

Presentation and management of Chronic Suppurative Otitis Media at Lady Reading Hospital, Peshawar

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ABSTRACT

Objective: To determine the clinical and operative findings of the patients sustaining chronic suppurative otitis media.

Patients and Methods: This descriptive cross sectional study of six months duration was conducted at the department of ENT, Head and Neck Surgery, Hayat Medical Complex (HMC), Peshawar-Pakistan from June 2012 to December 2012. All the patients of any age and either gender having discharging ears for more than three months were included. Those patients having aural discharge due to otitis externa or trauma were excluded from study. All patients having otogenic intracranial complications were first treated by neurosurgeon before treating the primary focus in ears. Mastoid surgery was performed according to the nature and type of disease.

Results: A total of 93 patients were enrolled who were 67 male and 26 females with male to female ratio of 2.5:1. These patients were in age range from 5 years to 67 years with mean age of 37±13 years. Most of the patients were from lower socioeconomic group (56%). In this study 90 patients (96.78%) had atticcoanal type tympanic perforation while 3 patients (3.22%) presented with tubotympanic type tympanic perforation with commonest presentation of ear discharge (100%). In majority of patients (54.71%) there was mild to moderate hearing loss. In 36 patients (38.7%) total perforation was common among atticcoanal type while cholesteatoma was the commonest (47.31%) finding in this disease.

Conclusion: Otorrhoea is the common presentation of atticcoanal type diseased ear that is best treated with mastoidectomy operation to minimize its complications.

Key words: Perforation, Myringoplasty, Mastoidectomy, Otogenic complication

INTRODUCTION

Chronic suppurative otitis media (CSOM) is a common problem in people with low socioeconomic status especially living in rural areas, with poor hygienic and dietary conditions.¹ The disease is now-a-days less aggressive, due to excessive use of antibiotics.² However unsafe type of this disease, also known as attic-antral type usually presents with marginal perforation having cholesteatoma, which is the hallmark of this affection and also considered as the complication producing element.³ Bone erosion is an established complication of this type and may involve extracranial and intracranial structures.¹ In the past, people were relatively less aware regarding the complications of this disease and so less effective treatment measures were employed resulting in high rate of complications.⁴ In the modern era, frequency of complications is

markedly reduced due to proper treatment but still the harmful effects of the unsafe disease may produce disaster.⁵ Chronic suppurative otitis media with cholesteatoma can spread beyond middle ear, leading to extra cranial and intracranial complications. In developing countries, the complications are comparatively higher leading to any disability or even death.⁶ It is important to discriminate between chronic suppurative otitis media with and without cholesteatoma. Chronic suppurative otitis media is divided into two types (1) benign chronic suppurative otitis media (CSOM without cholesteatoma). The treatment is conservative or closed cavity mastoidectomy/myringoplasty and (2) malignant chronic suppurative otitis media (CSOM with cholesteatoma).⁷ Treatment of this type is eradication of cholesteatoma by radical mastoidectomy (open cavity mastoidectomy).⁸

PATIENTS AND METHODS

This descriptive cross sectional study of six months duration was conducted at the department of ENT, Head and Neck Surgery, Hayat Medical Complex (HMC), Peshawar-Pakistan from June 2012 to December 2012 (6months). All the patients of any age and either gender having discharging ears for more than three months and not operated previously were included, while those patients having aural discharge due to otitis externa or trauma and those who were previously operated for ear disease were excluded from study. The diagnostic criteria were clinical evaluation, otoscopic and microscopic examination complemented with audiological or radiological investigations accordingly. After admission every patient was evaluated in term of detailed history, thorough examination focusing on ear disease and relevant investigations. Hearing loss was categorized in three on doing pure tone audiometry by the same audiometrician and same machine. Mild to moderate hearing loss was ≤ 40 db, moderate to severe hearing loss 41-80 db, Severe to profound hearing loss ≥ 81 db. The patients having otogenic intracranial complications were first treated by neurosurgeon before treating the primary focus in ears. A well informed consent was taken from every patient or relative explaining procedure, its benefits, complications, outcome, and expenses.

In case of tubotympanic disease, when the ear was free of disease, myringoplasty was performed. In all the patients after aseptic cleaning and draping end-aural approach was adopted. Temporalis fascia was taken as graft and after preparation it was placed on the defect of membrane and putting spongstone pieces above and below the graft. Wound was closed and polyfax pack was placed in the meatus. Patient was put on injectable antibiotics and was educated to avoid unnecessary exertion. In case of atticofacial disease mastoidectomy was performed. In this procedure mastoid air cells were cleaned of the disease, facial bridge was lowered down. After completing the mastoidectomy wide meatoplasty was performed and cavity was packed with polyfax ointment for ten days. Patients were put on injectable antibiotics and most of the patients were discharged on 4-5th postoperative days. This study was approved from hospital ethical board and data like clinical and operative findings of all patients were collected on preformed proforma and analyzed using SPSS version 17.

RESULTS

A total of 93 patients were enrolled who were 67 males and 26 females with male to female ratio of 2.5:1. These patients were in age range from 5 years to 67 years with mean age of 37 ± 13 years. Majority of the patients presented in 2nd and 3rd decade of life. Average duration of the symptom was 7 years. Most of the patients were from lower socioeconomic group (56%). In this study 90 patients (96.78%) had atticofacial type tympanic perforation while 3 patients (3.22%) presented with tubotympanic type tympanic perforation with commonest presentation of ear discharge (100%). The presentations of these patients were ear discharge (100%), hearing loss (100%) and perforation in tympanic membrane [100%] (Table 1). In majority of patients (54.8%) there was mild to moderate hearing loss (Fig. 1). Regarding operative findings in this study we observed total tympanic membrane perforation in 36 patients (38.8%) among the atticofacial type while cholesteatoma was the commonest finding in 44 patients (47.31%) having atticofacial type disease (Table 2).

Table 1: Clinical features of patients in this study (n=93)

| Clinical Feature | No. | % |
|----------------------|-----|-------|
| Symptoms | | |
| Ear discharge | 93 | 100.0 |
| Hearing loss | 93 | 100.0 |
| Earache | 35 | 37.63 |
| Headache | 2 | 2.15 |
| Dizziness | 9 | 9.67 |
| Vomiting | 5 | 5.37 |
| Signs | | |
| Ear drum perforation | 93 | 100.0 |
| Mastoid Abscess | 31 | 33.3 |
| Facial Nerve palsy | 15 | 16.12 |
| Mastoid fistula | 11 | 11.82 |
| Nystagmus | 7 | 7.52 |

Fig.1: Level of hearing loss observed in this study

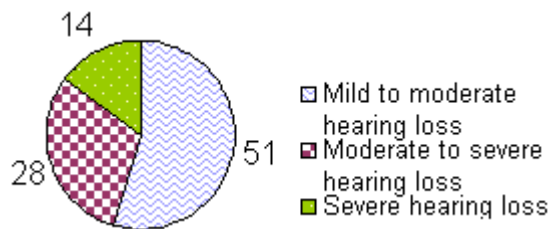


Table 2: Operative findings in chronic suppurative otitis media in this study (n = 93)

| Type of disease | Operative finding | No. | % |
|----------------------|----------------------------------|-----|-------|
| Tubotympanic disease | Total ear drum perforation | 63 | 67.74 |
| | Subtotal ear drum perforation | 44 | 47.31 |
| | Large size ear drum perforation | 30 | 32.2 |
| | Medium size ear drum perforation | 14 | 15 |
| Atticoantral disease | Cholesteatoma | 44 | 47.31 |
| | Granulation tissues | 44 | 47.31 |
| | Ossicular erosion | 26 | 28.0 |
| | Facial nerve dehiscence | 3 | 3.22 |
| | Labyrinthine fistula | 3 | 3.22 |

DISCUSSION

Chronic suppurative otitis media is still major cause of morbidity and mortality in developing countries like Pakistan. Although complications associated with chronic suppurative otitis media had been reduced to some extent due to awareness in public regarding treatment of discharging ear and taking appropriate therapy for otorrhea advised by otolaryngologist.⁹ In this study we noticed that this is not the disease of poor because some patients belonged to upper class of the society. However main bulk of the patients was from low socioeconomic stratum (56%) which is in accordance to study of Baig.¹⁰ Most of the patients presented at 2nd-3rd decades which is in accordance to study of Abdullah¹¹ who found that the age of the patients ranged between 5 months to 72 years (mean, 31years) with majority of the patients (86%) were adults and 9 (14%) were children. In this study males were predominant with male to female ratio of 2.5:1. which is contradictory to the study of baig where females were doubled the male.¹⁰ Probably the reason may be difficult access of females to health facility in our society due to strict cultural taboo where female are not allowed to go outside the home. In this study majority of patients (52.83%) having safe type disease which is in keeping with results of Bertoli.¹² The main presentations of chronic suppurative otitis media in this study were ear

discharge (100%), hearing loss (100%) and earache (37.63%) which are comparable with results of Sadoghi¹³ who reported otorrhea 91%, otalgia 48%, poor hearing 94%, true vertigo 2% and facial nerve paralysis 1%. In this study tympanic membrane perforation was medium size in 15%, large size in 32.1%, subtotal perforation in 47.16% and total perforation in 67.92% while in Akayleh's¹⁴ study the distribution of the patients according to the size of the perforation was 38 patients (31.66%) had small central perforations, 53 patients (44.16%) had medium size central perforations. Large central perforations were present in only 29 patients (24.16%). However in Abdullah's¹¹ study presentations of patients were otorrhea 92%, earache, 41%, reduced hearing 70%, tinnitus 19% and vertigo/giddiness 11%. In majority of cases (54.8%) there was mild to moderate hearing loss which was found in other studies.^{15,16} Operating findings in this study were total tympanic membrane perforation in 63 patients (67.92%) among the tubotympanic type while cholesteatoma was the commonest finding in 44 patients (47.16%) having atticoantral type disease. Similarly Memon and colleagues¹⁷ found that in unsafe disease there were cholesteatoma, granulation tissue and polypoidal mucosa, and ossicular damage. Likewise a study was conducted by Garap who noticed that otorrhea remained the most common presentation in all patients. Postauricular abscesses and fistulae were seen frequently. Cholesteatoma and granulation with polypoidal mucosa were frequent operative findings. Five (6%) patients had preoperative facial paralysis.¹⁸

CONCLUSION

Chronic suppurative otitis media is still a challenge for developing country. When this disease is not treated at early stage may rise to life threatening complications. So a high index of suspicion of intracranial complications may be kept in mind during dealing a patient with chronic otorrhea. Atticoantral type disease ear may be treated with mastoidectomy operation successfully.

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