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MODERN TREATMENT APPROACHES AND MANAGEMENT OF COMPLICATIONS IN CHRONIC OTITIS MEDIA

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Abstract

Chronic otitis media (COM) is a prolonged inflammatory process involving the tissues of the middle ear cavity, often characterized by hearing loss, purulent discharge, and tympanic membrane damage. This article highlights modern conservative and surgical treatment methods for COM. Additionally, it examines therapeutic strategies for complicated cases such as labyrinthitis, intracranial infections, and facial nerve paralysis. Timely and comprehensive treatment not only reduces the consequences of the disease but also significantly improves the patient's quality of life.

Keywords

Chronic otitis media, tympanoplasty, cholesteatoma, labyrinthitis, intracranial complications, hearing loss, antibiotic therapy.

Introduction

Chronic otitis media (COM) affects millions of individuals worldwide and is among the leading causes of disability. According to the WHO, COM is prevalent in both children and adults in developing countries, often being either undiagnosed or diagnosed late. The chronic form of the disease is characterized by persistent inflammation, destruction of middle ear structures, tympanic membrane defects, and sustained hearing loss.

Modern otorhinolaryngology offers a wide range of conservative, surgical, and complex approaches to effectively treat this condition.

1. Conservative Treatment

In mild to moderate forms of COM, conservative management is key. The following therapeutic interventions are applied:

- Antiseptic irrigation using furacilin, miramistin, or hydrogen peroxide solutions.
- Topical antibiotics: ofloxacin, ciprofloxacin, levofloxacin drops.

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- Combination drugs with corticosteroids: Polydexa, Sofradex.
- Systemic antibiotics: amoxicillin-clavulanate, ceftriaxone, levofloxacin (IV for severe or complicated cases).
- Physiotherapy: UHF, laser therapy, electrophoresis to reduce inflammation and accelerate regeneration.

2. Surgical Treatment

- Tympanoplasty – reconstruction of the tympanic membrane and ossicles.
- Mastoidotomy and mastoidectomy – removal of infected bone tissue.
- Placement of ventilation tubes – for middle ear effusion.

3. Management of Complicated Cases

3.1. Labyrinthitis (inner ear inflammation):
- Symptoms: severe vertigo, hearing loss, vomiting.
- Treatment: intravenous antibiotics, corticosteroids, betahistine.

3.2. Intracranial Complications (meningitis, brain abscess):
- Symptoms: fever, headache, neck stiffness, altered consciousness.
- Treatment: urgent hospitalization, broad-spectrum antibiotics (vancomycin, ceftriaxone, meropenem), neurosurgical intervention.

3.3. Facial Nerve Paralysis:
- Symptoms: facial muscle paralysis, asymmetry.
- Treatment: corticosteroids, antiviral therapy (if herpes-related), facial nerve decompression.

Facial Nerve Paralysis (n. facialis paresis):
Facial nerve paralysis in chronic otitis media is a rare but serious complication resulting from inflammation or pressure on the nerve as it traverses the bony canal. Clinical presentation includes unilateral facial muscle paralysis, loss of facial expressions, and incomplete eyelid closure (lagophthalmos).

Corticosteroid Therapy:
- Goal: to reduce nerve swelling and inflammation, and accelerate regeneration.
- Prednisolone: high doses initially (e.g., 1 mg/kg/day or ~60 mg/day) for 5–7 days, then gradual tapering over 5–10 days.
- Methylprednisolone (Medrol): 48–64 mg/day with tapering over 5–7 days.

Additional Treatment:
- B vitamins (B1, B6, B12) for nerve regeneration.
- Physiotherapy – facial muscle electrostimulation, massage.
- Artificial tears and eye hygiene to prevent dryness.
- Antiviral therapy – if viral etiology (e.g., Herpes zoster oticus) is suspected (acyclovir 800 mg,

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5×/day for 7 days).
- Surgical decompression – for severe cases unresponsive to corticosteroids or when the nerve is compressed by bone.

3.4. Cholesteatoma:
- Symptoms: persistent discharge, hearing loss, bone erosion.
- Treatment: only surgical – radical tympanoplasty, mastoidectomy.

Conclusion

Modern management of chronic otitis media should be complex, individualized, and stepwise. While conservative therapy effectively manages mild cases, surgical procedures performed by specialists are crucial in severe or complicated conditions. Timely diagnosis, adequate treatment planning, and preventive measures reduce the risk of complications and preserve the patient's hearing function.

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