

# Epidemiological study of patients of chronic Suppurative Otitis media: Attending OPD at tertiary care center hospital, Chhattisgarh

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## Abstract

**Objective:** To know the incidence of disease as per various variables? **Material and Methods:** One hundred cases suffering from Chronic Suppurative Otitis Media were included in the study. Various variables eg. Age, Sex, residential background, Socio-economic status, educational qualification if any etc. were recorded and analyzed. Statistical analysis: were expressed in terms of simple proportion. **Results:** 89 percent patients were under the age of 30 years. 60percent males and 40 percent females. Similarly majority belongs to rural area. 60 percent were of low socio economic class. **Conclusion:** An awareness campaign about the various causes of the disease have to be conducted among the community particularly in the rural area.

**Keywords:** Chronic Suppurative Otitis, Deafness.

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## INTRODUCTION

Chronic otitis media (CSOM) is a disease of various etiological factors and also known for its persistence and recurrence. CSOM is a name given to chronic inflammatory disease affecting middle ear cleft. It is a recurrent or persistent and destructive infection and may present with intra or extra cranial complications. It is of two variety safe and unsafe. It more common in people of lower socioeconomic status, illiterates and rural locality. Throughout the country chronic infection of middle ear has been one of the commonest problems of the Otolaryngologists. The patients suffering from the disease are humiliated and depressed by deafness and foul odour of discharge. They are rendered unfit in society and for

occupational employment and are rejected by insurance companies for the claim against disease and disability. In view of the above, and as very few reports of epidemiological analysis was available prompted the authors to undertake this study to find out the magnitude of Chronic Suppurative Otitis Media (C.S.O.M.) as per various variables.

## MATERIAL AND METHODS

One hundred patients of both sexes and all age groups, attended the outpatient department of Maharani Hospital associated with BRKM Govt. Medical College, Jagdalpur C.G. between 1<sup>st</sup> Jul. 2011 to 30<sup>th</sup> Dec. 2011 were included in the study after their clinical examination. Whole sample was placed in three groups, (i) cases with central perforation (safe type). (ii) cases with attic perforation and marginal perforation situated in posterior superior quadrant (unsafe type). (iii) Mixed type i.e. includes both safe and unsafe variety. Patients name, age, sex, occupation, educational qualification, environmental condition, socioeconomic status, place of residence, family background etc were recorded in a predrawn proforma. Socioeconomic status-cases were divided in to three classes lower, middle, higher. Lower class includes having income up to 5000 per annum, middle class having income above Rs. 5000 and up to Rs. 10,000 per

annum and higher class includes income above Rs. 10,000 per annum. Educational Status – All cases were grouped in to three category (i) illiterate (ii) Educated. Educated category divided into a)primary education (b) middle education (c) above middle education(higher) (3)children under five years of age. Place of residence – Rural and Urban area.

### Findings

After analysis of the collected data it has been revealed that there were (Table – I) 89 % cases were under the age of 30 years and the remaining 11% cases were above the age of 31 years.

**Table 1:** Distribution of Cases according to age

Sr.No	Age group in yrs.	No.of cases			Total No of cases	Percentage %
		Safe	Unsafe	Mixed		
1	1-10	21	12	01	89	89
2	11-20	26	09	02		
3	21-30	12	05	01		
4	31-40	04	01	00	11	11
5	41-50	02	00	00		
6	51-onwards	04	00	00		

**Table 2:** Distribution of cases according to Sex

Sex	No. of cases			Total	Percentage%
	Safe	Unsafe	Mixed bil.		
Male	42	16	02	60	60
Female	28	10	02	40	40
<b>Total</b>	<b>70</b>	<b>26</b>	<b>04</b>	<b>100</b>	<b>100</b>

**Table 3:** Distribution of cases according to education Status

Sr.No	Group	No of patients			Total No of cases	Percentage %
		Safe	Unsafe	Mixed		
1	Illiterate	49	15	01	65	65
2	Educated				35	29
	a.primary	05	04	01		
	b.middle	06	02	01		
	c.higher	06	03	01		
3	Children below 5 yrs.	04	02	-	6	6

Table-5 reveals cases of lower socioeconomic status were 60%, middle class 34% and upper class only 05%. On analysis it also reveals that 40 cases of safe variety, 18 cases unsafe variety and 3 cases mixed variety were of

Table 2: shows 60% males and 40% females. As per sex wise analysis, males were found more commonly affected in comparisons to their female counter parts. Both male and female were the sufferers of all three variety (safe, unsafe and mixed). Number of male patients are more It may be due to the fact that female patients attending the O.P.D. in less numbers in comparison to males. This also indicate the female status in the society and socioeconomic status also. sixty one percent cases were from low socioeconomic background and remaining belongs to middle and higher class. Table – 3: shows 65% cases were illiterate and 29% cases educated. Educated patients were studied from primary, middle and higher classes. Children below 5 yrs. Were 6% only. Tables further reveals that 10% cases were studied up to primary,9% up to middle,10% up to higher classes and 6% were children below 5 yrs. Table –4: reveals that 20 percent cases of safe variety having family history, while 30.76 cases from unsafe variety disclose the family history and 25 percent cases of mixed variety having family history.

**Table 4:** Distribution of cases according to Family History:

Sr.No.	Variety of disease	No.of cases	No.of cases with Positive family history	Percentage %
2	Unsafe	26	08	30.76
3	Mixed bil.	04	01	25
<b>Total</b>		<b>100</b>	<b>23</b>	<b>23</b>

**Table 5:** Distribution of cases according to socioeconomic status:

Socio economic Status	Variety of Disease			Total No Of cases	Percentage %
	Safe	Unsafe	Mixed		
Lower	40	18	03	61	61
Middle	26	07	01	34	34
Higher	04	01	-	05	05

**Table 6:** Distribution of cases according to locality

Locality	Variety of disease			Total No. Of cases	Percentage %
	Safe	Unsafe	Mixed		
Urban	24	07	01	32	32
Rural	46	19	03	68	68
<b>Total</b>	<b>70</b>	<b>26</b>	<b>04</b>	<b>100</b>	<b>100</b>

lower socioeconomic status, while in middle socioeconomic status 26 safe, 07 unsafe, 01 case mixed variety and in upper socioeconomic status 24cases safe variety, 01case unsafe. Table-6 reveals cases from rural locality were 68% and urban locality only 32%. On

analysis it further reveals that in rural locality safe cases were 46, unsafe 19, mixed variety 03 while in urban locality 24 cases safe variety, 7 cases unsafe variety and 1 case of mixed variety.

## DISCUSSIONS

One hundred patients with 128 ears were included in this study. In the present study minimum age was 1.5 years and maximum age was 60 years incidence was maximum under the age of 30 years of cases. Arya and Mahapatra<sup>2</sup> observed that 80.4% cases were under the age of the 30 years and 19.6% cases were of age above 30 years. Baruah *et al*<sup>3</sup> observed that 94% cases were under the age of 30 years while only 60 cases were above the age of 30 years and reported extremely high prevalence among children and adults. Harendra Nath<sup>4</sup> also observed 84.6% and 81.6% cases under the age of 30 years and 15.4% and 18.4% cases above the age of 30 years. In present study minimum age was 1.5 years and maximum age was 60 years. Thus 89% of the cases were under the age of 30 years while cases above the age of 30 years were only 11%. Thus our findings were consistent with findings of most of the workers in recent years. Arya and Mahapatra<sup>2</sup> reported 80.4% were male cases and only 19.6% were female. Baruah *et al*<sup>3</sup> reported that male and female cases were 56.0% and 44.0% respectively. Harendra Nath<sup>4</sup> also observed that cases of C. S. O. M. were more in males (81.6%) than females 18.4%. In present study it was observed that 61% cases were males and only 39% cases were females. This study and in all above mentioned studies shows disease is more common in males than females. It may be due to the fact that female patient attending the O.P.D. were considerably less as compared to males (Female: Male: 1: 1.5). Das *et al*<sup>5</sup> observed that patient came from rural areas more than patients from urban areas. Papastavros *et al*<sup>6</sup> reported that only 33 of the patients came from rural areas and 57 from large urban centers. In present study 68% cases were from rural area and 32% from urban area. This gives a ratio of 2:1 while rural to urban population ratio in India is 3:1. Das *et al*<sup>5</sup> observed that 26% were middle class and one percent were rich. Johnson<sup>7</sup> showed that otitis media is more common in poor and illiterates due to lack of hygiene and treatment. Lee<sup>20</sup> observe the severity of the diseases in children varied directly with the social status. In present study it was observed that 61% cases were from low socio-economic status or poor class and remaining 39% were from middle and upper class. Thus findings of present study tally with findings of other studies mentioned above and shows that C.S.O.M. is more common in poor class or low socio-economic group. Das *et al*<sup>5</sup> observed that 73% cases were poor and illiterate, in present study 65.0% patients were illiterate,

35% patients were with middle or higher educational group. This shows disease is more common in illiterate and people with low educational status. In present study it was observed that 23 cases (23%) of C.S.O.M. had family history of disease. Among these 14 cases were safe and 08 cases were unsafe variety and one of mixed variety, having both safe and unsafe variety of disease. Similar environment was probable the factor causing the disease (C.S.O.M.) among various members of the family. Gulati *et al* (8) reported that right ear involvement (56%) was common than left ear (44%). Harendra Nath<sup>4</sup> observed that left ear was involved in 56% and right ear in 44% of cases. In present study right ear was involved in 43% of cases left ear in 29% of cases and bilateral involvement was in 28% of cases, finding of this study tally with findings of Gulati *et al*<sup>8</sup> with more involvement of right ear. However the selection of cases by Gulati *et al*<sup>8</sup> was different from that of present study.

## CONCLUSION

From above observations and discussions the authors reached to the conclusion that there is an urgent need of bringing awareness in the community particularly in rural / tribal areas about the various aspects of C.S.O.M. This can be carried out with the help of various medias like Television, Radio, Folk dances and folk songs, which are online of culture, costumes of the local people.

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