

Treatment of Chronic Adenoiditis in Children

Ikramova F. S.

Bukhara State Medical Institute

Abstract: The article describes various methods of removing adenoid hypertrophy, including aspiration diathermy, cold plasma surgery and a combined approach. The article analyzes in detail the combined approach, which is a more accurate, safe and effective method of removing adenoids, especially in children with palatine dysfunction. It describes how this method allows resecting lymphoid tissue with a cutter under clear visual endoscopic control, which avoids injury to the nasal septum, nasal conchs, posterior pharyngeal wall and tubal tonsils. The advantages of preserving the palatopharyngeal sphincter and controlling the depth of adenoid resection using this method are also discussed. In conclusion, it is noted that the combined approach based on the use of an endoscope is a promising method in the surgical treatment of adenoiditis in children with palatine dysfunction and can lead to improved results of surgery and reduced complications after it.

Keywords: chronic adenoiditis, pharyngeal tonsil, viruses, bacteria.

A wide range of therapeutic methods are used in the treatment of inflammation of the pharyngeal tonsil in children, including elimination therapy and the use of anti-inflammatory, antiallergic and mucolytic drugs [2,4,20]. Conservative therapy is aimed at sanitizing the focus of chronic infection and suppressing chronic inflammation, as well as reducing the number of preoperative and postoperative complications, and sometimes even preventing the recurrence of pharyngeal tonsil lymphoid tissue growth after surgery [1,9,21].

Elimination therapy using seawater solutions or salt solutions of different osmolarity is widely used in the treatment of nasopharyngitis/adenoiditis. Nasal irrigation is effective and safe to use, especially when observing irrigation techniques and age restrictions in the choice of irrigation method, and contributes to the elimination of pathogenic microorganisms, removal of pathological secretions and restoration of normal operation of the mucociliary clearance system [3,5,10].

For the treatment of inflammatory processes of bacterial nature in the nasopharynx, it is most advisable to use topical (local) forms of antibacterial drugs, since systemic antibacterial drugs can cause the formation of resistant forms of bacteria, disorders of the flora of the gastrointestinal tract, an increase in the risk of allergic reactions and a decrease in the intensity of natural anti-infective protection [6,11,19]. For topical antibacterial drugs used intranasally, it is important to select a single / daily dose and duration of the course, which allows to achieve eradication of pathogens and relief of inflammatory phenomena without the development of adverse reactions from the mucous membrane of the nasal cavity and digestive tract.

In a number of clinical studies in acute bacterial rhinopharyngitis in children, the effectiveness, safety, cost-effectiveness and ease of use of thiamphenicol glycinate acetylcysteinate in the form of inhalations has been proven, which is a complex compound combining the antibiotic thiamphenicol and mucolytic acetylcysteine, which has a wide spectrum of antibacterial action and contributes to the dilution of sputum and pus, improving mucociliary clearance and accelerating recovery mucous membrane [7,15,18].

Conservative therapy of adenoiditis in children with concomitant pathology (often sick children, children with gastrointestinal pathology) can be effective in Uzbekistan. A study conducted in 2021 [8,12,17] confirmed the effectiveness of combination therapy, including the use of local glucocorticosteroids and antibiotics, in children with adenoiditis and concomitant rhinitis or sinusitis.

In children receiving such therapy, there was a significant improvement in the condition and a decrease in the frequency of relapses.

Another study conducted in 2019 [13,16,] showed high efficacy of homeopathic therapy in children with adenoiditis and concomitant respiratory diseases. In this study, homeopathic medicines such as *Sambucus nigra*, *Euphrasia officinalis*, *Belladonna* and others were used.

Thus, conservative therapy of adenoiditis in children with concomitant pathology can be effective in Uzbekistan. Combination therapy with the use of local glucocorticosteroids and antibiotics, as well as homeopathic therapy can be used to achieve the best results. Further studies are needed to more accurately determine the effectiveness and safety of these treatments, as well as to investigate other possible methods of conservative therapy of adenoiditis in children with concomitant pathology in Uzbekistan.

With the ineffectiveness of conservative therapy, the impossibility of complete rehabilitation of the chronic focus of infection, in the presence of an appropriate endoscopic picture (signs of chronic inflammation and/or prolapse into the nasal cavity and sphenoidal pocket of the pharyngeal tonsil, block of the pharyngeal mouth of the auditory tube, hypertrophy / inflammation of the tubal tonsils), as well as concomitant pathology from the middle ear, the results of audiological and somnological examination shows surgical treatment. Indications for surgical treatment are:

The presence of obstructive sleep apnea syndrome (OSA).

ESO and hearing loss in children without dynamics from conservative treatment for 3 months.

Deformation of the maxillofacial system as a result of persistent violation of nasal breathing.

Recurrent adenoiditis, lack of effect from conservative therapy.

The following types of surgical intervention are used on the structures of the lymphopharyngeal ring, including in the presence of complications from the middle ear:

Adenotomy

Adenotomy + tympanopuncture

Adenotomy + bypass surgery of the tympanic cavities

Adenotomy + destruction of tubal tonsils

Adenotomy + destruction of tubal tonsils + tympanopuncture or bypass surgery.

Adenotomy was first performed by W. Meyer in 1868, who performed the operation using a special ring-shaped knife inserted through the nose and choana to the nasopharyngeal arch [14,20,22].

Currently, there are many different approaches to the removal of hypertrophied lymphoid tissue in the structures of the nasopharynx. The most optimal at the moment from the position of most otorhinolaryngologists is to perform an adenotomy under combined anesthesia. Despite this, to date, adenotomy is performed using an adenotomic curette without the use of visual control, the disadvantage of which is the presence of remnants of lymphoid tissue in the pharyngeal mouths of the auditory tubes and choan, which, as a rule, leads to relapses of diseases.

According to the report cited by Saxby et al., after adenotomy with a single-volume curette without visual control, the preservation of residual lymphoid tissue in the nasopharynx, including in the area of the pharyngeal mouths of the auditory tubes, was determined in 25% of children [21,23]. Therefore, at the moment, the most preferred method is considered to be an endoscopic adenotomy, which allows you to visualize the removal area and achieve the most complete evacuation of hypertrophied lymphoid tissue.

In addition, in some cases, for example, in the presence of recurrent acute otitis media or chronic otitis media with impaired ventilation of the tympanic cavity, additional surgical intervention may be

required to improve the function of the auditory tube and ventilation of the tympanic cavity. In such cases, bypass surgery of the tympanic cavities or tympanopuncture may be performed.

In Uzbekistan, endoscopic methods of examination and treatment of adenoiditis are widely used in pediatric practice. These methods are used to diagnose adenoiditis, assess its severity and select the most appropriate treatment method. One of these methods is endoscopic adenectomy, which is performed under general anesthesia and is a safe and effective method of removing adenoids. Endoscopic methods also include infusion therapy, which allows achieving a higher concentration of drugs in the area of inflammation and providing more effective treatment.

In Uzbekistan, studies have been conducted on endoscopic methods of research and treatment of adenoiditis in children. One of these studies evaluated the effectiveness of endoscopic methods of treating adenoiditis in 127 children and showed that endoscopic adenectomy is a safe and effective method of treating adenoiditis in children. Other studies have evaluated the effectiveness of endoscopic diagnosis and treatment of adenoiditis in children, as well as the effectiveness of treatment of adenoiditis using laser technology and magnetotherapy.

In general, studies conducted in Uzbekistan confirm the high efficiency of endoscopic methods of research and treatment of adenoiditis in children. These methods allow you to accurately control the process of tissue removal and minimize the risk of damage to surrounding tissues, as well as choose the optimal treatment method and conduct safe and effective treatment procedures.

In recent years, various methods have been actively used in medical practice to remove adenoid hypertrophy, including aspiration diathermy, cold plasma surgery and a combined approach based on the use of a rigid endoscope and a microdebrider. Aspiration diathermy using monopolar diathermy is an accurate, easily performed, bloodless and relatively inexpensive method of removing adenoids. Cold plasma surgery is based on the interaction of a radio wave and a saline solution, which allows splitting tissue with simultaneous coagulation, which leads to less blood loss and faster restoration of the surface of the nasopharyngeal mucosa.

However, a new combined approach based on the use of a rigid 70-degree endoscope and a microdebrider is a more accurate and safe method of removing adenoids. This method allows you to resect lymphoid tissue with a cutter under clear visual endoscopic control, which avoids injury to the nasal septum, nasal conchs, posterior pharyngeal wall and tubal tonsils. This method also allows you to preserve the palatopharyngeal sphincter and control the depth of adenoid resection, which is especially important for partial adenotomy.

The literature indicates that the use of a combined approach in the surgical treatment of adenoiditis in children with palatine dysfunction can be especially effective. Removal of lymphoid tissue in the choan area, lateral sections and the tubal tonsils area helps to alleviate the symptoms of obstruction and preserve the palatopharyngeal valve. Thus, a combined approach based on the use of a rigid endoscope and a microdebrider is a more accurate, safe and effective method of removing adenoids, especially in children with palatine dysfunction.

In conclusion, it can be noted that the removal of adenoid hypertrophy is an important procedure in medical practice that can help children cope with the symptoms of obstruction and palatine dysfunction. In recent years, various methods of adenoid removal have been developed, including aspiration diathermy, cold plasma surgery and a combined approach based on the use of a rigid endoscope and a microdebrider.

Among all the methods of adenoid removal, a combined approach based on the use of a rigid endoscope and a microdebrider is a more accurate, safe and effective method of removing adenoids, especially in children with palatine dysfunction. This method allows you to resect lymphoid tissue with a cutter under clear visual endoscopic control, which avoids injury to the nasal septum, nasal conchs, posterior pharyngeal wall and tubal tonsils. In addition, this method allows you to preserve the palatopharyngeal sphincter and control the depth of adenoid resection, which is especially important for partial adenotomy.

Thus, a combined approach based on the use of a rigid endoscope and a microdebrider is a promising method in the surgical treatment of adenoiditis in children with palatine dysfunction. Wider use of this method can lead to improved results of surgery and reduced complications after it.

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