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# Health Seeking Behaviour in Patients of Suppurative Otitis Media in Surat City

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## ABSTRACT

**Introduction:** Perforation of tympanic membrane or cholesteatoma and pus discharge from ear characterize Suppurative Otitis Media (SOM). Apart from causing ear discharge and decreased hearing it can progress to cause life threatening complications. Early health seeking behaviour is mandatory. A number of barriers prevent early presentation at health facilities.

**Materials and Methods:** Patients with suppurative otitis media attending Ear, Nose and Throat Department were included in this study. Patients were given structured questionnaire to determine their health seeking behaviour and health related practices. Results were tabulated and compared with literature.

**Results:** 33.67% of pts did not seek health care services- most were males, in age group 20-39 yrs with education up to class 10 and income less than Rs 10,000 per month. 29% patients had only ear discharge and were unaware of their hearing handicap. Awareness about complication was seen in less than 15% patients.

**Conclusion:** Majority of respondents had good and positive attitudes and practices regarding health seeking behaviour. The lack of appropriate knowledge, perception and erroneous practices stresses the importance of specific health education to the population. There is need to improve the community's awareness for the care of ear infections.

**Key words**: Suppurative Otitis media, health seeking

## INTRODUCTION

Suppurative otitis media (SOM) is an infection of middle ear cleft by pus forming pathogens - one of a few important conditions affecting the middle ear cleft. From the otologist's perspective it is Acute Suppurative Otitis Media (ASOM) when presenting within 3 months, whereas the condition is known as Chronic Suppurative Otitis Media (CSOM) when complain of ear discharge is persisting for more than 3months duration.

The World Health Organization (WHO) definition requires only 2 weeks of ear discharge for the condition to be labeled as Chronic Suppurative Otitis Media. The WHO classifies national prevalence of CSOM as low, high, and highest if prevalence is < 2%, 2–4% and > 4% respectively.[1]With a national average of 6% for CSOM, India has been classified as high prevalence country.[2] This is significantly higher than the figure reported in the Western countries where it is about 1.8%.[1] The worldwide prevalence of CSOM is 65- 330 million people and 39-200 million (60%) suffer from clinically significant hearing impairment.[3]

Guidelines for treatment of acute otitis media have advocated a 'wait and see' approach ,[4] as up to 80% of those affected show spontaneous resolution.[2] By the 3rd birthday, 80% of children have had at least one episode of acute otitis media.[5] Some cases of acute ear infection may present with ear discharge through a tympanic membrane perforation- Acute Suppurative Otitis Media (ASOM). The perforation may heal spontaneously and ear

discharge stops in 2–14 days.[2] However, up to 41% of cases have persistent perforation and ear discharge leading to chronic suppurative otitis media (CSOM).[6]

Though what factors favor conversion to chronicity are not known, lack of attention to acute condition does have a role to play. The role of Eustachian tube is at fault in some, while in some it can arise de novo.

Among all ear diseases, ear infections are a common but treatable cause of morbidity. Delay in seeking diagnosis and treatment may result in complications which can be life-threatening like brain abscess, sigmoid sinus thrombosis, meningitis.[7,8] The not so life threatening sequels of ongoing middle ear infections since early childhood include hearing impairment, which may result in delay in speech, language, and cognitive skills development, especially if it commences prelingually.[9,10,11,12] All this leads to decreased employability in adulthood with suboptimal development of the affected individual, resulting in various social and psychological problems for those affected and their families.

The society at large and hence most of patients are ignorant of the complication associated with SOM. Most patients seek medical advice for ear discharge (otorrhea), followed by ear discharge along with decreased hearing. Isolated decreased hearing is rarely the presenting symptom, a small percentage of patients of SOM not even aware of its presence. Many a time patients present straight away with complications. It is important that patient themselves or their care givers be aware of potential alarming sign that if detected, should necessitate early referral.

There is a need to study the health seeking behaviour and the level of awareness about complications of CSOM in patients suffering from SOM in the society. An insight into the reasons for delay in health seeking behaviour will help to plan effective interventions aimed at decreasing the burden of SOM on the society. This should help in planning necessary interventional measures.

## OBJECTIVE

The objective of the present study was to analyze the health seeking behaviour of patients of Suppurative Otitis Media(SOM) presenting to a tertiary care hospital in Surat city.

## MATERIAL AND METHODS

A cross-sectional study was conducted in outpatient department of a tertiary care hospital in Surat during April to June 2018. All cases attending the outpatient department and diagnosed as SOM were included in the study. SOM was diagnosed based on the history of ear discharge and perforated tympanic membrane/cholesteatoma seen at otoscopy. All eligible cases were explained about the purpose of the study and informed consent was taken before inclusion in the study. Those who were eligible and consented, were interviewed using a pre-tested, semi-structured questionnaire schedule prepared in local language. The questionnaire consisted of items on demographic profile including age and sex, education and income. Information was sought from them regarding common ear care practices followed, health seeking behaviour and awareness regarding complications. Confidentiality was assured at all level of the study.

The results were expressed in number and percentage.

## RESULTS

The present study was conducted on 150 patients suffering from SOM who attended the outpatient department of a tertiary care hospital and were willing to participate in the study.

Of these 18% had ASOM and 72% were suffering from chronic suppurative otitis media.

The study population was from different socioeconomic background. Various components of sociodemographic profile has been depicted in Table1.

Study group comprised of ages ranged from 14 years to 62 years. Majority of patients seeking medical care were found in the age group 20-39 yrs (61.33%), followed by < 20 yrs age category (20.67%).

**Table 1: Socio-epidemiological profile of patients**

| Characteristics of patients | Cases (%) |
|---|---|
| **Age** | |
| <20 yrs | 31 (20.67) |
| 20-39 yrs | 92 (61.33) |
| ≥40 yrs | 27 (18.00) |
| **Gender** | |
| Male | 95 (63.33) |
| Female | 55 (36.66) |
| **Income** | |
| ≥ 10K | 43 (28.67) |
| < 10 K | 107 (71.33) |
| **Level of Education** | |
| Illiterate | 46 (30.66) |
| Class 10 or less | 89 (59.33) |
| More than class 10 | 15 (10) |

**Table2. Chief complaints with their duration for health care seeking**

| Chief Complain | Unilateral (%) | Bilateral (%) |
|---|---|---|
| Ear discharge & Decreased Hearing | 72 (48) | 34 (22.67) |
| Only ear discharge | 34 (22.67) | 10 (6.66) |
| Pain, itching, giddiness | 26% | |

**Table 3: Health seeking behaviour (n=150)**

| Health seeking behaviour | Patients (%) |
|---|---|
| ENT Specialist | 68 (45.33) |
| MBBS doctor | 6 (4.00) |
| Alternative Medicine | 21 (14.00) |
| No/Self medication | 55 (36.67) |

**Table 4: Characteristics of delayed health seeking population- 36.67% (n=55)**

| Characteristics of patients | Patients (%) |
|---|---|
| **Age** | |
| <20 yrs. | 12 (21.82) |
| 20-39 yrs | 34 (61.82) |
| ≥40 yrs | 9 (16.36) |
| **Gender** | |
| Female | 18 (32.73) |
| Male | 37 (67.27) |
| **Education** | |
| Illiterate | 18 (32.73) |
| ≤ class X | 28 (50.91) |
| > Class X | 9 (16.36) |
| **Income** | |
| ≤10k | 34 (61.82) |
| >10k | 21 (38.18) |

**Table 5: Barriers to early health care seeking**

| Barrier | Patients (%) |
|---|---|
| Lack of Awareness | 37 (67.27) |
| Health services-unavailable / inconvenient | 12 (21.82) |
| Financial | 6 (10.91) |

**Table 6: Ear care practices of patients**

| Ear care practice | Patients (%) |
|---|---|
| Cotton ear buds | 98 (65.33) |
| Match stick with or without cotton | 33 (22) |
| Water/oil /OTC drops | 50 (33) |

The study group showed predominance of males, i.e. 63.33% subjects were males and 36.66% were female, giving male to female ratio of 1.7:1

The educational level of this study group was categorized into illiterate, less than or equal to class X and more than class X. 30.66% of them were found to be illiterate, 59.33% had education up-to or less than class X, whereas only 10% had studied beyond class X. It was observed that 28.67% of the patient had monthly income more than Rs 10,000/- whereas the rest i.e. 71.33% earned less than this.

All enrolled patients had ear discharge as shown in Table 2. Unilateral disease was present in 71.45% patient, while it was bilateral in 28.57% .The complaint of ear discharge either alone or accompanied by decreased hearing was unilateral in 70.67% of cases, while it was present bilaterally in 29.33% of cases. Complaint of hearing loss was present in 70.67% and was absent in 29.33% of patients. Associated complaints like itching, ear-ache, tinnitus and giddiness were present in 26% of the patients.

Total 45.33% patients sought treatment from an ENT specialist, 4% from allopathic doctor. 14.00% preferred Alternative Medicine. 36.67% did not seek any treatment or self medicated before seeking treatment at our facility as shown in Table 3.

Lack of awareness was the main reason i.e. 67.27% of delayed health seeking. Barrier to early and proper health care seeking was unavailable / inconvenient health services in 21.82% care seekers, whereas 10.91% were unable to access health care due to financial reasons (Table 5).

On being enquired about their ear cleaning habits, maximum number of patients (65.33%) admitted to cleaning their discharging ear using cotton bud (Table 6). Usage of match stick with or without cotton was reported by 22% of the patients while putting oil, water, herbal or over the counter (OTC) drops was common in 33% of the patients. Ear cleaning practices were not mutually exclusive.

## DISCUSSION

In this study we assessed health care seeking behaviour and ear care practices of patients of suppurative otitis media.

The youngest patient was 14 years and the eldest was 62 years old. The mean age was 29.8 years. Majority of patients seeking medical care were found in the age group 20-39 yrs (61.33%). This observation is similar to a study by Rajam et al who found that in their study where the mean age was 32 years and majority of patients belonged to 31- 40 years.[13] 63.33% subjects were males and 36.67% of were female giving male to female ratio of 1.7:1. Most of the studies conducted in various parts of the world on SOM revealed male dominance. Study by Dhingra R et al showed predominance of males(53% males and 47% females) with insignificant p value.[14]

The city of Surat has sizeable proportion of migrants, by whom the health care facility is availed. Majority of them are employed in informal sector of the economy. 71.33% of health seekers had earning of less than Rs 10,000 pm. Most of the studies reveal the association of suppurative ear disease with low socioeconomic status.[15,16] In a study conducted by Arunabha et al 60% of their patients were from low socio-economic class.[20]

Of the patients seeking health care services, 30.66% were illiterate, 59.33% had education up-to or less than class X whereas only 10% had studied beyond class X.

Evidence shows that the painless nature of CSOM renders it an overlooked condition.[21]Symptoms of middle ear infections vary depending on stage of the disease. The mean duration of ear discharge in the present study was 8.8 years and mean duration of decreased hearing was 7.4 years. Ear discharge and decreased hearing together as a complaint was seen in 70.67%. Only ear discharge as a complaint was seen in 29.33% - in these patients in whom there was no complaint of decreased hearing, the average duration of the chronic disease was 6.76 years. It is highly unlikely that they have normal hearing, revealing the fact that these patients are not even aware of the handicap that they are living with. The ignorance and lack of awareness regarding their underlying condition is highlighted and is a major gap in the existing knowledge of patients. This needs to be addressed. Patients hardly seek advice for deafness as the presenting symptom is also shown in a study by Gaur et al. [22]

Interestingly, 49.33% sought treatment at a formal modern health facility, either from a MBBS doctor or a Specialist. This was considered to be good health seeking behaviour. 36.67% did not attend proper facility or did self medication - representing negligent health seeking behaviour. The most recurrent barrier which caused delays in health care seeking as reported by 67% of our participants was lack of awareness of the progressive nature of the disease to cause hearing impairment and life threatening complication. Other important barriers were unavailable or inconvenient health service delivery and financial constraints in 22% and 11% respectively.

Analysis of delayed or improper health seeking behaviour revealed that patients of male gender (67.27%) were more prone to adopt this kind of health behaviour. The age group which was most inclined towards ignoring their health problem in terms of ear disease belonged to age group 20-39 yrs (61.82%). Predictably low income group, earning less than Rs 10,000 per month (61.82%) depicted risky health seeking behavior in comparison to only 38.18% of patients who earn more than Rs 10,000 per month. Surprisingly percentage of literates (educated but level of education less than class X) who neglected their disease was more than illiterates (50% vs. 32.73%).We can infer that those males who are not well educated , and are engaged in their jobs which is not very remunerative, tend to neglect their health .

Ear care practices play an important role in development and progression of disease. In our study most patients used match sticks and cotton buds – this needs to be discouraged. The use of cotton tips applicators has been reported to be a leading cause of infection and hearing loss in children by Nussinovitch et al[23] and Kravitz et al.[24] Putting oil, water or ear drops procured from pharmacy without prescription was also a common practice. This happened because of ignorance and lack of awareness. These constitute dangerous practice from ear care perspective.

When asked about awareness of complication associated with SOM, about 87% patients expressed their ignorance.

## CONCLUSION

This study shows that patients with SOM who showed delayed health care seeking behaviour are young adult male patients with low level of education and low earning capacity. Ear care practices were not good amongst the affected patients and there was lack of awareness regarding its potential to give rise to complications. Mass educational programs utilizing the advancement in technologies like mobile and internet can spread the basic knowledge and awareness about the disease. Knowledge about health care seeking behaviour of population can help in formulating health care policies and programmes for early diagnosis, effective treatment and appropriate intervention implementation.

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