

AN OVERVIEW AND SPECTRUM OF REMOVAL OF *CHOLESTEATOMA* FROM EAR BY DIFFERENT SURGICAL PROCEDURES – CROSS SECTIONAL STUDY

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ABSTRACT

The present study attempt to know the spectrum of removal of cholesteatoma by Tympanoplasty and Tympanomastoidectomy. A total fifty suspected patients considered for the study .out of which male comprises 56.0% and female was 44.0% respectively .The mean age of the patient was 23.63 years (IQR 18-32 Years) and median age was 24 years. More number of patients were infected in the age group 21-36 years and it was found to be statistically significant ($p<0.00$) with incidence of the cholesteatoma. Present study concludes that Tympanomastoidectomy and Tympanoplasty surgery is more effective and high relevant surgical tool for ENT specialist

KEYWORDS: *Tympanoplasty, Tympanomastoidectomy & Cholesteatoma*

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INTRODUCTION

Background

As per the Medical research and review data envisages the problem of Cholesteatoma for the loss of hearing and visual impairment for both adult and pediatric population. Many scientist conducted evidence based prospective study on this research gap. 2013 IMS report defines “Cholesteatoma is rare “the true occurrence (incidence) rate is not known. About 1 in 1,000 people with ear problems have Cholesteatoma. Most cases are of the acquired type and advent with the past family history. The Cholesteatoma usually affects only one ear (it is unilateral). The most common initial symptoms are foul smelling like fish, scanty blood stained discharge and hearing loss. The patients likely to have had previous problems with ear infections. Other symptoms that may occur include a ringing sound in the ear (tinnitus) and headache. Eventually it could be damage tiny bones of the middle ear with permanent deafness, damages mastoid bone, cochlea and other structures in the inner ear. The present study attempt to know the spectrum of removal of Cholesteatoma by Tympanoplasty and Tympanomastoidectomy.

METHODS

A cross study was undertaken in the Department of ENT, Narayana Medical College, Nellore, Andhra Pradesh during the period of 2011-12. Total 50 suspected patients were considered for the study. The incumbent laboratory parameters, demographic profile and other defined parameters were collected from the pre-text questionnaires. Tympanoplasty and Tympanomastoidectomy *was done* for all the patients, pre operative and postoperative complications were recorded and analyzed by suitable statistical methods .The collected data was analyzed by using SAS-16.50 version. Univariate analysis was performed to test the hypothesis.

Description surgical methods carried out for the removal of Cholesteatoma: Surgery removes Cholesteatoma tissues from the diseased areas, including the cholesteatoma itself: the following parametric surgical

techniques were used for removal of Cholesteatoma

- **Tympanomastoidectomy.** This is removal of diseased process from the middle ear and all parts of diseased mastoid bone and cells, depending on the extent of the cholesteatoma. It is the procedure often performed and a large cavity is created from middle ear to external ear, requiring regular cleaning and management of the cavity. This procedure most helpful after removal of cholesteatoma. Complications of surgery can sometimes occur. These include deafness, dizziness and damage to the facial nerve, leading to weakness (paralysis) of the muscles in the face on the affected side.
- **Tympanoplasty.** This is another operation that can be performed on the eardrum. It is a less invasive technique with a better visual (cosmetic) appearance after surgery. However, it is associated with a higher risk of recurrence of cholesteatoma, and a further operation to check is required up to a year later.
- **Non-surgical treatment**

If you are not fit enough to undergo a general anaesthetic or do not want to have surgery, you may have the cholesteatoma treated with the aid of 'aural toilet'. This involves washing out the ear canal and sucking out bits (debris) using a microscope. This has to be done regularly and ultimately will prevent growth of the cholesteatoma.

RESULTS

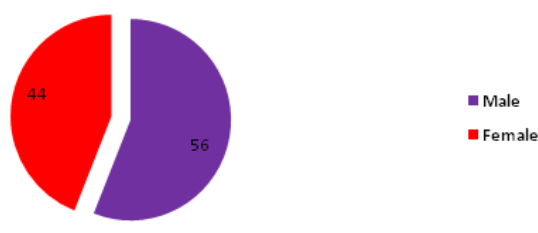


Figure 1: Gender Distribution of the Patients

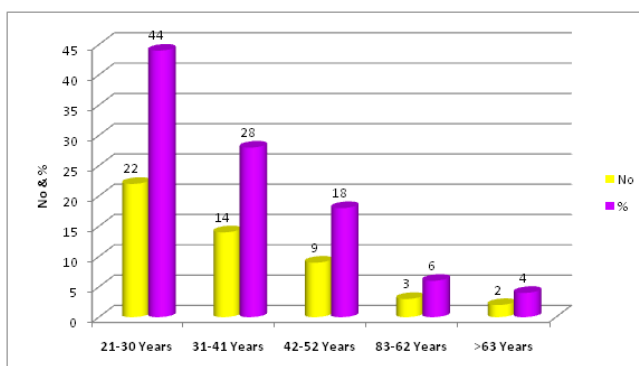


Figure 2: Age Wise Distribution of the Patients

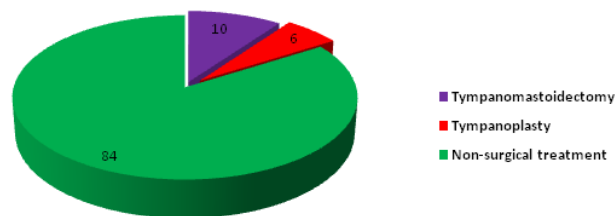


Figure 3: Surgical Intervention of Cholesteatoma

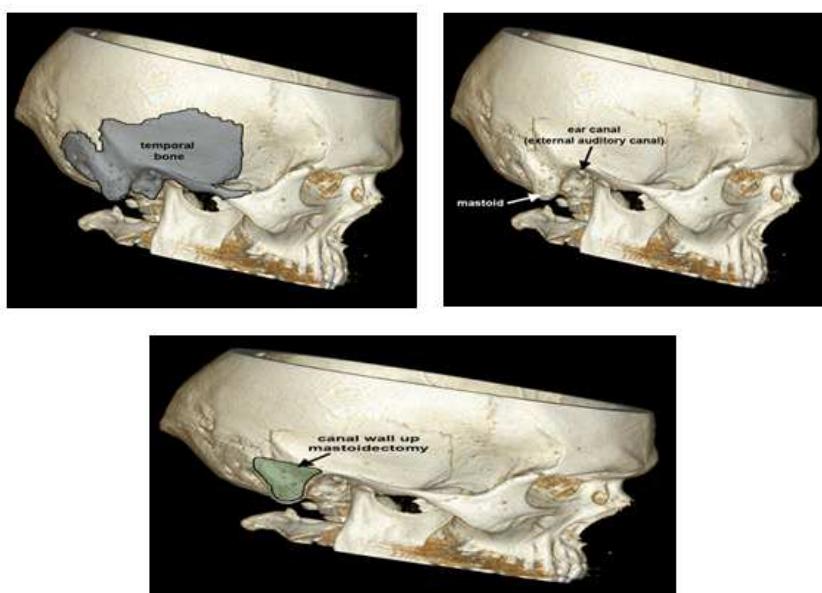


Figure 4: 3D View of Reconstruction, Lateral View, Right Skull

Table 1: Significance Level of Pre and Post Operative Complications

Complications	Pre	Post	P-Value
Deafness	00	00	-
Brain infections	00	00	-
Giddiness	03	01	0.03
Total	03	01	

A total fifty suspected patients considered for the study .out of which male comprises 56.0% and female was 44.0% respectively .The mean age of the patient was 23.63 years (IQR 18-32 Years) and median age was 24 years. More number of patients were infected in the age group 21-36 years and it was found to be statistically significant ($p < 0.00$) with incidence of the cholesteatoma. The different surgical intervention was done for the removal of cholesteatoma viz., Tympanomastoidectomy, Tympanoplasty and Non-surgical treatment. Over the period of 7-15 days follow up was done for all the patients during the course of post operative follow up the complication was noticed none of the patients were not been noticed the illness or complications like deafness, brain infection . Only three patients were noticed the giddiness and it was found to be statistically significant ($p < 0.00$). Rest of the patients was cured from non surgical treatment.

DISCUSSIONS

The present study procedure was used to restore or retain the hearing is called a tympanoplasty. “Tympanum” which could be refers to the middle ear cavity; “plasty” means “repair of”; thus “tympanoplasty.” Our study has conducted a techniques used to tympanic membrane and to reconstruct the middle ear. The middle ear bones (ossicles) have been needed to be replaced due to damage from infection. A prosthetic device were used in the replacement of the natural ossicles. “Depending on the specific condition in patient’s ear, an operation on the mastoid bone to control infection may be done, together with a procedure to restore hearing. This procedure is called a tympanomastoidectomy. The mastoid is a honeycomb cavity developed in the temporal bone, which lies directly behind the ear and it was connected to the middle ear space. When a hole arises in the eardrum due to previous injury or infection, or when a long-standing infection persists with tissue in the middle ear or mastoid, mastoid surgery often becomes necessary to alleviate this infection. This part of the procedure is called mastoidectomy. Our study encountered after surgery, dizziness and ringing in the ear was found commonly in three patients.

CONCLUSIONS

Present study concludes that Tympanomastoidectomy and Tympanoplasty surgery is more effective and high relevant surgical tool for ENT specialist in treating patients with Cholesteatoma.

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