



## Case Series

## FUNGAL OTITIS EXTERNA AS A CAUSE OF TYMPANIC MEMBRANE PERFORATION: A CASE SERIES

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### ABSTRACT

This report talks about 13 patients who had a serious ear infection caused by fungus, which led to holes in their eardrums. The group included 10 men and 3 women, aged between 18 and 70 years, with an average age of 49. These patients had ongoing ear problems that did not get better with usual treatments. They experienced symptoms like ear discharge, ear pain, and itching. Out of the 13 patients, six had no previous ear issues. Four were sent to specialists by their family doctors, five came from ear doctors, and three came on their own. Treatment included careful cleaning of the ears and one of two types of antifungal medicine. After treatment, nine patients fully recovered, including healing their eardrum holes. However, three patients needed surgery to fix their eardrums. This study shows that fungal ear infections can be hard to diagnose, but with the right medical care, most eardrum holes caused by this infection can heal without needing surgery.

**Keywords:** fungal otitis externa, perforation, ear infection, antifungals, tympanic membranes, fungal, otitis externa

### INTRODUCTION

Fungal otitis externa, also known as otomycosis, is a common condition seen in doctors' offices and ear, nose, and throat clinics. It usually shows up with swelling of the skin in the outer ear canal, redness of the eardrum, thickening or holes in the eardrum, and a watery discharge in the ear. These signs can look like bacterial ear infections, making it harder for doctors to give the right diagnosis.

The most common causes of this fungal infection are two types of fungi called Candida and Aspergillus. They make up about 9% of ear infections, and this number is going up because people often use topical antibiotics. Although we know a lot about fungal infections in the ear, it is rare to have a hole in the eardrum as a complication. Doctors usually diagnose this condition by looking for signs in a person's symptoms, particularly the tiny fruiting bodies of fungi that can be seen under a microscope. Treatment often involves cleaning the ear and using antifungal medicine.

This article talks about the symptoms, treatment, and results for 13 patients who had fungal otitis externa along with a hole in their eardrum.

### MATERIALS AND METHODS

Over a period of six years, we helped 13 patients who had fungal infections in their outer ear and holes in their eardrums. We collected information about these patients, including their age, how they were referred to us, their past ear problems, their symptoms, the treatments we used, and what happened to them after treatment. We diagnosed the fungal infection by looking for specific signs and by using a microscope to see the fungal growth. We didn't usually do lab tests to grow the fungus as it was very expensive.

### RESULTS

Patients had chronic ear infections (called chronic otitis externa) that lasted from 2 weeks to 12 months. They experienced symptoms like ear discharge (otorrhea), ear pain (otalgia), and itching (pruritus). Out of the patients, six had never had ear problems before, while two had previously undergone ear

surgeries (tympanoplasty and mastoidectomy). When doctors examined them, they found swelling in the ear canal and eardrum, and they saw signs of fungus under a microscope.

For treatment, two different plans were used. The first plan included boric acid, nystatin, and oral fluconazole, which was given to seven patients. The second plan included ciprofloxacin, chloramphenicol, amphotericin, and hydrocortisone for four patients. In the first group, six out of the seven patients got completely better, but one needed surgery to fix their eardrum (tympanoplasty). In the second group, two patients fully recovered, while the other two needed surgery to repair their ears.

## DISCUSSIONS

Diagnosing fungal otitis externa poses significant challenges due to its clinical resemblance to bacterial infections. This review emphasizes that the majority of fungal perforations of the tympanic membrane exhibit favorable healing outcomes with adequate medical management. Surgical intervention is typically not warranted unless the perforation remains after the resolution of the infection. Additionally, concerns regarding the safety of antifungal agents, particularly the ototoxic potential of boric acid, are largely mitigated when appropriate protocols are followed.

## CONCLUSION

Fungal otitis externa often presents with clinical features similar to bacterial infections, which can complicate both diagnosis and treatment approaches. This study highlights that prompt and appropriate medical management—incorporating thorough aural cleansing and targeted antifungal therapy—effectively addresses most instances of tympanic membrane perforation, thereby minimizing the necessity for surgical interventions.

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