



Bullous Myringitis: An enigmatic disease and insights into its management.

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Introduction

Myringitis bullosa is an unusual condition of the tympanic membrane which can be easily confused with Acute Otitis media and another common entity found in hot, humid climates of our Indian subcontinent namely Granular Myringitis. Granular Myringitis is the product of continuous scratching of the drum (usually done with a feather!) with the resultant granulation and may end up in scarring the drum.

On the other hand pathogenesis of Myringitis bullosa is a very poorly understood and presentation is rare enough not even to have been subjected to scrutiny of any major Randomized clinical trial(3).

Case report

Mr. Ag, a thirty year old man, painter by profession presented to Institute OPD clinic with history of severe Right ear pain and hard of hearing from past 1 week. He gave positive history of cold and fever a week back for which he had not taken any treatment. He was heavy smoker, puffing 10 to 15 cigarettes (called beedis) a day and an occasional alcoholic. He did not have any other medical conditions and did not use any topical Ear drops.

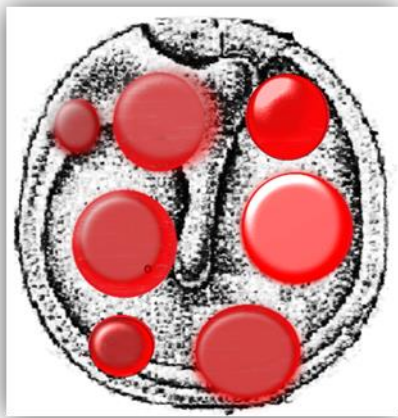


Fig 1. Schematic picture of Bullous Myringitis drawn with Open source Inkscape (Authors wish to thank the programmers of open source drawing package - Inkscape)



Figure 2: Oto- Endoscopic photograph of the tympanic membrane containing multiple reddish bulging bullae

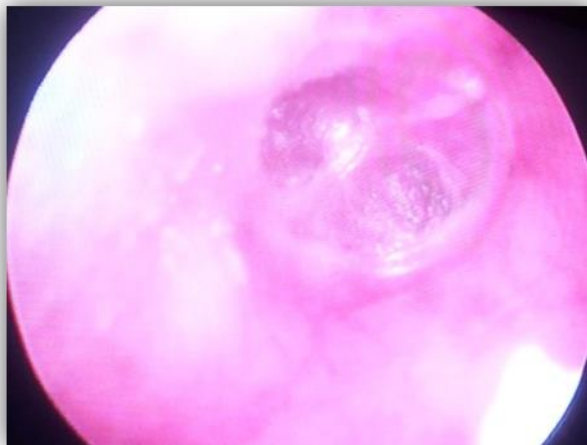


Figure 3: Photograph taken after a week, showing resolving Bulla and gradual return of drum to normalcy.

On cursory examination of the ear, the Right Tympanic membrane was found to be reddish and bulged; a diagnosis of Acute Otitis Media was made. On further Oto-endoscopic examination revealed a surprise as the tympanic membrane was found containing multiple reddish bulging bullae: Myringitis bullosa. Valsalva's maneuver was done and mobility of the tympanic membrane was noted ruling out Middle ear pathology. A pure tone audiogram revealed a Right

Mild sensorineural hearing loss. The ear was free from any discharge so there was no need for a ear swab and culture.

A broad spectrum Macrolide antibiotic Roxithromycin 150mg BID, routine NSAID (Aceclofenac 100mg and Paracetamol 325mg) and decongestants were given. Patient became symptom free in 2 days' time; the bullae resolved in the following week and were documented. Serial Pure Tone Audiogram done after 2 weeks did not show any improvement in the different thresholds.

Discussion

The causative agent of Bullous Myringitis is unknown. But the association with common cold is clearly illustrated in this case. The condition is rare enough that even main stream textbooks of Otolaryngology like Glasscock & Shambaugh's Surgery of the Ear do not carry a photograph of the condition (3).

Inflammation is thought to involve the lateral surface of the tympanic membrane and the medial portion of the canal wall (4). The bullae are understood to emanate from the Epidermis of the Tympanic membrane (7). Perhaps the bullae are the end result of a viral or Mycoplasma invasion of the Tympanic membrane (9 and 10); then again this is topic of debate, with little evidence. Another idea suggested, is that this represents a non specific reaction of the tympanic membrane (3), and the condition may be an evanescent one like Serous Otitis media in Children.

Again the rarity of this condition does not allow any detailed research or speculation to be made (3). Majority of the patient (67%) (1) show evidence of sensorineural loss like in our index case (2 and 5). The Authors contemplate that could this represent an inflammatory response in

Cochlear nerve (and the tympanic membrane may be middle ear) to a Neuro-trophic virus like say Herpes simplex (11) or this is an entirely different component of this condition.

Role of steroids in the management of this condition is even more controversial (4). Authors opine that steroids are at best avoided as this may predispose to secondary bacterial infection. This is opposite of the practice described in Glasscock & Shambaugh's Surgery of the Ear 5th Edition which advocates steroids as the main treatment, at a dose of prednisone 1 mg/kg/day for 7 days, tapering doses after a week (3).

The choice of antibiotic is influenced by suspected role of Mycoplasma which is always sensitive to Macrolide antibiotics like Roxithromycin or Erythromycin (4). Roxithromycin was used successfully in this index case. For children, a dose of 2.5 - 5.0 mg/kg of body weight, given in twice a day.

There seems to be no logic of rupturing the bulla, this would inevitably lead to secondary bacterial infection with resultant tympanosclerosis and scarring, in addition adding to the agony of the sufferer. This point is a diametrically opposite stand taken, for a common paradigm of bulging Acute Otitis Media AOM where a simple Myringotomy settles the pain and fever in the matter of hours.

Conclusion

Authors would like to remind the readers that the differential diagnosis of rare Bullous Myringitis, has to be kept in mind before sharpening our Myringotomy knives, tentatively looking at a Bulging tympanic membrane.

Bullous Myringitis can be conservatively managed with broad spectrum antibiotic presumably Macrolides like Roxithromycin or Erythromycin, routine NSAID and decongestants. Presence of

a sensorineural loss is an indubitable definite added diagnostic criterion to this enigmatic disease (5 and 6). The patient may continue to have residual Sensorineural hearing loss after the bullae have subsided.

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