adenoids, represented by an enlarged pharyngeal tonsil. They usually appear at the age of 2-7 years and gradually decrease after puberty. This is due to the fact that it is the pharyngeal tonsil that plays the role of the first immune barrier for respiratory infections in early childhood. Adenoiditis in children occurs when adenoids remain unnoticed for a long time, the child often gets sick as a result of immunodeficiency, or conservative therapy is ineffective.

SYMPTOMS OF ADENOIDITIS IN CHILDREN

Manifestations of adenoiditis in children are always layered on the overall picture of adenoids. Signs of an enlarged palatine tonsil include difficulty breathing through the nose, which causes the baby to breathe through the mouth and snore in his sleep, as well as a closed nasal voice, in which the sounds "m" and "n" actually disappear from speech. In addition, the child has a characteristic appearance: the mouth is open, the face is hypomimic, the nasolabial folds are smoothed. With a prolonged course, adenoids and adenoiditis in children lead to a delay in physical development, a decrease in memory and attention.

The child quickly gets tired and irritated due to chronic hypoxia and lack of a healthy night's sleep. In addition to the above symptoms, adenoiditis in children is accompanied by an increase in temperature (more often to subfebrile values), even more pronounced difficulty in

nasal breathing up to its complete absence, as well as a runny nose. Nasal secretions are difficult to remove, but even after that, breathing through the nose is relieved only for a short time.

COMPLICATIONS

The disease is chronic and often leads to complications from the cardiovascular system. This is due to the fact that the most common pathogen is Group A hemolytic streptococcus, which has a similar structure to heart cells, so endocarditis and myocarditis develop by an autoimmune mechanism. Adenoiditis in children is often accompanied by otitis media and conjunctivitis. The child often suffers from viral infections. This is due to a decrease in immunity, and the constant secretion of infected mucus in children with adenoiditis.

Mucus flows down the back wall of the pharynx, the inflammatory process spreads to the lower respiratory tract. Chronic hypoxia and constant stress on the immune system lead to delayed physical and mental development. Oxygen deficiency is manifested not only by general hypoxemia, but also by underdevelopment of the facial skull, in particular, the upper jaw, as a result of which the child develops an incorrect bite. Possible deformity of the palate ("Gothic" sky) and the development of a "chicken" chest. Adenoiditis in children also leads to chronic anemia.

DIAGNOSTICS

A pediatrician may suspect adenoids and adenoiditis in children during a physical examination. The child develops the "adenoid" type of face mentioned above. Difficulty in nasal breathing, nasal twang, and frequent viral infections are indications for rhinoscopy for a child.

- Anterior rhinoscopy is performed when the tip of the nose is pulled up. So you can assess the condition of the mucosa, patency of the nasal passages and notice the adenoids themselves with significant hypertrophy of the pharyngeal tonsil.
- Posterior rhinoscopy is technically more complex, especially given the patient's age, but it allows you to examine the back wall of the pharynx, determine the presence of adenoids and adenoiditis in children.

It is possible to conduct a finger study. The procedure is simple and takes only a few seconds. The method is very informative, but extremely unpleasant for the child, so the study is usually performed at the end of the examination. Endonasal diagnosis of adenoiditis in children is also used. It allows you to visualize adenoids, assess their condition and the degree of enlargement, but it requires special training (anesthesia, mucosal anesthesia). The presence of anatomical deformities of the nasal cavity is a contraindication to this study, so it is necessary to first exclude possible curvatures, as well as nasal polyps and other formations, otherwise there is a high risk of bleeding.

Rhinocytological examination (nasal smear followed by microscopy) gives an idea of the cellular composition of mucus. Thus, a high content of eosinophils indicates the allergic nature of adenoids and adenoiditis in children. To confirm the allergic nature of the disease, skin tests are performed, especially if the parents have allergies and the child has a history of allergodermatosis. Consultation with an otorhinolaryngologist is mandatory. Otoscopy allows you to assess the condition of the eardrum and the involvement of the auditory tube and ear cavity in the inflammatory process. The examination also evaluates the child's hearing. Diagnosis of adenoiditis in children includes X-ray of the skull in a direct and lateral projection to exclude sinusitis and tumors of the nasal and pharyngeal cavity. CT and MRI are necessary if an anterior cerebral hernia is suspected, which leads to a violation of nasal breathing, but with this pathology, deformities of the facial skull with a wider eye position and other signs are more often noted. Choan atresia is manifested by the complete inability of nasal breathing from one or both sides, but this malformation is more often diagnosed

immediately after birth. If hoan atresia is suspected, a test is performed with instillation of colored drops in the nose.

TREATMENT OF ADENOIDITIS IN CHILDREN

Conservative therapy

Treatment of the disease includes rehabilitation of the focus of inflammation and ensuring full nasal breathing. Washing with antiseptic solutions, as well as isotonic salt solutions, is prescribed. Aerosol antibiotics and steroid preparations, drops with antiseptic and vasoconstrictor effects are used (adrenomimetics are used only in short courses). Also, in the treatment of adenoiditis in children, inhalations with antiseptics and mucolytics are effective. Any antibiotics are used only after confirming the nature of the disease, that is, isolating the pathogen and determining its sensitivity to drugs. Interferon inducers are indicated for immune stimulation.

Surgical treatment

Operations for adenoids and adenoiditis in children are performed when conservative methods are ineffective, as well as when nasal breathing is difficult. An important condition for surgical intervention is the absence of exacerbation of the inflammatory process. The duration of remission should be at least one month.

Usually, an adenotomy is performed using an adenotome, the lymphoid tissue is cut off with a special knife under local anesthesia or general anesthesia, depending on the patient's age, the degree of adenoids, the presence of hearing disorders, etc. Endonasal removal of adenoids is also possible, but when using this technique, areas of lymphoid tissue often remain, so a second operation may be necessary. Hospitalization for an adenotomy is not required.

PROGNOSIS AND PREVENTION

The prognosis of the disease is favorable with timely diagnosis and therapy. With repeated growth of adenoids, a relapse of adenoiditis in children is possible, this happens rarely and is an indication for repeated adenotomy. A separate block of adaptation of the child is represented by the restoration of nasal breathing, as patients get used to breathing through the mouth. The child is engaged in special exercises together with his parents, if necessary - with a speech therapist. Prevention of adenoiditis in children is timely removal of adenoids or successful conservative therapy. A mandatory point is to maintain the child's immunity, which requires a full-fledged diet, staying in the fresh air and other hardening procedures.

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