

Original Article**STUDY ON EVALUATION OF SURGICAL OUTCOMES IN PATIENTS WITH CHRONIC SUPPURATIVE OTITIS MEDIA**

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Introduction: Back ground: Chronic suppurative otitis media (CSOM) is one of the most common childhood infectious diseases worldwide and is a leading cause of hearing impairment in resource-limited settings. It is less frequently seen in resource-rich settings. It is characterized by chronic drainage from the middle ear associated with tympanic membrane (TM) perforation. CSOM is usually preceded by an episode of acute otitis media (AOM).

Aim and Objective of the study. The aim and objectives of the study is to evaluate the surgical outcomes chronic suppurative otitis media.

Materials and Methods: Informed consent was obtained from all patients included in the study. The study was approved by institutional ethical committee. The data were collected by the active participation of the patients' interview by the preformed proforma of data collection sheet and then data were gathered and tabulated. Detail history, physical examination and relevant investigations were done pre-operatively and post-operatively. Post-operative follow up after 1month, 2 months and 3 months were done.

Results and Discussion: In the present study, we included a total of 80 patients with CSOM who underwent surgical intervention. The aim and objectives of the study is to evaluate the surgical outcomes chronic suppurative otitis media. The number of subjects in the age group of 5-10 years were 3, 11-20 years were 20, 21-30 years were 15, 31-40 years were 22 and 41-50 years were 20. The number of males were 62% and females were 38%. It is evident from the table 2 that 100% presented with discharge, 22.5% with granulation tissue, 21.25% with aural polyp, 55% with attic perforation and 35% with postero-superior marginal perforation. It is evident from table 3 that 52.5% had dry ear, 15% had discharging ear and 1.25% had granulation tissue at 1st month. Similarly, that 55% had dry ear, 10% had discharging ear and none of the subjects had granulation tissue at 3rd month. It is evident from table 4 that 3.75 % had deterioration, 8.75% had unchanged and 87.5% had improvement in hearing.

Conclusion: Hearing loss arising from COM is a matter of serious concern because of its long-term effects on communication, language development and educational process. Early diagnosis and intervention by skilled Otologist is recommended to regain hearing as well as to prevent disability and complications.

Key-words: hearing loss, granulation tissue, chronic suppurative otitis media, dry ear and discharging ear.

INTRODUCTION

Chronic suppurative otitis media (CSOM) is one of the most common childhood infectious diseases worldwide and is a leading cause of hearing impairment in resource-limited settings. It is less frequently seen in resource-rich settings. It is characterized by chronic drainage from the middle ear associated with tympanic membrane (TM) perforation. CSOM is usually preceded by an episode of acute otitis media (AOM).¹⁻²

Hearing loss arising from COM is a matter of serious concern because of its long-term effects on communication, language development and educational process. An estimated 2/3rd of the world's hearing impaired population are believed to be distributed among developing countries.³⁻⁵

There are many different surgical techniques for managing active squamous COM, which can be categorized as open cavity (canal wall down) and closed cavity (intact canal wall mastoidectomy). The principle aim of surgery for active squamous COM (cholesteatoma) is to completely remove disease and minimize the risk of recurrence, but, in addition, the ear should be returned to as near normal as possible. The ear should be self-cleansing and should not require regular aural toilet and the hearing should be restored. Now, canal wall down tympanoplasty (CWDT) are widely performed, recurrences are reduced in CWDT and hearing outcome is not sacrificed.⁶⁻⁸

Tympanomastoid surgery is a new method of surgery which is one stage mastoidectomy with tympanoplasty. It has been in a state of constant evolution from the early 1980's. The original technique has gradually been moulded and improved as newer methods of ear surgery.

The outcome of the surgery depends on diagnosis category of CSOM (with cholesteatoma and without cholesteatoma), pathogenic organisms, extent of mastoid pneumatization, regional factors such as associated mucosal disease of the nose & paranasal sinuses and systemic factors such as diabetes. Hearing gain after tympanomastoid surgery is 10-25 dB & recurrent rate is 5-71%. When indicated mastoidectomy might improve tympanoplasty results and prevent graft failure. Relative indications for mastoidectomy during tympanoplasty are a history of profuse otorrhoea especially purulent otorrhoea, a previous tympanoplasty failure, secondary acquired cholesteatoma and severe tympanic membrane that is not respectable without further exposure provided by mastoidectomy. The extent of disease often will determine the aggressiveness of surgery approach.⁹⁻¹²

AIM AND OBJECTIVES OF THE STUDY: The aim and objectives of the study is to evaluate the surgical outcomes chronic suppurative otitis media.

MATERIALS AND METHODS

Source of data: This is the prospective observational study conducted at our tertiary care hospital.

Study population: we included the subjects with chronic suppurative otitis media with active squamous disease who underwent tympanomastoid surgery.

Study Design: We conducted a hospital based prospective observational study conducted on a total number of 80 patients both males and females attending the departments of ENT of our hospital.

Inclusion criteria: we included the patients CSOM with active squamous cell disease who underwent operative treatment and patients aged more than 5 years and less than 50 years.

Exclusion Criteria: we excluded the following patients from our study

Tubotympanic variety of CSOM

Patients who are not willing to participate in the study

Patients who needed revision surgery

Patients dropped out from follow up

Patients unfit for GA due to other medical causes

Data Collection: Informed consent was obtained from all patients included in the study. The study was approved by institutional ethical committee. The data were collected by the active participation of the patients' interview by the preformed proforma of data collection sheet and then data were gathered and tabulated. Detail history, physical examination and relevant investigations were done pre-operatively and post-operatively. Post-operative follow up after 1 month, 2 months and 3 months were done.

RESULTS:

We included a total of 80 subjects based on inclusion and exclusion criteria in the age group more than 5 years and less than 50 years, who presented with CSOM.

Table 1: Shows age-wise distribution of study subjects

VARIABLES	Number =80	Percentage
AGE GROUP		
5 – 10 yrs.	3	3.75
11 – 20 yrs.	20	25
21 – 30 yrs.	15	18.75
31 – 40 yrs.	22	27.5
41 – 50 yrs.	20	25

The number of subjects in the age group of 5-10 years were 3, 11-20 years were 20, 21-30 years were 15, 31-40 years were 22 and 41-50 years were 20.

Figure 1: Shows gender wise distribution of study subjects

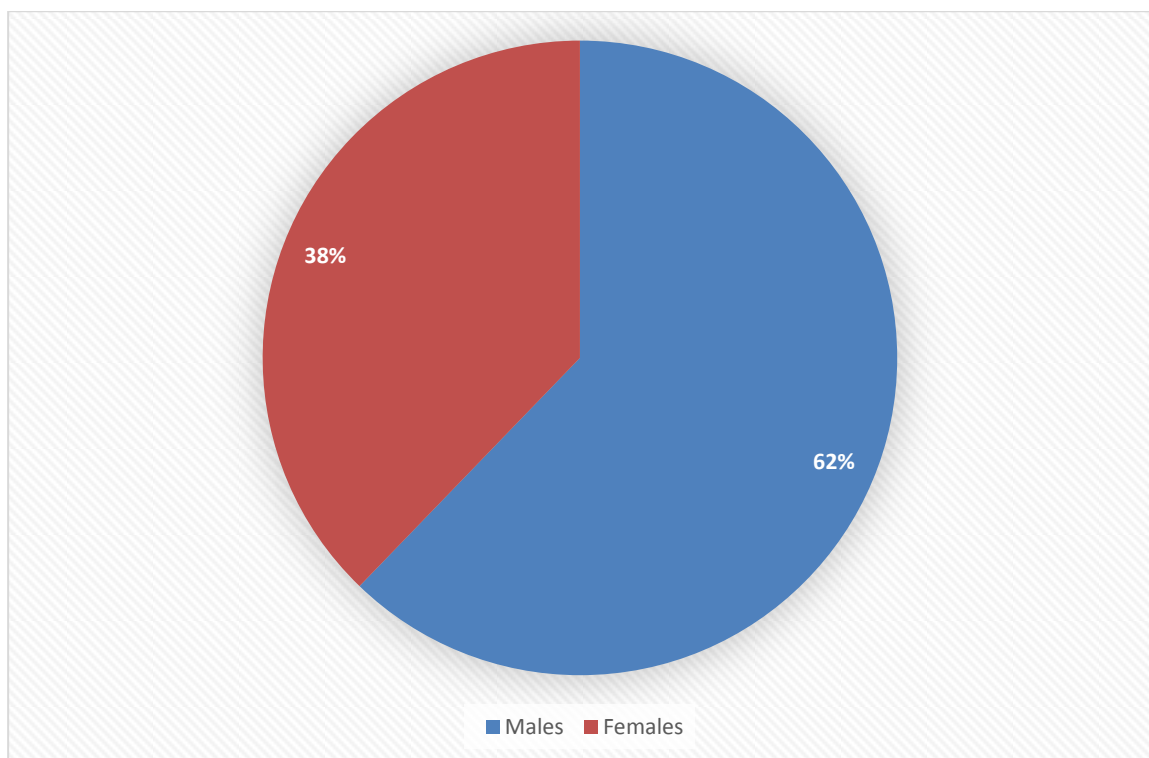


Table 2: Clinical presentation of Study Subjects

Clinical presentation	Number of Cases=80	Percentage
Discharge	80	100
Granulation tissue	18	22.5
Aural polyp	17	21.25
Attic perforation	44	55
Postero-superior marginal perforation	28	35

It is evident from the table 2 that 100% presented with discharge, 22.5% with granulation tissue, 21.25% with aural polyp, 55% with attic perforation and 35% with postero-superior marginal perforation.

Table 3: Results of post-operative follow up at month 1 and month 3

Clinical presentation	1 st month	3 rd month
Dry ear	42 (52.5%)	44 (55%)
Discharging ear	12 (15%)	10 (12.5%)
Granulation tissue	1 (1.25%)	0 (0%)

It is evident from table 3 that 52.5% had dry ear, 15% had discharging ear and 1.25% had granulation tissue at 1st month. Similarly, that 55% had dry ear, 10% had discharging ear and none of the subjects had granulation tissue at 3rd month.

Table 4: Shows post-operative hearing status after 3 months

Hearing status	Number of subjects	Percentage
Deteriorated	3	3.75
Unchanged	7	8.75
Improved	70	87.5

It is evident from table 4 that 3.75 % had deterioration, 8.75% had unchanged and 87.5% had improvement in hearing.

DISCUSSION

In the present study, we included a total of 80 patients with CSOM who underwent surgical intervention. The aim and objectives of the study is to evaluate the surgical outcomes chronic suppurative otitis media. The number of subjects in the age group of 5-10 years were 3, 11-20 years were 20, 21-30 years were 15, 31-40 years were 22 and 41-50 years were 20. The

number of males were 62% and females were 38%. It is evident from the table 2 that 100% presented with discharge, 22.5% with granulation tissue, 21.25% with aural polyp, 55% with attic perforation and 35% with postero-superior marginal perforation. It is evident from table 3 that 52.5% had dry ear, 15% had discharging ear and 1.25% had granulation tissue at 1st month. Similarly, that 55% had dry ear, 10% had discharging ear and none of the subjects had granulation tissue at 3rd month. It is evident from table 4 that 3.75 % had deterioration, 8.75% had unchanged and 87.5% had improvement in hearing.

CONCLUSION

Chronic suppurative otitis media is a common health hazard in ENT practice all over the world. Cholesteatoma erodes ossicular chain and result in loss of hearing. Hearing loss arising from COM is a matter of serious concern because of its long-term effects on communication, language development and educational process. Early diagnosis and intervention by skilled Otologist is recommended to regain hearing as well as to prevent disability and complications.

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