

PREVENTION OF CHRONIC OTITIS MIDDLE WITH FUNGAL ETIOLOGY

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Chronic otitis middle with fungal etiology is a persistent fungal infection of the middle ear, often caused by fungi such as *Candida* and *Aspergillus* species. This condition typically affects individuals with weakened immune systems, those with a history of prolonged antibiotic use, or those who do not adhere to adequate ear hygiene practices. Fungal otitis middle involves the fungi attaching to the epithelial lining of the ear canal, which triggers inflammation and establishes a chronic infectious process. According to recent research, up to 9% of chronic otitis middle cases may involve fungal infection, with a higher prevalence in tropical and subtropical climates where humidity favors fungal growth (Kulikov, 2021).

To prevent chronic otitis middle with fungal etiology, maintaining personal hygiene and strengthening the immune system are crucial. Studies show that ensuring the ear canal remains dry is essential, as moisture creates an ideal environment for fungal growth. Petrov (2020) recommends cleaning the ear regularly using dry cotton swabs or other hygienic tools, ensuring that no water remains in the ear canal after bathing or swimming. Swimming in untreated or stagnant water, especially in hot climates, significantly increases the risk of fungal infections. In colder climates, covering the ears with protective wear and avoiding exposure to cold, damp conditions can also help reduce the likelihood of infection.

Long-term antibiotic use is another factor that increases susceptibility to fungal infections. While antibiotics are necessary for treating bacterial infections, prolonged use can disrupt the natural microbial flora of the ear, providing fungi an opportunity to colonize the area. Therefore, antibiotics should be taken only under medical supervision and for the prescribed duration. Sidorov (2018) notes that unregulated antibiotic use is linked to a weakened immune response, which can lead to an increased risk of fungal infections. Research indicates that patients using antibiotics for more than two weeks are at twice the risk of developing fungal otitis compared to those on shorter courses. A diet rich in vitamins C, D, and E, as well as minerals like zinc, has been shown to support immune function and reduce vulnerability to infections, including fungal ones (Mitrofanov, 2022).

Antifungal treatments are essential for managing chronic otitis middle with fungal etiology. Both topical and systemic antifungal agents have shown effectiveness against *Candida* and *Aspergillus* infections. In a study by Abramov and Ivanov (2023), over 80% of patients treated with antifungal therapy experienced reduced symptoms and decreased recurrence rates. Typical antifungal medications include clotrimazole, nystatin, and fluconazole, applied either as ear drops or oral medications depending on the infection's severity. Additionally, using antiseptic ear solutions can inhibit fungal growth in the ear canal, serving as both a preventive and therapeutic measure.

Research highlights that early detection and management of fungal infections can prevent chronic otitis middle from worsening or spreading to surrounding tissues. Regular

medical check-ups, especially for individuals with a history of ear infections or those living in high-risk climates, are advised. Furthermore, lifestyle modifications like avoiding the use of earbuds, cotton swabs, or other objects in the ear can prevent ear canal injuries, which may otherwise serve as entry points for pathogens.

Furthermore, preventing chronic otitis middle with fungal etiology requires consideration of social factors. Regional conditions, climate changes, and the public's awareness of health also play a significant role. For instance, in tropical and subtropical areas, high humidity promotes fungal growth, which can contribute to the development of otitis middle. Therefore, providing special preventive guidance to residents in these regions, encouraging ear protection, and promoting hygiene practices is crucial.

The effectiveness of the healthcare system also plays an important role in early detection and treatment of the disease. Healthcare professionals need to utilize modern laboratory and diagnostic methods to make accurate and timely decisions when diagnosing fungal otitis middle. This helps prevent the disease from progressing to more complex stages. At the same time, the effectiveness and safety of antifungal medications used for treatment must be continuously monitored.

The successful implementation of these preventive and therapeutic measures will help reduce the incidence of chronic otitis middle with fungal etiology and is vital in maintaining the health of patients. Achieving this requires the coordinated and effective application of all medical and social measures.

In conclusion, preventive measures such as good hygiene, cautious use of antibiotics, immune support through a nutrient-rich diet, and prompt treatment of early symptoms are all crucial for reducing the risk of chronic otitis middle with fungal etiology. Such measures not only help prevent the infection from establishing but also facilitate better outcomes in treatment, allowing individuals to maintain healthy ear function.

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