

OTOMYCOSIS: AN OVERVIEW IN HYDERABAD KARNATAKA REGIONR. B. Chapparbandi¹, Farha Naaz Kazi², Kazim Ali³**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: Otomycosis is a common clinical problem in Hyderabad Karnataka region because of the hot, humid climate of this region. The infection can be diagnosed clinically on the basis of symptoms like itching, otalgia, discharge, blockage, hearing loss and presence of debris resembling wet blotting paper appearance in the external auditory meatus. It is common in males and occurs more in the 21-30 year age range. The most common symptoms in our review were itching followed by hearing loss, otorrhoea and blockage. Otomycosis was predominantly unilateral with left ear affected more. The species of fungus causing the disease in our center is *Aspergillus Niger*. Drugs like clotrimazole/lidocaine, acetic acid hydrochloride (eardrops) or Gentian violet are indispensable topical agents in the management of otomycosis. Gentian violet should only be used as treatment of last resort because it discolors the external auditory canal giving a poor cosmetic appearance during treatment.

KEYWORDS: Otomycosis, clinical diagnosis, treatment.

INTRODUCTION: Otomycosis is generally described in literature as fungal infection of the external auditory canal. It can be associated with chronic middle ear discharge and open mastoid cavity infection. Hundred or more species of fungi are identified as pathogens till date. The common aetiological agents include the *Aspergillus* species; *A. fumigatus*, *A. Niger* and the *Candida* species; *Candida albicans*. Other fungi involved are, *Penicillium*, *Pitirosporium*.^[1,2,3]

Otomycosis has a worldwide distribution with more prevalence in warm, wet, humid and dusty environments. Its incidence has increased due to increasing use of antibiotics, immune suppressant and bad aural hygiene, instilling hot oil and water in the ear. The disease is said to be commoner on those who wear head covers in some parts of the World.^[5] It is also common among swimmers hence sometimes called "swimmers ear".

Symptoms usually include: itching, otalgia, otorrhoea, ear blockage, hearing loss and tinnitus.^[9,10,11] Examination usually reveals the presence of debris ranging in colour from white to black resembling "wet blotting paper" in the external auditory meatus. Diagnosis is usually clinical with mycologic studies to confirm the particular species of causative fungi. Treatment is by suction clearance or aural syringing followed by topical anti-fungal agents. Many antifungals were used for otomycosis with different percentage of success but standard regime is not firmly established.

PATIENTS AND METHODS: This retrospective study was carried out at the Otorhinolaryngology (ORL) department of our hospital. The study was carried out on 159 cases clinically diagnosed as mycotic otitis externa attending our outpatient department.

Clinic records of patients seen within this period with a history of ear complaints were reviewed for age, sex, clinical symptoms, laterality, and duration of symptoms, previous medications and treatment given. The diagnosis of otomycosis was based on clinical history and otoscopic examination.

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The clinical symptoms of itching, otalgia, ear blockage, hearing loss, and discharge in the ear canal were regarded as clinical diagnostic of otomycosis. After clinical diagnosis is made, all cases were subjected for mycological examination. Two sterile swabs were collected from ear canal of each patient. One swab was cultured on Saboraud's medium to which Chloromycetin and actidol were added to suppress the growth of bacteria.

The inoculated plates were cultured at 37 degree Centigrade. The other swab was used for direct mycological examination using 10% KOH. Treatment was by one of two methods; Patients with suspected perforation of the tympanic membrane had aural toileting or suction clearance followed by topical application of antifungal agents. Those with intact tympanic membranes had aural syringing followed by topical antifungal agents. Topical antifungal agents used were either; clotrimazole/lidocaine hydrochloride-(Candid eardrops) or Gentian violet.

RESULTS: In the period under review, 159 patients were diagnosed as otomycosis in the outpatient clinic. Ear symptoms suggestive of otomycosis were; Pruritus (93%), Otalgia (84%), Musky ear discharge (73.5%), Blockage (79%), Hearing loss (50.3%), and Tinnitus (39%). Table II Of the 159 patients, unilateral left ear was affected in 80(50.32%), unilateral right ear was affected in 69(43.39%), and bilateral affected is 10 patients (6.29%). Table III

Treatment was repeated in 35 patients who had recurrent infection. Of these, 27 (77.1%) had cure while symptoms persisted in 8 (22.9%). The patients were commonly affected by *Aspergillus* species. *Aspergillus Niger* (55.97%), *Aspergillus flavus* (28.94%), *Aspergillus fumigates* (4.41%) followed by *Candida* species (1.25%) Table IV.

Age (in years)	No. of patients	Percentage
0-10	25	15.72
11-20	42	26.42
21-30	45	28.30
31-40	19	11.95
41-50	13	8.18
51-60	09	5.66
61-70	04	2.52
71-80	02	1.25
Total	159	100.0

TABLE I: Age distribution of patients (n=338)

Symptoms	No. of cases	Percentage
Itching in the ear	149	93.37
Pain	135	84.90
Feeling of block sensation	126	79.25
Ear discharge	117	73.59
Tinnitus	63	39.62
Deafness	55	34.60
Others	2	1.25

TABLE II: Common signs and symptoms of otomycosis

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Laterality	No. of cases	Percentage
Left	80	50.32
Right	69	43.39
Bilateral	10	6.29
Total	159	100

TABLE III: Ear distribution of otomycosis

Fungal isolate	No. of cases	Percentage
Aspergillus niger	89	55.97
Aspergillus flavus	46	28.94
Aspergillus fumigates	07	4.41
Candida albican	11	6.93
Candida species	02	1.25
Mucor species	02	1.25
Penicillium	02	1.25
Total	159	100

TABLE IV: fungal isolates encountered in mycotic otitis externa

DISCUSSION: Otomycosis is a common clinical problem in our region. This is not surprising because of the hot humid, dusty climate of the region.^[1,4,5] According to Paulose et al otomycosis occurs more in those who wear head covers in certain parts of the world.⁵ Head covers increase moisture and heat and humidity around the ears.

Our diagnosis and treatment was presumptive based on clinical symptoms and signs including pruritus, otalgia, blockage hearing loss and presence of debris resembling wet newspaper in the external auditory meatus. This agree with literature reports that the infection can be diagnosed clinically on the basis of symptoms.^[1,4,5]

Otomycosis was commoner in males as compared to study by M. M. Yehia et al who reported a higher incidence in females and mainly in housewives.^[5] In our study, the highest number of cases of otomycosis occurred in the 21-30 year age range similar to the findings of Ravinda Kaur et al in which otomycosis was more prevalent between the ages of 16-30 years.^[1] These age groups do more swimming and physical exercises which predisposed them to otomycosis.

In our review, otomycosis was predominantly unilateral with left ear more affected. This agrees with many studies reporting that otomycosis is usually unilateral.^[1,3,7] The most common symptoms in our review were pruritus followed by pain and blockage due to debris. Different studies have shown variations in the most common symptoms. Otagia and blockage,^[1,4] discharge,^[3] itching,^[5] and otalgia.^[8]

Our study highlights the most common fungi causing otomycosis. The species of fungus causing the disease in our setting is *Aspergillus Niger*. All the cases respond well to topical antifungal agents like clotrimazole. In conclusion, otomycosis is a common problem in Hyderabad Karnataka region and the most common etiological agent is *Aspergillus Niger*.

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