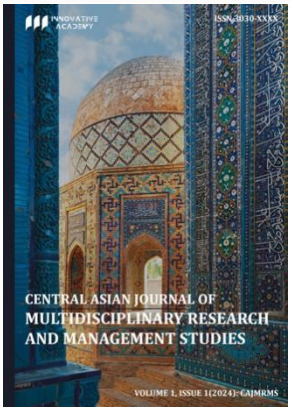

OPTIONS FOR DIAGNOSTICS AND CONSERVATIVE TREATMENT OF CHRONIC OTITIS MEDIA IN PATIENTS WITH PULMONARY TUBERCULOSIS

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ABSTRACT

This article discusses the diagnosis and conservative treatment of chronic otitis media in patients with pulmonary tuberculosis. It provides information on the interaction of the disease, early diagnosis of pulmonary tuberculosis and otitis media in the initial mild form, treatment based on specific approaches in conservative treatment, and the results achieved, based on analyses and examples.

Tuberculous otitis media (TOM) is a rare form of chronic otitis media (COM) and extrapulmonary TB. TOM often develops when there are already other foci of TB in the body (in adults - in the lungs, in children - in the bones and lymph nodes). Tuberculous otitis media is relatively rare, accounting for approximately 0.05% - 0.9% of chronic middle ear infections. It is often observed in combination with pulmonary tuberculosis or secondary to it. Clinical features are often variable and differ from classical descriptions. Chronic serous otitis media is characterized by continuous serous discharge (usually straw-colored) Chronic suppurative otitis media is characterized by persistent purulent discharge through perforation Chronic otitis media with cholesteatoma is characterized by the presence of a keratinized mass in the cavities of the middle ear.

Tuberculous otitis was first reported in 1853, and in 1883 this microorganism was first detected in ear discharge [5]. TSO is a very rare cause of chronic otitis media and is rarely considered in differential diagnosis [6]. The literature predominantly reports rare cases of tuberculosis of the ear [7-10], but in recent years review articles on this nosological entity have begun to appear [11-13]. Tuberculosis (TB) is one of the most deadly infectious diseases in humans. By the end of the 20th century, an increase in TB incidence was noted, its course changed towards a more severe process, an increase in the number of its extrapulmonary manifestations and complications due to the development of resistance of mycobacterium tuberculosis (Mycobacterium tuberculosis /Koch's bacillus/ - MBT) to anti-tuberculosis drugs [1-4].

The progressive spread of TB has been largely facilitated by the increase in military conflicts, flows of migrants and refugees, the spread of drug addiction and alcoholism, and the increase in the number of patients suffering from immunodeficiency. Of those infected, 8-10 million people fall ill annually and up to 3 million die, of which 12% have associations with HIV infection. Some authors indicate that 80% of patients with the human immunodeficiency virus (HIV) have TB. More than 90% of all cases of TB are detected in developing countries. Up to 50% of cases of extrapulmonary TB are noted in these regions. TB is the second most common infectious cause of death in the world, and in the overall mortality structure it accounts for 7-20% [4-11].

About 15% of patients with TB have an extrapulmonary form or one associated with pulmonary TB. Primary lesions of the middle ear and mastoid process are detected in 0.04-1% of all cases of TB and are most often caused by Mycobacterium Hominis and Bovis. Among TB of the head and neck organs, this localization occurs in 1-4%. In patients with chronic suppurative otitis media (CSOM), tuberculous etiology of the disease is detected in 0.04-2% of cases and more often with an active process in the lungs [2, 7, 9, 11-16]. Tuberculous otitis media (TOM) is a rare form of chronic otitis media (COM) and extrapulmonary TB. TOM often develops when there are already other foci of TB in the body (in adults - in the lungs, in children - in the bones and lymph nodes). Less often, ear disease is the first clinical manifestation of the TB process and its only identified localization [13].

A distinction is made between primary and secondary TSO. TB of the middle ear can also occur with inactive foci in the body of individuals considered healthy, as a result of which such cases often remain unrecognized. The following routes of TB infection penetration into the middle ear are distinguished: hematogenous, contact (including tubular) and lymphogenous. Most researchers attach primary importance to the hematogenous route in the infection of the middle ear cavity with TB. This route becomes significant in adults in cases of abacillar and inactive tuberculous foci in the body [2, 17, 18]. TB damage is accompanied by three types of reactions: proliferation, exudation and alteration. Depending on the spread of tissue damage, miliary, granulomatous and caseous TB are distinguished. The lesion begins with the mucous membrane, and when the process spreads to bone structures, their destruction occurs. Therefore, the primary TB affect in the ear initially manifests itself as an exudative nature of inflammation, and then a picture of a purulent process appears [2, 19].

The difficulty in diagnosing TSO may be due to low physician alertness in making this diagnosis, often the absence of a family history or recorded patient contacts, the absence of pulmonary manifestations of tuberculosis in general or according to the survey radiograph of the chest organs, and the polymorphism of the otoscopic picture. Negative results of bacteriological, cytological, and histological studies in the presence of clinical manifestations of sluggish or recurrent acute otitis media should alert the physician to the possibility of a tuberculous infection in the ear. Late initiation of treatment can lead to serious complications, such as facial nerve paresis, labyrinthitis, hearing impairment, including sensorineural type, as well as intracranial spread of infection [3, 29]. Surgery should be performed only if these complications are threatened or present. In uncomplicated cases, surgical intervention can lead to activation of the growth of tuberculous granulomas, disease of the trephination cavity, and the outer ear. Early diagnosis and subsequent anti-tuberculosis chemotherapy prevents the development of further complications.

The absence of specific signs and symptoms of tuberculosis of the middle ear is the main problem in diagnosing this disease. At the same time, the sluggish nature of the inflammation, despite basic therapy and surgical treatment, is the main criterion for additional studies to exclude the TB process [14, 19]. Diagnosis of TB of the middle ear is extremely difficult due to repeated negative results of studies on the specificity of the process, the similarity of its clinical and pathomorphological manifestations with CSO and nonspecific granulomatous

inflammation. All this explains the duration of the diagnosis, often against the background of the development of severe complications [14, 15].

The purpose of the study is to determine the characteristic pathognomonic features of tuberculous lesion of the middle ear and its diagnosis in modern conditions.

Conclusion. Given the diverse nature of TSO manifestations, it is necessary to remember about the similar etiology of exudative and perforative otitis media in all cases of sluggish inflammation in the middle ear and the lack of effect from standard therapy and surgical intervention. A high index of suspicion for TSO facilitates early diagnosis of the disease using clinical, radiological and laboratory methods. Negative results do not exclude the presence of TSO in the patient and determine the need for repeated studies. Early anti-tuberculosis chemotherapy reduces the frequency and volume of surgical interventions, the severity of fibrosis in the middle ear, which helps improve anatomical and functional results.

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