

Otomycosis in the South of Iran with a High Prevalence of Tympanic Membrane Perforation: A Hospital-Based Study

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Abstract:

Introduction

Otomycosis is a superficial infection of the external ear caused by fungal pathogens. The genera *Aspergillus* and *Candida* are considered the main fungal causative agents, with the predominance of *Aspergillus* section *Nigri*. The present study aimed to evaluate the clinical symptoms of patients with otomycosis and predisposing factors and to identify fungal etiological agents using molecular approaches. We also present an overview of published papers on tympanic membrane perforation (TMP) secondary to otomycosis.

Materials and Methods

An otorhinolaryngologist collected specimens from external ear canals of patients with suspected otomycosis based on the patient's history and clinical examinations. The specimens were collected using sterile swabs. Fungal isolates were confirmed in clinical specimens by direct microscopy and culture methods. Fungal isolates were identified based on molecular approaches.

Results

In total, specimens from 211 patients with suspected otomycosis were examined. The presence of fungi was confirmed in about 51% of patients based on fungal elements in direct microscopy and culture-positive fungi. *Aspergillus tubingensis* was the most commonly isolated species (52.77%), followed by *Aspergillus niger* (25.92%). Otomycosis due to infection with *Candida* species was observed in 16% of cases. Of note, in 36.11% of cases, otomycosis was associated with TMP.

Conclusion

A mycological examination is indispensable for a correct diagnosis in patients with otitis extern. TMP should be considered in patients with otomycosis, as it appears to be relatively common in this population.

Keywords: *Aspergillus tubingensis*; Epidemiology; Otomycosis; Tympanic membrane perforation.