

Case Report

Primary tubercular otitis media: a rare case report

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ABSTRACT

Tubercular otitis media is a rare presentation of tuberculosis. High index of suspicion is required for diagnosis. We present a rare case of tubercular otitis media presenting as post auricular swelling with no evidence of pulmonary or any other foci of tuberculosis. Diagnosis was made on the basis of acid fast bacilli seen in fine needle aspirate. Anti-tubercular drugs were initiated and patient responded well to treatment.

Keywords: Tubercular otitis media, Fine needle aspiration, Anti-tubercular drugs

INTRODUCTION

Tuberculosis is a major health concern in developing countries like India. The classical picture of tuberculous otitis media (TOM) was explained by Wilde as a disease characterised by painless, insidious onset of ear discharge, multiple perforations in the tympanic membrane, pale granulations in middle ear cleft.¹ However, the classical textbook picture is rarely seen these days. The incidence of tuberculous otitis media has been reported to be 0.04% to 0.9%.² Tuberculosis affects the middle ear through three routes either through the Eustachian tube, blood borne dissemination or direct implantation through the external auditory canal and tympanic membrane perforation.³ The clinical presentation of TOM is nonspecific and varied. A chronic otorrhea resistant to usual antibiotics is a common presentation.⁴ Many of these patients end up getting operated for chronic otitis media. They may land up with persistent otorrhea, delayed or incomplete healing.

The computed tomography (CT) scan findings of TOM include soft tissue density in the middle ear and mastoid. There may not be any bone erosion.⁵ As these findings are not pathognomonic of TOM, the accurate diagnosis is based on histopathological examination (HPE) or

microbiological culture. In recent years extra pulmonary tuberculosis has more frequently been associated with mastoiditis in patients with immunodeficiency state. Although otomastoiditis is a very rare complication of tuberculosis today, when occurs it may cause significant morbidity. Facial paralysis and permanent hearing loss may develop. We report a rare case of tubercular otitis media presenting with mastoid abscess. Fine needle aspirate showed acid fast bacilli after which patient was put on anti-tubercular drugs.

CASE REPORT

A 25 year old female presented to our outpatient department with left ear pain for 3 months and left ear discharge for 2 months. The discharge was mucopurulent and non-foul smelling. The patient developed swelling in the post auricular region one month later which was associated with pain. On examination, a 2 × 2 cm swelling was seen in the post auricular region which was fluctuant and tender to touch. Otoscopy revealed sagging of the posterior canal wall and granulations over the tympanic membrane.

Non contrast CT temporal bone was done which showed soft tissue density in the left middle ear, mastoid cells and

external auditory canal with resorption of mastoid air cells. Fine needle aspiration cytology (FNAC) was done from the post auricular swelling. Serosanguinous fluid was aspirated and sent for microbiological examination. Acid fast bacilli were seen in the aspirate. A diagnosis of tubercular otitis media was made and patient was started on antitubercular drugs after consultation with pulmonologist. Patient responded well to the treatment.



Figure 1: High-resolution computed tomography temporal bone coronal view showing soft tissue density.

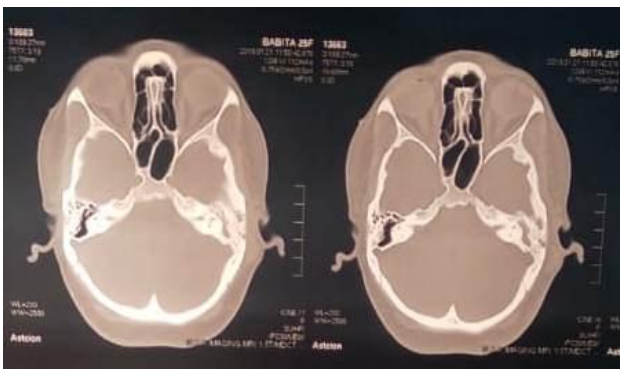


Figure 2: High-resolution computed tomography temporal bone axial view showing soft tissue density.



Figure 3: Healed post-auricular wound.

After 2 weeks of treatment, the post auricular swelling decreased in size but otorrhoea and pain persisted. Patient was started on anti-inflammatory drugs and topical ear drops. Medicated wicks were also used intermittently to reduce ear canal swelling. ATT was continued. 4 weeks after treatment, ear canal swelling reduced remarkably,

granulations over tympanic membrane disappeared and a normal looking tympanic membrane began to appear. The post auricular swelling disappeared completely. At the end of intensive phase of ATT, patient's condition was almost back to normal state. She was advised to complete the continuation phase of ATT.

The unusual feature in this case was the presence of pain which is atypical of tubercular otitis media.

DISCUSSION

The occurrence of tuberculosis of the middle ear has dramatically decreased, from about 1.3-18.6% in the beginning of the last century, down to 0.04% of all cases of chronic suppurative otitis media according to a recent study report.¹ This could be due to better hygiene, improved laboratory facilities, bacille Calmette-Guerin (BCG) vaccination and a variety of specific drugs. Tuberculosis of the middle ear and mastoid may occur as a result of haematogenous or lymphatic spread or by extension to the middle ear cleft through the eustachian tube.

Tubercular otitis media was first described in 1953.⁶ The classical clinical features are less commonly seen these days. A persistent discharge not responding to conventional treatment should raise the suspicion of tuberculosis. Our patient had continuous discharge for 2 months which failed to respond to topical and oral antibiotics and progressed to form a post-auricular swelling.

Diagnosis of tubercular otitis media requires high index of suspicion. Demonstration of AFB in ear discharge is difficult. The positivity for AFB in ear discharge varies from 5 to 35% and on repeated examinations it improves to 50%.⁷ In our case, AFB were seen in the aspirate from the post-auricular swelling. A CT scan was done to look for the extent of disease. It also helps in identifying areas of bone erosion and facial nerve anatomy.

Mainstay of treatment is anti-tubercular therapy. ATT can be started on clinical and histopathological suspicion. Early start of treatment is mandatory to avoid development of complications. Standard duration of treatment is 6-9 months which can be extended based on clinical course.⁸ Penetration of anti-tubercular drugs is less in middle ear and mastoid. Our patient started responding after 2 weeks of therapy but complete response was only seen after 4 weeks.

Evidence has failed to show effectiveness of surgery in such cases. Most of the authors do not recommend surgery in absence of complications.⁹ Very commonly, diagnosis of tuberculosis is suspected intraoperatively based on surgical findings. Surgery still remains an option for cases not responding to antitubercular treatment as drug penetration in the middle ear is not good.⁸

CONCLUSION

Tubercular otitis media remains a rare disease with high index of suspicion required for diagnosis. Histopathological demonstration of AFB remains the gold standard for diagnosis. Early institution of antitubercular treatment is mandatory for prevention of complications. Surgery is indicated only for unresponsive patients

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