INTERNATIONAL JOURNAL OF
INTEGRATIVE AND
MODERN MEDICINE

Optimal Treatment of Acute Catarrhal Otitis Media in Children

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Abstract: An increase in the number of people with catarrhal middle otitis indicates the need to study this patalogy more deeply. When hearing dysfunction is detected, it directly plays an important role in the development and acceleration of catarrhal otitis. Research objective. The complexity of the treatment process for acute catarrhal otitis indicates the need to improve conservative methods of treatment of the acute inflammatory process of the middle ear and make new methods of treatment acceptable.

We have concluded that furotalgin ear drops are the first choice of treatment for tubotitis and acute catarrhal otitis observed in children. Conclusion. Thus, the advantages of the remedy were shown by the rapid and guaranteed loss of pain, strong anti-inflammatory effect, ease and simplicity of Application, good reception by children and adults.

Keywords: catarrhal middle otitis, perforative otitis, antibiotic therapy.

Relevance. Currently, the incidence of acute catarrhal middle otitis has reached almost 30% among individuals with ENT pathology [2-5]. The problem of the acute inflammatory process of the middle ear is relevant for ENT specialists for many years. Inflammation of the middle ear is observed at any age, it is known that foci of purulent infection can form in the cavities of the middle ear, which are considered the cause of stagnation of the inflammatory process in this ear. The disease is especially common in early children. In particular, it was found that by the age of one year, 62.4% of children had acute catarrhal middle otitis once, while 17.3% of children had three or more cases of this disease recorded [4-8]. Middle otitis as a child is considered to be the cause of the development of severe soreness in adults in 26% of cases, in which about 15% of patients experience severe soreness of a sensoneural nature [1, 3].

In one of the sections of the middle ear in different forms of the disease, these changes will be expressed to a greater extent than in others [2, 8]. In catarrhal middle otitis, the process is dominant in the auditory tube, in middle purulent middle otitis – in the oral cavity, in mastoiditis – in the sucker-like tumor.

According to the data of recent studies, at present, complications of nonperforative forms of acute catarrhal middle otitis are often encountered. The authors consider that this is due to inappropriate use of antibiotics, not timely hospitalization, late surgical treatment [1-4].

In the early stages of acute middle otitis, there is almost no difference between purulent middle otitis and viral otitis, when redness and vascular bleeding are observed and until pus develops. [10] The main complaints in acute middle otitis are: pain in the ear (sometimes of a gypsy nature), ear congestion, decreased hearing, noise in the ear, fever, autophony (its own voice resonates in a sick ear). The first signs of acute middle otitis in children are sometimes considered vestibular signs (nausea, vomiting once) due to the fact that the cerebral palsy is located close to the structures of the middle ear.

Otoscopy (otomicroscopy) data is very important for diagnosis. In eustachiitis, a pull of the permeable non-ferrous curtain is recorded with the following characteristic signs: the appearance of a shrinking hammer handle, a sharp push of a short tumor on the side of the auditory canal; loss or deformation of the light cone. At the stage of catarrhal inflammation, radial bleeding of the vessels of the mucous membrane is detected along the hammer handle, the mucous membrane is reddened and thickened, the recognizable points are detected with difficulty or not at all. At the stage of purulent perforation acquired middle otitis, expressed hyperemia of the mucous membrane is observed, no bundatanilic points are visible, the mucous membrane becomes bulging at different levels of expression. In the perforated pre-stage, the mucous membrane retains its integrity, preventing local antibacterial agents from entering the oral cavity, which makes it ineffective to prescribe ear drops containing antibacterial agents [2-7].

Research objective. Thus, the complexity of the treatment process for acute catarrhal otitis indicates the need to improve the traditional methods of treatment of the acute inflammatory process of the middle ear and make new methods of treatment acceptable.

Research materials and methods. From 2021 to 2023, 56 patients with acute catarrhal middle otitis were under our observation in the Otorhinolaryngology Department of the Samarkand regional multidisciplinary children's Medical Center. The age of patients was 6 months to 7 years: 15 people (26.8%) aged 6 months to 18 months, 28 people (50%) aged 2 to 4 years, and 13 people (23.2%) aged 5 to 7 years. Girls were 29 (51.8%), boys were 27 (48.3%).

The duration of the disease was about 1 year to 3 years in 24 (43%) patients and 1 month to 1 year in the remaining 32 (57%) patients. 32 patients (57.1%) were diagnosed with acute catarrhal medial otitis media, and 24 patients (42.9%) had a perforative pre-existing stage of acute medial purulent otitis. In younger children, nospecific symptoms such as fever, irritability, headache, apathy, sleep disturbances, nausea, diarrhea, refusal to eat have been observed. An increase in body temperature has been reported in 35 children (62.5%), where an increase in body temperature above 39°C is not characteristic of the uncomplicated course of the disease. Expressed otoalgic syndrome 29 patients (51.7%) were observed in the child, 29 (51.7%) had moderately expressed nature of pain syndrome, and 11 (19.6%) had no pain at all. Pain, most often at the time of the meal reception (during breastfeeding), was recorded at night. Children with otitis leading to pus buildup or perforation of the mucous membrane are excluded from the study, since topical agents are prohibited at the time of examination. Otoscopic presentation has been described in 20 patients (35.7) with swelling and nausea of the hyoid veil, 25 patients (44.6) with hyperemia, and 11 children (19.6) with thickening. All our patients were prescribed conservative treatment. Pathogenetic therapy includes: irrigator-elimination treatment-when a purulent separation is separated from the nose, rinsing the nose with NaCL isotonic solution, and Decasan antiseptic solution; vascular narrowing agents (topical decongestants), intranasal glucocorticosteroid agents; anti-tumor, anti-inflammatory treatment-paracetamol 10-15 mg/kg/intake, ibuprofen 8-10 mg/kg/intake.

An important component of treatment measures was the administration of mucolytic, secretolytic, and secretomotor treatment (when it was not possible to remove the dark nasal secret). The appointment of systemic antibacterial treatment is required in all cases of acute middle otitis, with stretch marks and recurrent acute middle otitis, observed in children under two years of age. In acute middle otitis, it is recommended to calculate amoxicillin as an antibacterial agent of the first choice. Treatment should be started with the peroral reception of amoxicillin/clavulanate. The rest of the patients do not require systemic antibacterial therapy. Local treatment involves the use of topic symptomatic affected ear drops – Furotalgin.

Research results. Furotalgin is a remedy that has antimicrobial, anti-inflammatory and local anesthetic effects. The antimicrobial effect of the remedy is provided by nitrofural. U5 is a derivative of nitrofuraldehyde and is an antibacterial agent with a wide range of effects on Gram-positive and Gram-negative microorganisms. The mechanism of action consists in inactivating the dehydrogenase system in a bacterial cell. It is considered effective in comparison with streptococci, staphylococci, enterococci, intestinal wand, Enterobacteria and certain strains of Proteus. The resistance of

microorganisms sensitive to the drug develops gradually, therefore, it manifests its activity in relation to bacteria, even when nitrofural, sulfonamides and antibiotic resistance develop. Tetracaine, part of the combination, is a synthetic local anesthetic, paraaminobenzoic acid ether (PABK). Effective for contact and superficial anesthesia. The local anesthetic effect begins 8-10 minutes after application and lasts around 2 hours. Phenazone is a pyrazolone derivative. Analgesics are a group of antipyretics. Expressed has an analgesic, heat-lowering, anti-inflammatory effect. Its main pharmacological action consists in attenuating the synthesis of prostoglandins by thinning the enzyme cyclooxygenase and enhancing the release of beta-endorphins. Capillaries have antiexudative and anti-inflammatory effects by reducing their permeability. All 56 patients (27 boys (48.2%), 29 girls (51.8%). Furotalgin was used in the early stages of the disease in order to stop the pathological process, for children from 1 to 12 years of age with tubotitis and catarrhal middle otitis, 4 drops were applied 2-3 times a day, in severe cases – as part of a complex treatment with antibiotics. In all patients, otoscopic changes were lost on the 3-7th day of observation. In one of the observed children, the transition of the disease to a purulent process and the development of complications were not recorded, which confirms the high effectiveness of Furotalgin as an anti-inflammatory agent.

Although the course of treatment is usually designed for 10 days, in sick children it is from 3 to 9 days, on average it was 5 days. Allergic reactions to the remedy were not detected. As a result of the study, we concluded that Furotalgin ear drops are the first choice of treatment for tubotitis and acute catarrhal otitis observed in children.

Conclusion. Thus, the advantages of the remedy were shown by the rapid and guaranteed loss of pain, strong anti-inflammatory effect, ease and simplicity of Application, good reception by children and adults.

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