

UNSAFE TYPE OF CHRONIC OTITIS MEDIA, HOW PREVALENT IT IS?

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ABSTRACT

Objective: To determine the frequency of unsafe type of chronic otitis media (COM) in patients with chronic ear discharge.

Materials and Methods: A cross sectional study was conducted in August 2019 to May 2020 at ENT department, Khyber Teaching Hospital, Peshawar. All patients with more than 3 months history of ear discharge were included in the study. Unsafe COM was defined as persistent foul-smelling ear discharge for at least 3 months with attic or marginal perforation of the pars tensa, suspicious of cholesteatoma and granulation tissues on otoscopy/ otoendoscopy and/ or hearing loss of more than 30 dB on pure tone audiometry. Spss Version 22 was used for analysis.

Results: Out of total 312 participants, age distribution showed 224 (72%) participants between 18-30 years, while 88(28%) between 31-60 years. Among 312 patients most of the participants 194 (62%) participants were male as compare to female 118 (38%) participants were female. Duration of symptoms showed 46 (15%) with duration of symptoms ≤ 6 months, 266 (85%) patients had duration of symptoms > 6 months. Mean duration of symptoms was 6 months with SD ± 4.212 . Unsafe type COM was found in 44 (14%) participants and 268 (86%) patients did not have unsafe type COM.

Conclusion: The frequency of unsafe type of COM is 14% among patients presenting with chronic ear discharge.

Keywords: Otitis media, attico-antral, prevalence, unsafe, ear discharge

INTRODUCTION

Chronic otitis media (COM) is a very common middle ear infectious disorder with a prevalence of 5.2%,^{1,2} and is associated with a number of complications both within and outside the ear.³ The most common bacterial pathogens involved in COM are as follows; streptococcus pneumoniae, Klebsiella, Staphylococcus aureus, Proteus and pseudomonas aeruginosa.⁴ The defining clinical feature in COM is ear-drum perforation which can be atticoantral and

tubotympanic.^{5,6,7} Bone eroding process are mostly associated with atticoantral variety such as cholesteatoma, granulations or osteitis which is treated by mastoidectomy.^{8,9} Gopichand WR et al reported atticoantral type in 9.09% of patients.¹⁰

The rationale of our study was to determine the prevalence of atticoantral type of COM among patients who presented with chronic ear discharge. Keeping in view the disease burden, it is suggested that COM cases are increasing day by day and the disease burden is also highly variable from one population to another. It is also documented in several studies that atticoantral/ unsafe type of COM is having more and severe complications than tubotympanic type. This compelled us to generate the local

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evidence of atticointral/ unsafe type of COM among our patients presenting with chronic ear discharge to add further knowledge to the existing literature.

MATERIALS AND METHODS

This a cross sectional study conducted at the department of otorhinolaryngology, Khyber Teaching Hospital, Peshawar. The study period was from August 2019 to May 2020. For the purpose of study, Unsafe COM was defined as persistent foul-smelling ear discharge for at least 3 months with attic or marginal perforation of the pars tensa, suspicious of cholesteatoma and granulation tissues on otoscopy/ otoendoscopy and/ or hearing loss of more than 30 dB on pure tone audiometry.

Both genders were selected with age range of 18 to 60 years. All patients with history of persistent ear discharge were included except patients with recorded use of antibiotics during the previous 2 weeks, polyps, patients already operated or those presenting with complications of surgery and patients with any chronic medical condition such as diabetes, hypertension, tuberculosis.

RESULTS

In this study 312 participants were included, age distribution showed 224 (72%) participants between 18-30 years, 88(28%) between 31-60 years. 29 years was mean age with Standard Deviation of ± 25.43 . Among 312 patients 194 (62%) participants were male and 118 (38%) participants were female (Table I & Table II). Duration of symptoms showed 46 (15%) with duration of symptoms ≤ 6 months, 266 (85%) patients had duration of symptoms > 6 months. Mean duration of symptoms was 6 months with SD ± 4.212 . Unsafe type COM showed 44(14%) participants with unsafe type COM and 268 (86%) patients didn't have unsafe type COM. (Table III & Table No IV). Table No V, VI, VII is regarding stratification of unsafe type COM with age, gender and duration of symptoms.

DISCUSSION

COM clinically manifests with pus discharge from the ear over the previous 3 months. This study recruited 156 patients where majority were males (62.1%) while only 10% had atticointral type and a mean age of 29 ± 25.4 years.¹ Gopichand et al has reported 9% incidence of atticointral type in their

Table 1: Age distribution, (n= 312), SD ± 25.43 with Mean age 29 yrs

Age	Frequency	Percentage
18-30 years	224	72%
31-60 years	88	28%
Total	312	100%

Table 2: Gender distribution (n= 312)

Gender	Frequency	Percentage
Male	194	62%
Female	118	38%
Total	312	100%

Table 3: SD ± 4.212 with Mean duration was 6 months Duration of symptoms (n= 312)

Duration	Frequency	Percentage
≤ 6 months	46	15%
> 6 months	266	85%
Total	312	100%

Table 4: Atticoantral Type of Chronic Otitis Media (n= 312)

ATTICOANTRAL TYPE CSOM	FREQUENCY	PERCENTAGE
Yes	44	14%
No	268	86%
Total	312	100%

Table 5: Stratification of Atticoantral Type of Chronic Otitis Media W.r.t Age Distribution (N= 312)

ATTICOANTRAL TYPE CSOM	18-30 years	31-60	P Value
Yes	30	14	0.7636
No	194	74	
Total	224	88	

Table 6: Stratification of Atticoantral Type of Chronic Otitis Media W.r.t Gender Distribution (n= 312) Chi square test

ATTICOANTRAL TYPE CSOM	Male	Female	P Value
Yes	26	18	0.977
No	168	100	
Total	194	118	

Table 7: Stratification of Atticoantral Type of Chronic Otitis Media W.r.t Duration of Symptoms (n= 312)

ATTICOANTRAL TYPE CSOM	≤6 months	>6 months	P Value
Yes	10	34	0.78
No	36	232	
Total	46	266	

Chisquare

study.¹⁰ Iqbal and co-workers in a multi-center study including 5000 army troops and reported 0.66% incidence of the attico-antral type COM. They attributed poor living conditions, and overcrowding with poor hygienic conditions as the contributing factors for the causation. Patients with mastoid surgery might also be more prone to develop middle-ear infection.

In the present study, young males were commonly affected and majority of patients were having less than 6 months duration of symptoms. This was in concurrent with most other studies by Paudel et al in which the mean age was reported to be 32 ± 25.4 years while 60% were male patients.^{11,12}

Intracranial complications, are observed frequently in our practice and they are the most

fearsome complications, since they can lead to permanent disability and death. Baig et al¹³ in a prospective study of 160 patients, reported various complications which are associated with COM. They are also reported results similar to our study, which included younger male patients with majority being in between age 11 to 30 years. They have also reported poor hygienic conditions, malnutrition and crowding as the causative factors for the spread of the disease. These authors reported that 68% patients who presented with COM were belonging to poor families.

These findings show that COM is quite common in younger and productive age groups, which may lead to significant morbidity and even mortality

from its complications. It also shows, that although the unsafe type is less frequent as compared to the overall incidence of COM, this particular subtype may lead to higher incidence of disability with loss of hearing function and other complications. Active immunization against known pathogens, improving hygienic conditions, health and personal care education of the communities and medical vigilance may lower the incidence of this disease.

The weakness of our study is, that it is a single-center experience and include only the frequency of unsafe type. We plan to focus our research on study of the overall spectrum of COM and especially its preventive measures and their efficacy in our future.

CONCLUSION

The study concludes that the frequency of unsafe type of COM is 14% among patients presenting with chronic ear discharge.

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