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A Clinical Study of Otomycosis

Dr Raj Kumar Arora[1], Dr. Prem Kumar Arora[2]

[1]Principal Specialist ENT Department, Govt hospital Sri Ganganagar

[2]Principal Specialist Medicine, Government Hospital Medicine, Sri Ganganagar

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Corresponding author: Dr. Prem Kumar Arora
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Abstract

Background: Otomycosis is fungal infection of the external auditory canal and its associated complications sometimes involving the middle ear.

Methods: A prospective study was conducted on 50 patients who were clinically diagnosed with otomycosis and presented to our OPD.

Results: All specimens yielded single organism. Aspergillus niger 44.00% was the predominant species isolated. Aspergillus flavus 30.00% was the second most common species isolated. Aspergillus fumigatus 14.00% Candida species 8.00% and Mucor was 8.00% isolate.

Conclusion: Clinical suspicion of otomycosis can prevent unnecessary use of antibiotics.

Keywords: Otomycosis, Aspergillus, Candida.

Introduction

Otomycosis presents with nonspecific symptoms like pruritis, discomfort and pain in the ear, aural fullness, tinnitus, hearing impairment, and sometimes discharge, and also recurrence is common[1]. Predisposing factors for otomycosis include habitual instrumentation, dermatitis, unhygienic habits, immunocompromised individuals, pre-existing ear disease etc[2]. Studies have revealed that there has been an increase in the prevalence of otomycosis in recent years that has been linked to the extensive use of antibiotic eardrops,9,10 widespread use of steroids, broadspectrum antibiotics, and chemotherapeutic agents. There is substantial variation with respect to clinical features, presentation, and treatment outcome seen among immunocompetent and immunocompromised individuals.[3]

Material and Methods

A prospective study was conducted on 50 patients who were clinically diagnosed with otomycosis and presented to our OPD.

The study included patients of all age group and either sex with a clinical diagnosis of otomycosis.

Exclusion Criteria: Only new cases of otomycosis will be included in the study. The patients who were already on treatment for otomycosis were excluded from the study. A total of 50 cases of clinically diagnosed otomycosis presenting were subjected to a comprehensive history and clinical and laboratory investigation as per the proforma designed for this study.

The outer part of the patients' EAC was cleaned using sterile swabs, and material from the deeper portion of the EAC was taken using sterile aural

swabs and sent to microbiology department for processing.

One swab was subjected to microscopic examination with10% KOH and the other swab was inoculated over Sabouraud's dextrose agar media for culture.

Results

Mean age was 35.01±8.12 Yrs. 70% patients were male and 30% patients were female.

Table 1: Symptoms wise distribution of patients

Symptom	No of patients	Percentage
Itching	46	92.00%
Pain	30	60.00%
Discharge	35	70.00%

92.00% patients were present with itching.

Table 2: Fungal wise distribution

Fungal isolates	No of patients	Percentage
Aspergillus niger	22	44.00%
Aspergillus flavus	15	30.00%
Aspergillus fumigatus	7	14.00%
Candida species	4	8.00%
Mucor	4	8.00%

All specimens yielded single organism. Aspergillus niger 44.00% was the predominant species isolated. Aspergillus flavus 30.00% was the second most common species isolated. Aspergillus fumigatus 14.00% Candida species 8.00% and Mucor was 8.00% isolate.

Discussion

The incidence of Otomycosis in our study was high in the age group of 21-30 years (42%) followed by 11-20 years. This may be due the fact that immune-compromised states are less common in younger age group.[5]

Aneja et al[6] reported 78% of the patients positive for otomycosis, Kaur et al[7] reported otomycosis in 74.7% patients, Ozcan et al.,[11]in 65% patients and Chin and Jegathesan[8] in 74.6% patients. Pontes et al[13] reported otomycosis in 19.4% patients.

In this study, the species of Aspergillus were the largest taxon isolated from patients. A. flavus was the most common fungal pathogen followed by A. fumigates. Araiza et al.,[9] also reported A. flavus to be the most common pathogen in Mexico City. This was different from studies conducted in hot humid regions where A. niger was the most common mycological pathogen.[10]

Conclusion

Clinical suspicion of otomycosis can prevent unnecessary use of antibiotics and potent steroids for prolonged periods, which might lead to the alteration of the local flora of the ear and leads to the morbidity like hearing loss.

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