Changing trends in clinical presentations and management of chronic otitis media with complications

Chronic suppurative otitis media, infection of the middle ear, is a common disease in the developing countries and the complications associated with it still pose a major problem in the developing countries. The proximity of the middle ear cleft and mastoid air cells to the extracranial and intracranial compartments places structures located in these areas at increased risk of infectious complications. Complications are seen more in the rural population than in urban population. Despite the fact that incidence of chronic suppurative otitis media related complications has significantly decreased since the introduction of antibiotics this clinical problem has not been eliminated yet. The complications chronic suppurative otitis media remains a serious concern, particularly in developing countries and socioeconomically poor regions. Complications are more common in patients having atticoantral type otitis media than in patients with tubotympanic type of otitis media.

The incidence of extracranial and intracranial complications of chronic suppurative otitis media and cholesteatoma has decreased with the proliferation of antibiotics early in the twentieth century. However, these complications continue to occur, and can be lethal if they are not identified and treated properly. Furthermore, with the continued development of multi–drug-resistant pathogens and immunocompromised diseases, these complications may again become more prevalent as our current antibiotics become less effective. In such a piquant clinical environment it becomes inevitable to review the changing trends in presentation of the disease and its complications in order to understand and instill the most appropriate management for the same.

Review of literature showed that many studies have been done worldwide to analyse the complications associated with chronic otitis media, their incidence, presentations and the management trends followed. Of these innumerable studies that have been mentioned in literature worldwide, the most salient ones have been reviewed to cognize the disease trends in different parts of the world.

A prospective descriptive study was done in Bangalore Medical College hospital from July 2008 to June 2013. The institute caters to both urban and rural population and it is a referral centre in the state.

This aim of this prospective descriptive study was to know the changing trends in the presentations and management of atticoantral type of chronic suppurative otitis media with complications. The following observations were recorded in each patient.
1. Age
2. Sex
3. Socio economic status/Domicile of the patient
4. Literacy status
Observations & Conclusions:

In this study there were 81 patients with atticoantral type of chronic otitis media with complications. Number of patients are 81 but complications are 124. This is because many patients had more than one complication. There were 69 extracranial complications and 55 intracranial complications. The incidences of extracranial complications were more than the incidences of intracranial complications. The commonest extracranial complication was subperiosteal mastoid abscess and the commonest intracranial complication was brain abscess.

The conclusions of this study were:

1. This prospective study has shown that complications have an increasing incidence in older children and adolescents. There is an increased incidence among older children and adolescents.
2. An increase in the incidence of multiple complications was observed in this study. It was observed that intra cranial complication was frequently associated with another intra cranial complication.
3. Correlation of extra and intra cranial complications according to gender showed that post aural fistula is more common in men (p value 0.062).
4. Statistical correlation of extra and intra cranial complications to the age showed that facial palsy was more common in the age below 20 yrs (p value 0.012), labyrinthine fistula was more common between 20 to 40 yrs of age (p value 0.054) and cerebellar abscess was more common in the age below 20 yrs (p value 0.095). The present study is the first of its kind to correlate the complications of atticoantral type of chronic suppurative otitis media with the age of the patients.
5. Mastoiditis was found to be more common in middle socio economic status patients (p value 0.056+) and temporal lobe abscess was more common in low socio economic status patients (p value 0.055+).
6. In the present study there were two patients with family history of complications due to cholesteatoma.
7. Few patients had bilateral atticoantral disease. Bilateral complications and contralateral complications are seen rarely. Bilateral concurrent mastoidectomy may be indicated in cases with bilateral complications.
8. Prolonged history of ear discharge was seen in majority (56.2%) of the patients.
9. Headache (58%) and fever (54.3%) were the commonest symptoms of complications.
10. Polyp or granulations completely filling deeper part of the external auditory canal are unsafe and they can lead to complications.
11. Majority of the complications were due to attic perforations.
12. Of the 81 patients in this study 13 patients had mixed hearing loss of which 2 were associated with extra cranial complications 7 with intra cranial complications and 4 with both extra and intra cranial complications. Mixed hearing loss was significantly more with the latter two (p=0.025).

13. Mixed infections were more common in patients with intracranial complication. Pseudomonas and Proteus combination was more common. Peptostreptococci was commonly isolated in young adolescent patients with intracranial abscesses. Anaerobic organisms were isolated predominantly in cases of otitis media associated with intracranial complications. Infecting organisms in case of bilateral chronic suppurative otitis media were similar.

14. Mastoid bone was hypocellular in majority of the cases.

15. Presence of both cholesteatoma and granulations was a potential risk factor for complications.

16. Compared to earlier reports, the incidence of subperiosteal abscess is found have decreased.

17. Asymptomatic lateral sinus thrombosis was not seen on the right side.

18. Association between lateral sinus thrombosis and otitic hydrocephalus was not found to be significant.

19. Small subdural empyema in an unusual location (interhemispheric region) which responded to antibiotics therapy was managed conservatively. Early mastoidectomy helps to remove the source of infection in the ear.

20. Small otogenic brain abscess, which are less than 1.6 cm in size responded to treatment with antibiotics and was managed conservatively. Surgery was required only for the management of underlying atticoantral ear disease.

21. Early mastoidectomy following neurosurgical drainage of the brain abscess was found to be effective in this study. However, specific parameters dictating staged versus simultaneous surgery have not yet been reported or established in literature.

References:


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Dr. B. Viswanatha, is presently working as a professor of ENT at Bangalore medical college and research institute. He got his PhD degree from Rajiv Gandhi University of Health Sciences, Karnataka. He has published many papers in international and national journals. He is one of the medical editor & author of emedicine Medscape reference - Otolaryngology and Facial Plastic Surgery. Many reputed international journals have taken him as a reviewer and editorial board member. He is editor-in-chief of “Research in Otolaryngology” journal.

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