Central Asian Journal of Medicine

CLINICAL PRESENTATION AND TREATMENT OF PHARYNGEAL TONSIL HYPERTROPHY IN CHILDREN WITH TORCH INFECTION

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ABSTRACT

According to the data of the Tashkent Pediatric Medical Institute clinic, hypertrophy of the pharyngeal tonsils mainly develops in children aged 3 to 6 years 31 (51.6%) and from 7 to 10 years 17 (28.3%), while at the age of 11-16 years, there were 12 (20.1%) children. The main clinical symptoms indicating the presence of herpesvirus infection in OGM are regional cervical lymphadenitis (14.8%), as well as recurrent exudative otitis media (14.8%). The most effective treatment in children with GHM infected with herpesviruses is a combined method, including adenotomy with the prescription of antibacterial and antiviral drugs in the preoperative period (95%), while with surgical, conservative treatment, the effectiveness is lower (81.2 and 50%, respectively).

Key words: Hypertrophy of the pharyngeal tonsils, herpesvirus, adenotomy.

INTRODUCTION

Diseases of the lymphopharyngeal ring organs are the 1st most common among all ENT diseases in pediatric otorhinolaryngology. At the same time, nasal breathing is blocked, normal ventilation of the paranasal sinuses is disrupted, viscous mucus accumulates in the nasal lumen, congestion occurs in the nose and paranasal sinuses [3, 7]. In addition to the growth of lymphoid tonsils, the ventilation function of the auditory tube is impaired, patients often have rhinosinusitis and otitis, which leads to the formation of chronic diseases at an early age [2, 5, 9].

Frequent viral infections in childhood lead to an increase in lymphoid tonsils in the body of children. The most significant causative agents of respiratory infections are orthomyxo-, paramyxo-, picorna-, adeno- and coronoviruses. One common mother-to-child infection is TORCHE infection. Infection caused by the

herpes simplex virus ranks second after trichomonas. The herpes simplex virus, once in the body, affects almost all organs and systems, but first of all they multiply in lymphoid tissues [12, 17, 20]. Tonsils located in the pharynx are peripheral organs of the immune system, they provide the mucous membrane with immunocompetent cells and control local immunity [4, 10, 14].

An important role in the development of pathological changes in the adenoid vegetation is played by infection, possibly still in utero, with lymphotropic viruses: Epstein-Barr virus (EBV), herpes simplex virus types 1 and 2 (HSV 1,2), cytomegalovirus (CMV), adenoviruses [6, 13, 18]. The result of the action of pathogens on the body is the inhibition of the mechanism of apoptosis of lymphocytes, which leads to pronounced hypertrophy of the tonsils and lymph nodes [1, 15, 19].

Thus, having lymphotropy, EBV mainly affects B-lymphocytes. Epithelial cells of the nasopharynx, T-lymphocytes, macrophages, and neutrophils also serve as target cells for EBV. The effect of the virus on the body leads to the formation of an immunodeficiency state, acute or chronic (depending on the nature of the process), and is realized by the symptoms of an infectious disease [8, 11, 16].

The aim of the study was to study relationship between hyperplasia of the pharyngeal tonsils in TORCH infection in children, to develop treatment and diagnostic tactics in this case. To achieve this goal, we have the following tasks.

Material and methods of the research. The 60 children with pathology of the lymphodenoid pharyngeal ring aged 3 to 16 years. Adenoids of II-III degrees were diagnosed in 33 children combined with herpes infection.

Collection of anamnesis and complaints of patients, general otorhinolaryngological examination and endoscopy of the nasopharynx, CT scan of the paranasal sinuses and pharynx, laboratory research (blood test of the herpes simplex virus and immunogram).

In the course of the study, generally accepted clinical, immunological, biochemical, virological, bacterioscopic, and statistical methods were used.

The results of the study. All examined children were divided into 2 groups:

- Group 1 included 27 (44.4%) children with hyperplasia of the pharyngeal tonsils;

- Group 2 – 33 (55.6%) children with hyperplasia of the pharyngeal tonsils against the background of TORCH infection (with herpes infection) (Fig. 1). For an adequate assessment of the laboratory test data, 20 healthy children of comparable age were examined.

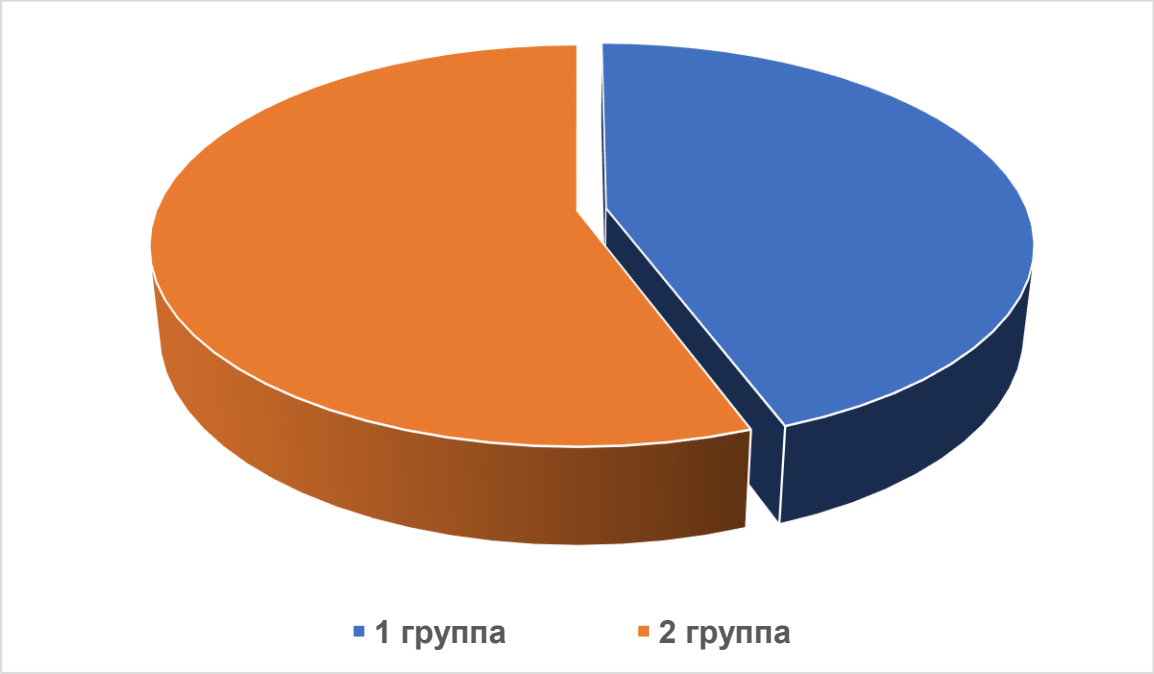

Fig. 1. Distribution of the examined children into groups.

An analysis of the distribution of the examined children by gender showed that boys are more likely to get sick than girls. The ratio of girls to boys was 1:1.5, in group 1 - 1:1.2 in group 2 (Fig. 2).

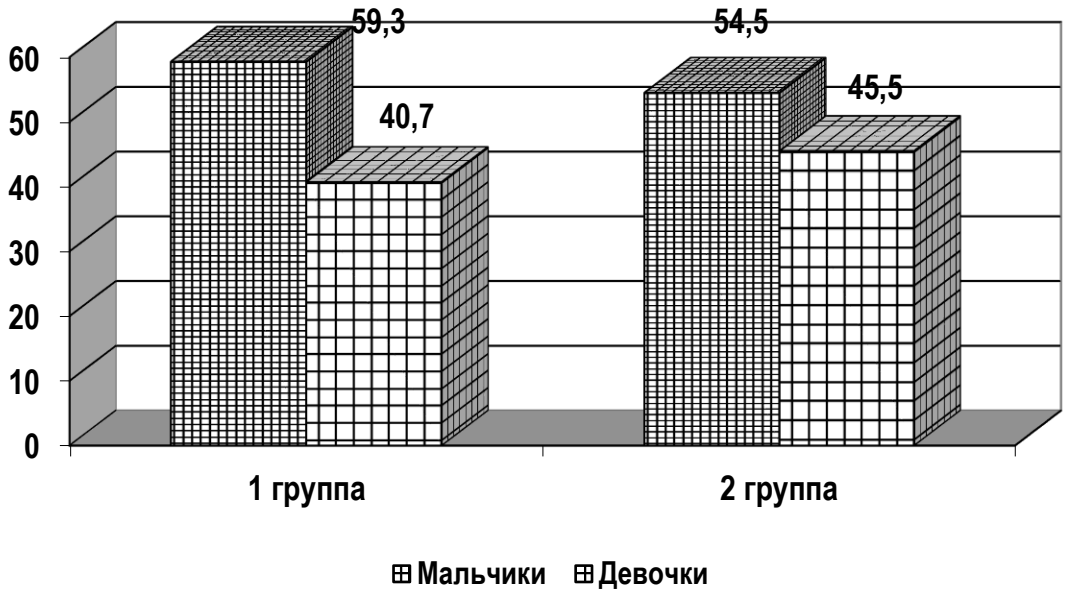

Fig. 2. Distribution of the surveyed by gender.

In general, 31 (51.6%) children aged 3 to 6 years develop and 17 (28.3%) children aged 7 to 10 years, while 12 (20.1%) children aged 11-16 years. (Fig. 1, 2). Basically, hyperplasia of the pharyngeal tonsils against the background of TORCH infection in children of senior preschool age (from 3 to 6 years old). In

group 1 - 52.0%, in group 2 - 51.5%, and at the age of 7 to 10 years - 29.6% of children of group 1 and 27.3% - children of group 2 fell ill.

Table 1.

Symptoms	Group 1 (n=27)	Group 2 (n=33)
Nasal discharge	19 (70,4%)*	26 (78,8%)
Difficulty in nasal breathing	25 (92,6%)	32 (97%)
Snoring during sleep	15 (55,5%)	23 (69,7%)
Obstructive sleep apnea syndrome	2 (7,4%)	4 (12,1%)**
History of hearing loss, exudative otitis media	4 (14,8%)	13 (39,4%)
Enlarged lymph nodes of the cervical group	4 (14,8%)	19 (57,5%)**
Weakness, dizziness, headaches	8 (29,6%)*	20 (60,6%)

Note: * - differences relative to the data of group 1 are significant (* - P<0.05, ** - P<0.01, *** - P<0.001

Hypertrophy of adenoid vegetations of the II degree or more was accompanied by nasal discharge in group 1 in 19 (70.4%) children, and in the second group it was 26 (78.8%) examined. Difficulty in nasal breathing in group 1 was found in 25 (92.6%) patients, and in the second group it was equal to 32 (97%) children. Patients of 2 groups (23 (69.7%) were more affected by snoring during sleep, while in group 1 it was diagnosed in 15 (55.5%) patients. In 20 (60.6%) patients in the second group, they complained of weakness, dizziness, and headaches.

The effectiveness of surgical treatment of GHM (subanesthesia endoscopic adenotomy) was retrospectively evaluated to determine the further course of scientific development.

6-9 months after adenotomy, patients and their parents were invited for examination, follow-up interviews, and evaluation of the quality of treatment.

The remaining symptoms and complaints after adenotomy are presented in the table (Table 2). The following was revealed: the absence of a decrease in the incidence of acute respiratory infections was the most common 15 (71.4%) reasons for a negative assessment of adenotomy. Manifestations of nosebleeds and allergic rhinitis were observed in 2 patients and were associated by parents directly with adenotomy.

Table 2.

Symptoms and complaints persisting after adenotomy (n=21)

Lamentation	Number of children N=21 (100%)
Persistent frequent respiratory illnesses	15 (71,4%)
Persistent difficulty in nasal breathing, snoring	4 (19%)
Manifestation of nosebleeds after surgical treatment	1 (4,8%)
Manifestation of allergic rhinitis	1 (4,8%)

In both groups of children, we studied the microflora from the surface of the pharyngeal tonsil.

With the help of ELISA, the presence of markers of atypical infections (M.pneumoniae, C.pneumoniae) and herpesviruses (HSV1, 2, CMV, EBV, HVF type 6) was determined. The results were evaluated jointly with a pediatrician-infectious disease specialist. In 33 examined children (the first group) atypical pathogens and/or herpesviruses were detected, in the second group (27 children) markers of atypical and herpesvirus infection were not detected in any patient. CMV - 43%, EBV - 40.0% and HHV type 6 - 39.5%, HSV type 1.2 - 33.4%. The causative agents of atypical infections were detected in a smaller percentage of cases: M. pneumoniae - 21.5%, C. pneumoniae - 23.6%. Mixed infectionwas observed in 56.8% of children. In the structure of mixed infection, a combination of herpesviruses prevails (52.%), as well as a combination of herpesviruses and atypical pathogens (48%).

Drugs used for conservative treatment of GHM in the presence of TORCHE infections infected with herpesviruses and/or atypical flora within 1 week after surgery.

As systemic antibiotics, children with atypical flora were prescribed drugs of the macrolide group: josamycin (Vilprafen) and azithromycin (Sumamed). The course is 10 days.

Acyclovir (Acyclovir) is an antiviral drug that inhibits the activity of herpes simplex viruses, inhibits the replication of viral DNA, lining up in growing chains, blocking its growth. The drug was received by 40 children.

Inosine pranobex (Isoprinosine) is an immunomodulator with antiviral activity, inhibits the synthesis of viral proteins and inhibits the replication of a wide range of DNA and RNA-containing herpes viruses, and has

immunocorrective activity. The drug was administered at a dose of 50 mg/kg for 10 days. In the case of EBV and HHV type 6 infection, therapy was carried out in 3 courses of 10 days each, with a 10-day interval between courses and was combined with prolonged therapy with interferon alpha-2B.

The presence of herpesvirus infections and atypical pathogens in children with GHM with TORCH infection exacerbates the severity of the course of GHM and leads to an increase in the number of episodes of acute respiratory infections, contributes to the development of functional changes in the cardiovascular and bronchopulmonary systems Treatment. Adenotomy in children with herpesvirus and atypical infection without prior etiotropic treatment proceeded with complications in the postoperative period. The clinical efficacy of etiotropic treatment depends on both the degree of hypertrophy of the pharyngeal tonsils and the variants of infection of the patient, hypertrophy of adenoid vegetations of the 11th degree, in hypertrophy of adenoid vegetations of the 3rd degree, etiotropic therapy was effective in 33.5% of patients. The best treatment results were observed in patients with a combination of atypical pathogens (100%), atypical monoinfection (78%), herpes monoinfection (75.7%). Etiotropic treatment was less effective in the case of a combination of herpesviruses (30.8%).

Conclusion. According to the data of the Tashkent Pediatric Medical Institute clinic, hypertrophy of the pharyngeal tonsils mainly develops in children aged 3 to 6 years 31 (51.6%) and from 7 to 10 years 17 (28.3%), while at the age of 11-16 years, there were 12 (20.1%) children. The main clinical symptoms indicating the presence of herpesvirus infection in OGM are regional cervical lymphadenitis (14.8%), as well as recurrent exudative otitis media (14.8%). The most effective treatment in children with GHM infected with herpesviruses is a combined method, including adenotomy with the prescription of antibacterial and antiviral drugs in the preoperative period (95%), while with surgical, conservative treatment, the effectiveness is lower (81.2 and 50%, respectively).

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