

To Determine the Symptoms, Predisposing Factors and Causative Organisms of Otomycosis

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Abstract:

➤ *Introduction:*

Otomycosis is described as Fungal infection affecting the external auditory canal and middle ear. It is seen in hot, humid and dusty areas of tropics and subtropics. The common symptoms include itching, ear ache, tinnitus, etc

➤ *Aim:*

To identify the common symptoms, predisposing factors and Fungal organisms causing otomycosis.

➤ *Materials and Methods:*

A total of 60 cases suspected of otomycosis were studied for 3 months and specimens are sent to microbiological lab techniques for identifying the causative Fungal organisms.

➤ *Result and conclusion:*

The commonest symptoms are itching followed by ear pain aural fullness, etc.

The commonest predisposing factors are antibiotic ear drop/oil followed by trauma, swimming, etc. The commonest fungi causing otomycosis is *Aspergillus niger* followed by *Candida*, *Aspergillus flavus*, *fumigatus*, etc.

Keywords:- Otomycosis, Predisposing Factors, Symptoms, *Aspergillus*.

I. INTRODUCTION

Otomycosis is an acute, subacute or chronic infection of the external auditory canal [1,2]. It is due to decreased acid-lipid balance of the ear [3]. In human medicine, the opportunistic fungal infection gained greater importance due to increasing number of immunocompromised individuals. To avoid complications like hearing loss, temporal bone infection, etc it is necessary to treat otomycosis vigorously especially in immunocompromised patients [4,5]. It is greater in humid hot and dry areas of tropics and subtropics. Broad spectrum of fungi are involved in otomycosis but *Candida* and *Aspergillus* are common among them.

The sand containing decomposing vegetable matter has abundant of fungi. The airborne fungal particles are carried by water vapour hence otomycosis is reported more frequently in monsoon where relative humidity rises to 80%.

Immunocompromised patients are more prone to otomycosis. The patients with lymphoma, diabetes, chemotherapy and radiation therapy are at higher risk to otomycosis and its complications. The symptoms include pruritis, aural fullness, otalgia, ear discharge, hearing impairments, tinnitus, etc. The recurrence of otomycosis is common [7,8]

Predisposing factors are dermatitis, unhygiene, pre-existing ear disease, antibiotic eardrop, immunocompromised patients, using oil in the ear, steroids, etc [9]

Diagnosis of otomycosis is done clinically and accompanied by microbiological confirmation. Blotting paper appearance of matted mycelia on otoscopy and fruiting body appearance or conidiophores seen on microscopy and culture confirms the diagnosis.

Treatment involves removal of debris, toileting of external auditory canal and use of broad spectrum antifungals like clotrimazole, keeping the ear dry and aiming to restore the physiology by avoiding the maneuvers in the external auditory canal.

In this study we describe, the commonest mode of presentation, predisposing factors and fungi involved in the otomycosis patients.

II. AIM

To determine the commonest symptoms, predisposing factors and fungi involved in the otomycosis patients.

III. MATERIALS AND METHODS

A prospective study was conducted in 60 patients who were clinically diagnosed as otomycosis in otorhinolaryngology department at Saveetha Medical College and Hospital at Thandalam, Chennai during the period from January to March, 2019.

➤ *Inclusion Criteria:*

This study includes all the patients above 18 years of age who have clinical features suggestive of otomycosis.

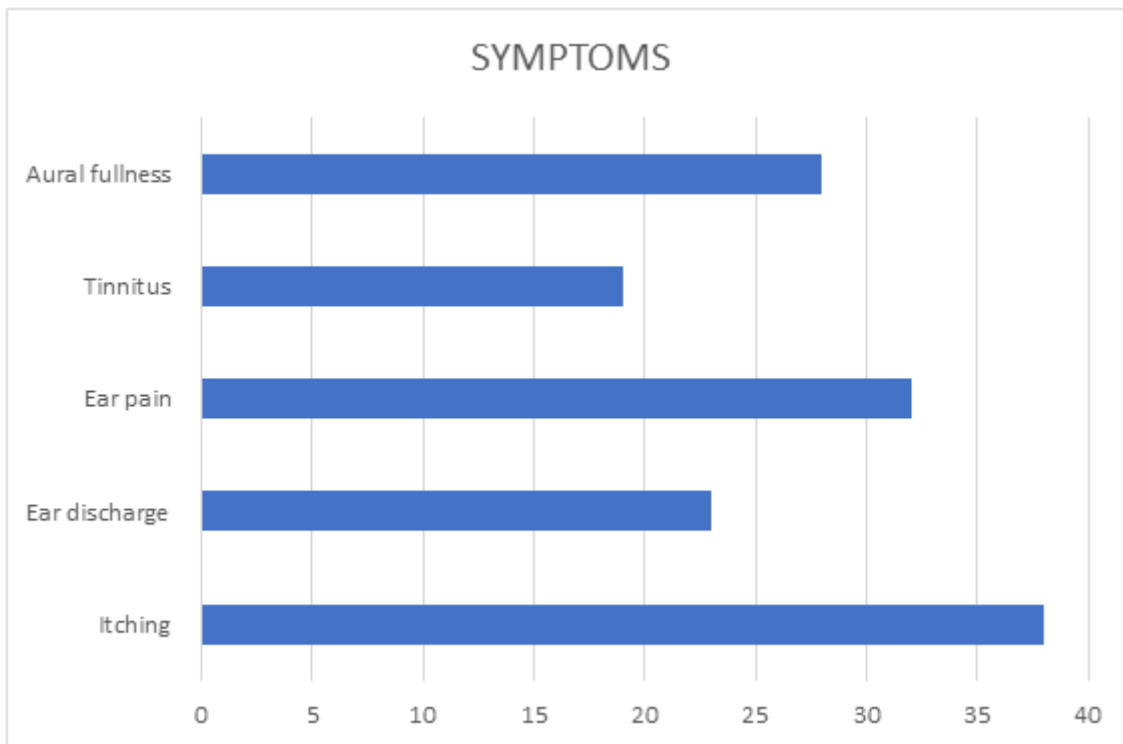
➤ *Exclusion Criteria:*

The new cases of otomycosis were included in the study and pre-existing cases were excluded from the study.

Total of 60 patients in otorhinolaryngology department were subjected to comprehensive history ,clinical and lab investigations .The sterile ear swab was used to clean the outer part of external auditory canal and was sent to microbiology department for culture and processing. One swab was subjected to 10% KOH for microscopic examination and other swab was inoculated to sabouraud’s dextrose agar for culture.

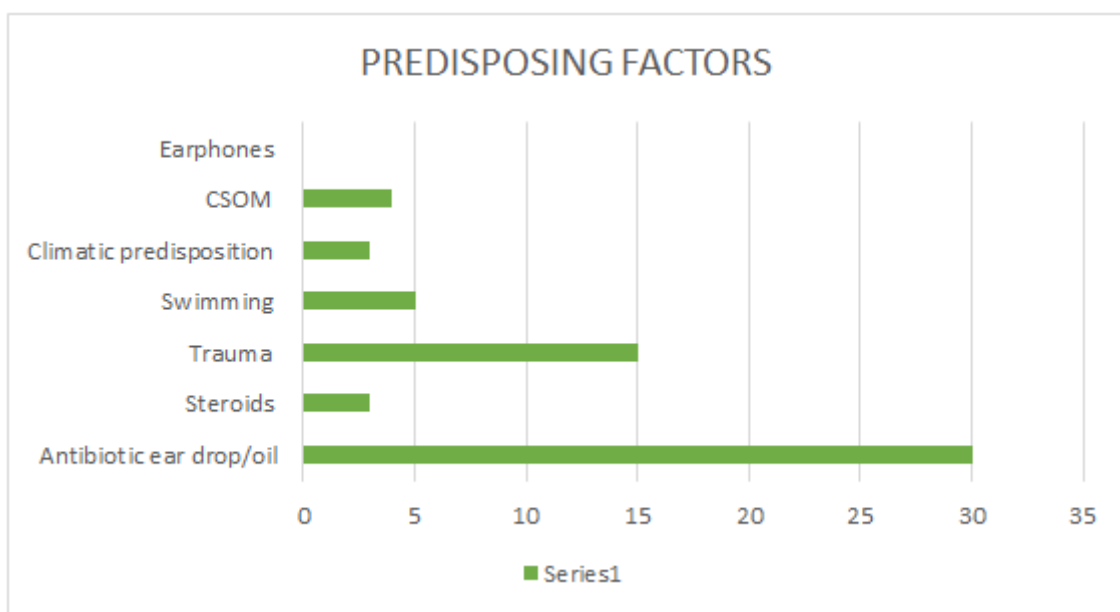
Aural toileting and dry mopping of debris is done as primary treatment..The patients were given antifungal ear drops like clotrimazole or fluconazole for 3 weeks.patients advised to keep the ear dry and reviewed at the end of 1st,2nd,3rd or 4th week.

IV. RESULTS



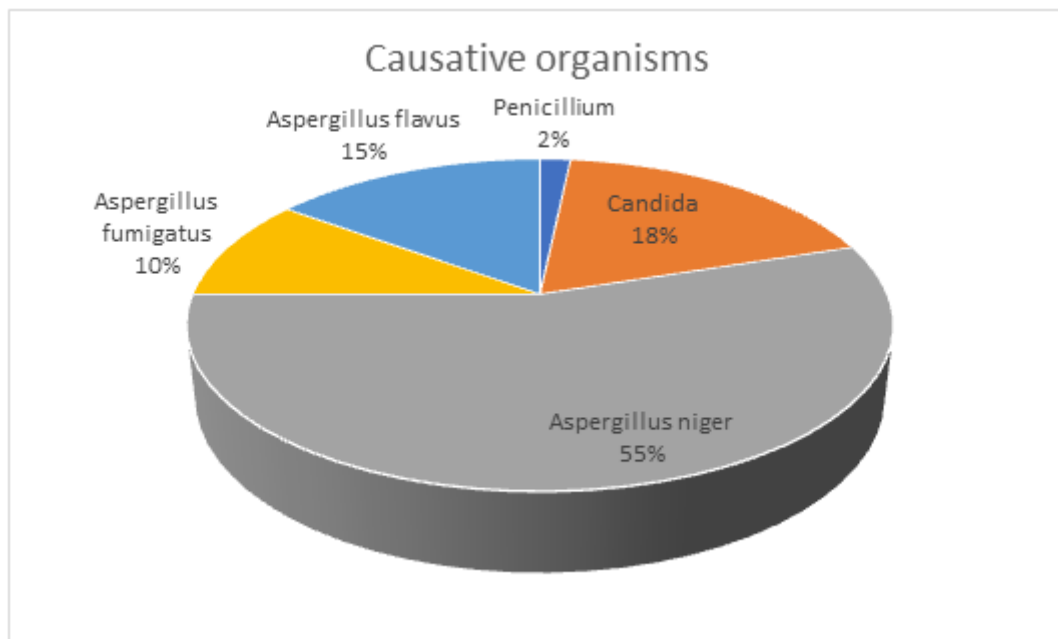
Graph 1:- Symptoms among Study Population

In this study the most common symptoms are itching (38 people),ear pain(32people),aural fullness (28people),ear discharge(23people),tinnitus(19people).



Graph 2:- Predisposing Factors among Study Population

In this study antibiotic ear drop is the commonest predisposing factors encountered followed by trauma to the EAC, swimming, common climatic predisposition. From this study founded that *Aspergillus niger* is the commonest fungi causing otomycosis followed by *Candida*, *Aspergillus flavus* and *fumigatus*.



Graph 3:- Fungal Isolates Found in Study Population

V. DISCUSSION

Otomycosis is an middle ear infection caused by superficial mycosis with complications. It results in exfoliation, accumulation of Fungal debris, osuppurations and pain. It is sporadic in worldwide. It mostly occurs in tropical and subtropical region. The common symptoms are itching followed by ear pain, ear discharge, aural fullness and tinnitus [6,7,8]. The predisposing factors include antibiotic ear drop, trauma to EAC, swimming, common, steroids and climatic predisposition. In this study we recorded that *Aspergillus niger* has 55% of causing otomycosis which is correlating with Paulose et al [6] which shows 54.5%. The effective treatment include clotrimazole and alternative choice is flucanazole.

VI. CONCLUSION

Otomycosis is a Fungal infection affecting External auditory canal. The commonest symptoms absorbed in my study are itching, ear pain followed by ear discharge, aural fullness and tinnitus. The commonest predisposing factors of otomycosis are antibiotic ear drop or oil, trauma to the EAC, swimming, common, and climatic predisposition. The commonest fungi causing otomycosis are *Aspergillus niger*, *Candida*, *Aspergillus flavus*, *Aspergillus fumigatus*. The treatment of choice clotrimazole and flucanazole.

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