

“CSOM – A CROSS SECTIONAL STUDY”

SURYANARAYAN JYOSHM¹ & RAMYA .B²

¹Professor & Chief, Department of ENT, Bowring & Lady Curzon Hospitals, Bangalore

Medical College and Research Institute, Fort Road, Bangalore, Karnataka, India

²BMC&RI, Resident, Department of ENT, Bowring & Lady Curzon Hospitals,

Bangalore Medical College and Research Institute, Fort Road, Bangalore, Karnataka, India

ABSTRACT

The CSOM is a long standing infection of a part or whole of middle ear cleft characterized by ear discharge and permanent perforation; most patients with chronic discharge from the ear are likely to require surgical treatment. In Indian perspective the incidence of CSOM could be alarming stage and is steadily increased in 10-24 years of age group. The retrospective study was conducted at Victoria and Bowring Hospitals attached to Bangalore Medical College & Research Institute during the year 2011-12. Total 50 CSOM pediatric patients considered for the study with irrespective of age and gender bias. The median age of the patients was 7.5 years (IQR 5-12 years) with mean age was 10.13 with SD 3.12 years , The maximum age attained was 16 years and lower was 5 years respectively. Female has accounted more as compared males ($p<0.001$). Discharge is most common presenting with chief complaints. The incumbent risk factors were found to be statistically significant with age group of the children. Most of the developing countries the incidence is predominantly more in younger children. Thus, the urgent attention will be needed to deal with a massive public health problem at national level.

KEYWORDS: CSOM, Ear Discharge, Risk Factors, Incidence

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INTRODUCTION

The CSOM is a long standing infection of a part or whole of middle ear cleft characterized by ear discharge and permanent perforation; most patients with chronic discharge from the ear are likely to require surgical treatment. In Indian perspective the incidence of CSOM could be alarming stage and is steadily increased in 10-24 years of age group. As per the previous studies literature, the pediatric population the incidence will be more as compared to adults. Worldwide, there are between 65-330 million people affected, of whom 60% receive significant hearing loss. This burden falls disproportionately on children in developing countries. The following risk factors are noticed. The multiple episodes of acute otitis media (AOM), Living in crowded conditions, Being a member of a large family, Attending daycare, Studies of parental education, passive smoking, breast-feeding, socio-economic status and the annual number of upper respiratory tract infections (URTIs) show inconclusive associations only and also Craniofacial anomalies increase risk. The present study aims to know the spectrum of CSOM in the age group between 6-16 years on retrospective basis.

MATERIALS AND METHODS

The retrospective study was conducted at Victoria and Bowring Hospitals attached to Bangalore Medical College & Research Institute during the year 2011-12. Total 50 CSOM pediatric patients considered for the study with irrespective of age and gender bias. The demographic profile and incumbent parameters were collected through pretested questionnaires. Collected data was analyzed by the SAS-16.50 version. All patients were meet inclusion and exclusion criteria. Inclusion criteria: age of the person between 6-15 years, terminal illness of the patients was excluded from the study design. Details history of the patients was being collected from the patient's card. Written consent obtained from the patients.

RESULTS

Table 1: Spectrum of CSOM among the Children

SL	Parameter	Observations	Interpretation
01	Age	Max : 16 years Min : 5 years Mean age 10.13±3.12	The median age of the patients was 7.5 years (IQR 5-12 years) with mean age was 10.13 with SD 3.12 years , The maximum age attained was 16 years and lower was 5 years respectively
02	Gender	Male : 22 Female :28	Female has accounted more as compared males (p<0.001)
03	Laterality	B/L-19 Left-19 Right-07	B/L involvement is more common
04	Presenting complaints	Discharge in all 50 patients followed by hearing loss of 15 patients	Discharge is most common presenting with chief complaints

Table 2: Risk Factors of CSOM in Children (Univariate Analysis)

SL	Risk factors	No (%)	P-value
01	Multiple episodes of acute otitis media	05(15.15%)	0.00**
02	Living in crowded conditions	03(9.09%)	0.00**
03	Being a member of a large family	02(6.06%)	0.36ns
04	Attending daycare	08(24.24%)	0.00**
05	Studies of parental education	01(3.03%)	0.82ns
06	passive smoking,	06(18.18%)	0.00**
07	upper respiratory tract infections	03(9.09%)	0.00**
08.	Craniofacial anomalies	05(15.15%)	0.00**

**, Significant at 1% level, ns-non significant



Figure 1: External View of CSOM

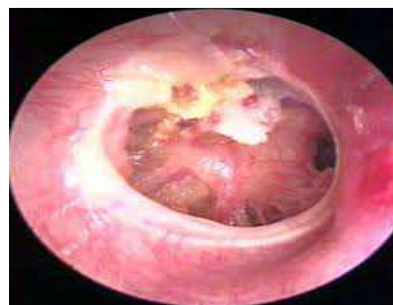


Figure 2: Cross Sectional View of CSOM



Figure 3: Pear white Cholesteatoma with Intact drum



Figure 4: Inner view of CSOM

DISCUSSIONS

In the light of several systems of nomenclature have been developed to distinguish between the different types of otitis media, reflecting the lack of complete understanding of the processes responsible of inflammation and healing of the middle ear part. However, for the purpose of this study, the presence of a persistent tympanic perforation and middle ear discharge differentiates CSOM from other chronic forms of otitis media with related risk factors. CSOM is also called chronic active mucosal otitis media, chronic oto-mastoiditis, and chronic tympanomastoiditis as per the present study all the above said risk parameters were found to be statistically significant ($p < 0.001$). In a subset of CSOM may have been cholesteatomas or other suppurative complications⁵. The age group 5-16 years apparently documented the complications *viz.*, chronic otitis media with effusion (COME), chronic secretory otitis media, chronic seromucous otitis media, chronic middle ear catarrh, chronic serous otitis media, chronic mucoid otitis media, otitis media with persistent effusions, and glue ear *etc.* All these are recurrent or persistent effusions in the middle ear behind an intact tympanic membrane in which the principal symptom were seen, if present at all, is deafness and not ear discharge. The hearing impairment is being produced by otitis media affects intellectual performance, which was demonstrated by several studies. Long-term effects on overall risk factors and psychosocial development have not been consistently observed in children. All children were being the cleft palate; those with unremitting chronic otitis media with effusion had pure tone thresholds 5 dB higher, as well as lower scores in psychological, emotional and social development test results, compared with those who underwent drainage of middle ear effusion. The multifactorial nature of otitis media must be stressed. Inadequate antibiotic treatment, frequent upper respiratory tract infections, nasal disease and poor living conditions with poor access to medical care is related to the development of CSOM. Poor housing, hygiene and nutrition are associated with higher prevalence rates, and improvement in these aspects was found to halve the prevalence of CSOM in Indian based pediatric population.

CONCLUSIONS

Most of the developing countries the incidence is predominantly more in younger children. Thus, the urgent attention will be needed to deal with a massive public health problem at national level.

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