



## A STUDY OF CLINICAL PROFILE OF PATIENTS WITH CSOM ATTENDING NEWLY ESTABLISH GMC RAJOURI AND AH

### ENT

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### ABSTRACT

**Background:** Chronic suppurative otitis media is a long standing infection of a part or whole of the middle ear cleft characterised by ear discharge or pain and a permanent perforation. In many cases, patients may suffer from hearing loss causing communication problems and social withdrawal. The persistent infection and resultant inflammatory responses are tackled with effective pharmacotherapy. **Material and method:** The study was conducted on 65 patients in ENT department of GMC rajouri and AH over a period of one year from July 2020 to June 2021. **Results:** In our study, majority cases were in the age group of 21-30 yrs (33.84%) with slight female preponderance in 34 (52.30%) patients, mostly belonging to rural area in 62 (95.38%) cases. 22 patients (33.84%) are illiterate and only 3 cases (4.6%) are graduate. Nearly half i.e 31 (47%) patients are student followed by housewife (15.38%), labourer (15.38%). 44 patients (67.69%) belongs to lower class and 21 (32.30%) to middle class. Most common chief complaint is ear discharge in all (100%) patients followed by hearing loss (50%), itching (32.3%), pain (23%) and tinnitus (15.38%). Left ear in 24 patients (36.92%) is more commonly involved than right (33.84%) and bilateral in 19 (29.23%) patients. Safe type (89.23%) of CSOM is more common than unsafe (10.76%) type. **Conclusion:** In our experience, CSOM mostly affects young students with slight female preponderance from rural background and poor socio-economic status. Timely intervention in form of health promotion, education about the risk factors and improvement in the living conditions will result in decrease in incidence and prevalence of the disease. Proper knowledge of signs and symptoms of the disease is likely to result in early seeking of health care and prevention of complication.

### KEYWORDS

Chronic suppurative otitis media (CSOM), hearing loss, tympanic membrane, perforation.

### INTRODUCTION

CSOM is a long standing infection of a part or whole of the middle ear cleft characterized by ear discharge, a permanent perforation, conductive hearing loss and sometimes pain. It is defined as permanent abnormality of pars tensa or pars flaccida, most likely as a result of earlier acute otitis media, negative middle ear pressure or otitis media with effusion [17]. It is one of the most common problems encountered in individuals in India [8]. If not treated at earliest it can lead to permanent hearing loss at a very early age.

Poverty, illiteracy, poor hygiene, over crowded living conditions and nutrition are all factors which play an important role in causation of this disease and widespread prevalence of CSOM in developing countries [11].

CSOM has been classified into tubo-tympanic and attico-antral. Tubo-tympanic- also called as safe or benign type is characterized by perforation of pars tensa involving antero-inferior part of middle ear cleft with no serious risk of complications while attico-antral variety, also called as unsafe or dangerous type involves posterosuperior part of the cleft (i.e attic, antrum and mastoid) and is associated with an attic or a marginal perforation. The disease is often associated with the bone eroding process such as cholesteatoma, granulations or osteitis.

The middle ear cholesteatoma most often acquired than congenital occurs from the ingrowth of keratinising squamous epithelium from external auditory canal skin to middle ear through the tympanic membrane [20]. Recurrent ear infection will cause hearing impairment over the years as a result of mucosal changes in the windows and ossicles. The changes may stiffen the windows and ossicles and may lead to the disruption of ossicular chain. The hearing loss associated with the perforation is directly proportional to the size of the perforation [14].

Proper management of CSOM is significant because it is an important cause of middle ear disease. After complete history, clinical examination, the disease is diagnosed. The persistent infection and resultant inflammatory responses are tackled with effective pharmacotherapy.

### MATERIAL AND METHOD:

This study was conducted in the department of ENT, Head and neck surgery in GMC Rajouri and AH. The study includes 65 patients with CSOM attending ENT OPD or emergency. Duration of study was one year from July 2020 to June 2021. Patients fulfilling the selection

criteria were included in the study after taking informed consent. All the patients in the study were clinically evaluated by taking detailed history, clinical examination including TFT.

### Inclusion criteria

All cases with middle ear discharge more than 3 months

### Exclusion criteria

Conditions which mimic CSOM like ASOM, otitis externa, otosclerosis, adhesive otitis media. A proforma is used for documenting age, sex, address, clinical information, including chief complaints, duration of symptoms and any previous history of treatment.

### RESULTS

**Table no.1: Sex distribution of patients with CSOM.**

| Sex of patient | No. Of patients |
|----------------|-----------------|
| Male           | 31 (47.69%)     |
| Female         | 34 (52.30%)     |
| Total          | 65              |

**Table no.2: Age group of patients with CSOM.**

| Age group of patients | No. Of patients |
|-----------------------|-----------------|
| 0-10                  | 6 (9.2%)        |
| 11-20                 | 17 (26.15%)     |
| 21-30                 | 22 (31.84%)     |
| 31-40                 | 7 (10.76%)      |
| 41-50                 | 10 (15.38%)     |
| 51-60                 | 2 (3.07%)       |
| 61-70                 | 2 (3.07%)       |
| Total                 | 65              |

**Table no.3: Area wise distribution of patients with CSOM.**

| Area of patient | No. Of patients |
|-----------------|-----------------|
| Rural           | 62 (95.38%)     |
| Urban           | 3 (4.6%)        |
| Total           | 65              |

**Table no.4: Education status of patients with CSOM.**

| Education status of patients | No. of patients |
|------------------------------|-----------------|
| Illiterate                   | 22 (33.84%)     |
| High school                  | 17 (26.15%)     |
| Middle school                | 14 (21.53%)     |

|                |            |
|----------------|------------|
| Primary school | 7 (10.76%) |
| Graduate       | 3 (4.6%)   |
| Total          | 65         |

**Table no.5: Occupation of patients with CSOM.**

| Occupation of patient | No. of patients |
|-----------------------|-----------------|
| Student               | 31 (47.69%)     |
| Labourer              | 10 (15.38%)     |
| Housewife             | 10 (15.38%)     |
| Shopkeeper            | 3 (4.6%)        |
| Govt. Job             | 3 (4.6%)        |
| <5 year patient       | 3 (4.6%)        |
| Driver                | 1 (1.5%)        |
| Tailor                | 1 (1.5%)        |
| Health worker         | 1 (1.5%)        |
| Teacher               | 1 (1.5%)        |
| Barber                | 1 (1.5%)        |
| Total                 | 65              |

**Table no.6:Socio-economic status of patients with CSOM.**

| Socio-economic status | No. of patients |
|-----------------------|-----------------|
| Upper                 | -               |
| Middle                | 21 (32.30%)     |
| Lower                 | 44 (67.69%)     |
| Total                 | 65              |

**Table no.7: Chief complaint of patients with CSOM.**

| Chief complaint | No. of patients |
|-----------------|-----------------|
| Discharge       | 65 (100%)       |
| Hearing loss    | 50 (50%)        |
| Pain            | 15 (23.07%)     |
| Itching         | 20 (32.3%)      |
| Tinnitus        | 10 (15.38%)     |

**Table no.8: Side of patients involved in CSOM.**

| Side involved | No. of patients |
|---------------|-----------------|
| Left          | 24 (36.92%)     |
| Right         | 22 (33.84%)     |
| Bilateral     | 19 (29.23%)     |
| Total         | 65              |

**Table no.9: Type of CSOM in patients.**

| Type of CSOM | No. of patients |
|--------------|-----------------|
| Safe         | 58 (89.23%)     |
| Unsafe       | 7 (10.76%)      |
| Total        | 65              |

## DISCUSSION

65 patients of different age groups were included in the series, after taking relevant history, clinical examination and investigation.

In our study, there is a preponderance of female patients (52%) followed by male patient (47%). Study by Vishnu kumar also observed female (65%)preponderance and males (35%)[13].

Study by Priya et al. also observed female preponderance, out of 88 patients studied 47 were females and 41 were females [16].

In a study conducted by Kumar N et al, both sexes were almost affected with slight female preponderance. (52%) patients were female and (48%) patients were male which resemble our study [12]. The reason for female preponderance in our study may be due to seeking less medical facilities in our country by females which lead to persistent infection.

In our study, majority of patients were in the age group of 21-30 years (33.84%) followed by 11-20 years (26%) followed by 31-40 years (10%).

This corresponds to study conducted by Islam et al, who observed majority of patients between the age group of 21-30 years (38.7%) and 31-40(10%) [9].

In another study by Kumar N et al. majority of patients belonged to the age group ranging from 21-30 years which resemble our study [12]. A study by Deosthale et al. observed that 45.65% were in the age group of 21-30 years resembling our study [5].

In Kumar V study, majority of patients were in the age group of 21-30 years (63%) which resembles our study [13].

In our study, most of the patients (95%) belongs to rural areas. In study of Khalique N et al. majority of the patients were from rural background [10].

In the study of Raushan EA et al 79% of patients were from rural areas as compared to 21% from urban areas [19].

Dutton DB, Bandyopadhyay R et al. and Tiwari R et al also reported higher proportion of patients from rural areas [7,2,23].

In our study, related to education status 33% of patients are illiterate followed by high school (26.15%), middle school (21.53%) , primary school (10%) and only 4.6% patients are graduate which resembles study of Khalique N et al where 23% patients are illiterate, high school (24.5%), middle school(27.5%), primary school (16%) and graduate in 4%[10].

CSOM is found to be most common in student population (47%) in our study which resembles study of Rajendran et al who also reported students as the most commonly affected (65%) by this disease [17].

In our study, the disease is more prevalent in the poor socio-economic group as compared to the other groups in the society which resemble study of Rajendran et al. where disease is more common in lower socio-economic status (62%)[17].

Poorey V.K. et al showed that the prevalence of the disease was more common in low socio-economic group (50%) [15].

In study by Khalique N et al. the patients mostly belong to lower class [10]. Arunbha et al and Basak B et al have also reported similar prevalence in patients of lower socio-economic status which resembles our study [21,3]. Lower socio-economic status lead to poverty, poor hygiene, over-crowding and poor nutrition which plays an important factor in causation of this disease.

In our study, the most common clinical feature is ear discharge (96.92%) followed by decreased hearing (50%), followed by itching, earache and tinnitus.

Kumar V also reported ear discharge in 91% and decreased hearing 65% which matches our study [13]. In a study conducted by Bhusal et al, all the patients complained of intermittent otorrhoea and hearing loss [4].

A study conducted by Shrestha et al, it was observed that the most common clinical presentation was ear discharge (98%) and decreased hearing (80%) with other presentations like earache and tinnitus which resemble our study [22].

Abassi et al. noted that the most common clinical feature were otorrhoea (100%) [1].

Desbassarie et al observed 95.3% patients had ear discharge as their chief complaint, accompanied by hearing loss in 53.5% which resembles our study [6].

In our study, left side involvement is seen in 24 cases (36.92%) followed by right side in 22 cases (33.84%) and bilateral in 19 cases (29.23%).

In study of Kumar V, majority had disease in the left ear (49%) followed by right ear (29%) and with bilateral involvement in 22% of cases which resembles our study [13].

In a study by Rafique et al. out of 90 cases, 45 were affected in left ear while 35 patients right side ear was involved which resembles our study[18].

In a study by Kumar N et al. who also came to the consensus that left ear was more commonly involved in their study [12]. Study by Bhusal et al, the left ear was affected in 30 (60%) patients and 20 patients (40%) in right ear [4].

Out of 65 patients, 58 cases (89.23%)in our study had a safe type of

CSOM, while the other 7 (10.76%) patients qualified as unsafe type of CSOM.

In a study by Khalique N et al. safe type was made in 57.5% and 42.5% with unsafe type [10].

Rajendran et al. reported 89% of safe type of CSOM and only 12% had unsafe type of CSOM which resembles our study [17].

Study of Kulkarni shows safe type of CSOM in 77.3% and unsafe in 22.7% which is near to our study [11].

Study by Islam et al shows that safe variety was found in 60 (75%) patients and unsafe variety in 20 (25%) patients which is nearly resembling our study [9].

## CONCLUSION

From our study, it can be concluded that chronic suppurative otitis media is predominantly more common in young females of rural area with lower socio-economic status, over crowding, poor hygiene and under resourced health care. This disease requires support and cooperation of both medical and professionals and timely management of the problem. For prevention of this disease more attention should be given to epidemiological survey and public awareness. People should be educated about the early signs and symptoms of the disease and encourage them to seek early and timely health care which lead to better outcomes and prevention of complication.

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