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Case Report

The bloated ear drum- A unique case of bullous myringitis

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ABSTRACT

Otological conditions range from a wide spectrum of congenital anomalies to inflammations, infections and complicated tumours that often not much is said about simple conditions such as myringitis. Bullous myringitis is not just a very unique condition but it also associated with a much-dreaded condition in the form of sudden SNHL and needs immediate diagnosis and timely treatment. Here we present to you one such case report and the management.

1. Introduction

Inflammation of the tympanic membrane is known as myringitis, involving the lateral surface of the tympanic membrane and sometimes even the external auditory canal wall. There are several types of myringitis such as granular, bullous, haemorrhagic bullous and fungal.[1] It is also one of the causes of otitis externa. Since the 19^{th} century the aetiology of bullous myringitis was attributed it to bacterial infection by some while others to viral but it is still an enigma.[2] Less than 10 cases reported over the past 2 decades. Due to the inflammation of the TM, it may also involve the middle ear, leading to conductive hearing loss but, apart from this several studies have reported even SNHL associated with bullous myringitis making its speedy diagnosis furthermore essential.[3] Here we present a rare case of haemorrhagic bullous myringitis and its management.

2. Case Report

A 19yr old male patient presented to the ENT OPD with the complaints of right ear pain and ear discharge for 3 days, associated with blocked sensations and reduced hearing. The pain was acute in onset, dull aching and progressive in nature, aggravated by chewing and not relived-on analgesics. He gave history of nasal obstruction and rhinitis for 10 days with 2 episodes of fever mild grade and not associated with chills or rigors. In Otoendoscopy congested and oedematous external auditory canal with a congested tympanic membrane and multiple bullae over its lateral surface seen (Figure 1). Tuning fork tests suggested right mild CHL Diagnosis of Bullous Myringitis was made in view of classical presentation. Treatment with broad spectrum antibiotics and anti-inflammatory enzymes and analgesics along with a short course of oral prednisolone was given. At 3 days of follow up, the patient was symptomatically better, otoendoscopy showed that bullae had ruptured and haemorrhagic content present, confirming the diagnosis of haemorrhagic BM (Figure 2). Fluid sent for culture sensitivity showed coagulase negative staphylococcus species. After a week audiometry was suggestive of mild right conductive loss with no SNHL. At 2 weeks follow up the patient showed complete symptomatic relief, with hearing improvement and the tympanic membrane was mildly congested but intact.

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Fig. 1: Otoendoscopy image showing one large and many small hemorrhagic bullae

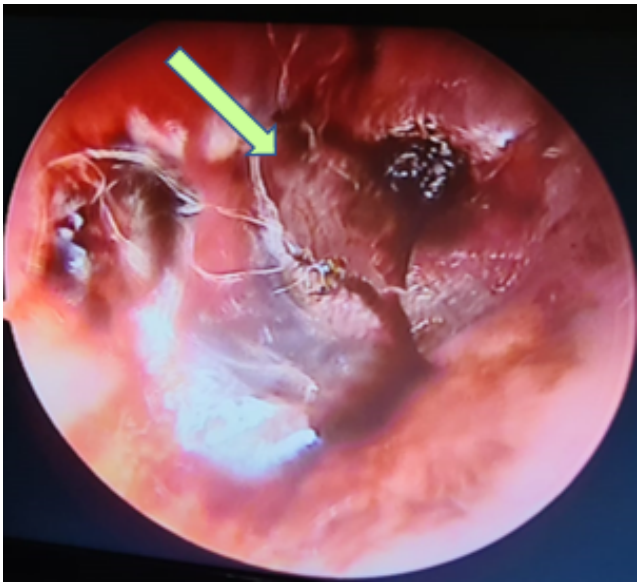

Fig. 2: Bullae have ruptured and hemorrhagic content and clots seen

3. Discussion

Bullous myringitis is termed, due to its typical pathognomic feature of bullae over the tympanic membrane. The pathogenesis is contributed to recurrent upper respiratory tract infection and eustachian tube dysfunction.[3] The condition is also more common in the paediatric age group, with studies showing a preponderance among infants.[4] The commonest symptom is ear pain, followed by reduced hearing and symptoms of rhinitis or pharyngitis accompanying this complaint.

The examination of ear shows inflamed EAC with the pathognomic fluid or blood filled bullae, which upon rupture lead to resolution.[5] While some authors such as Milligan in the 20th century discuss in detail the viral aetiology not many were able to isolate viruses form the fluid of the bullae, on the other hand several studies such have obtained organisms similar to those found in acute otitis media such as haemophilus influenzae, Beta haemolytic streptococci, streptococcus pneumonia,[6,7] but none have shown Coagulase negative staphylococci as we found.

Hearing loss is another common feature of this condition which can be conductive or mixed, but the reason for a SNHL isn't well understood, though data points towards a cochlear form of loss, attributable to viral infection but this isn't substantiated well.[3,8] Conductive loss is attributable to myringitis or otitis media. Our patient had a typical mild CHL. The course of the disease is usually short otalgia and otorrhoea subside by 1 week, only the middle ear inflammation like OME takes about 4-5 weeks for complete resolution.

The management is providing analgesics with anti-inflammatory medications and accompanied by antibiotics and treatment of the rhinitis or pharyngitis as we did in our case. Topical medications used as a combination of antibiotics and steroids prevent superadded infection.[9,10] Some studies have said that the use of systemic steroids helps to tackle both the inflammation as well as prevent or reduce the component of SNHL which might coexist. Very few cases have required surgery in the form of myringotomy, unless it is a refractory BM.

4. Conclusion

Bullous myringitis is a rare condition, though at the offset it might seem less important as against other complex ear pathologies, it is a very painful and acute condition with complications of hearing loss sometimes sudden SNHL and prolonged middle ear infection. The identification and differentiation of this entity from AOM and Otitis externa of other causes is imperative to ensure immediate management, and simultaneously treat the underlying nasal and eustachian tube pathologies as well which are the root cause.

5. Source of Funding

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6. Conflict of Interest

None.

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