

Resistant *Mycobacterium tuberculosis* in a case of Chronic Suppurative Otitis Media

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Tuberculosis in India is still a major problem even after over 43 years of control programme. A majority of TB patients suffer from multidrug resistant *Mycobacterium tuberculosis*. The present paper reports a rare incidence of *Mycobacterium tuberculosis* in a case of chronic otitis media, an otological infection which has not been reported earlier.

Keywords: *Mycobacterium tuberculosis*, Chronic otitis media, Otological infection.

The common organisms associated with cases of chronic otitis media are *Pseudomonas* spps, *Proteus* spps, *Staphylococcus aureus*, *Streptococcus* spps, anaerobic cocci, *Bacteroides* spps and *Candida albicans*¹. During the past few years cases of extrapulmonary tuberculosis are on the rise. About 80% of India's four million TB patients suffer from multidrug resistant *Mycobacterium tuberculosis*. Mycobacteria other than tuberculosis have been reported earlier in otological infection but not *Mycobacterium tuberculosis*³. We report a rare incidence of *Mycobacterium tuberculosis* in a case of chronic otitis media which has not been cited in any recent study till date.

Case study

A thirty year old woman was referred in May 2005 for sudden hearing loss in the left ear. The onset was acute and associated with scanty discharge. On examination the tympanic

membrane was perforated and thickened. Cholesteatoma was filled in attic and antrum of left ear whereas the right ear was found to be normal. Mild anaemia of 12.5mg% of HB was noted. Leukocyte count was found to be in normal range. Chest radiograph showed infiltration of both lungs and unilateral hilar adenopathy. She also complained of low grade fever and frequent giddiness since three years. She had suffered from tuberculosis lymphadenitis for which she was treated in 2003. She did not take the full course of treatment as she felt the symptoms disappear. The discharge was processed for aerobic, anaerobic and fungal growth. Ear swab yielded no anaerobic and fungal growth. Due to the past history of the patient, the sample was also processed on Lowenstein-Jensen Media. Dysgonic growth was detected on the 22nd day of incubation. Its acid fastness was confirmed. The isolate was niacin and nitrate positive and susceptible to paranitrobenzoic acid (500µg/ml) and characterized as *Mycobacterium tuberculosis*.

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Drug susceptibility testing of *Mycobacterium tuberculosis* was carried out by Resazurin Microtitre Plate Assay against Rifampicin, Streptomycin and Ciprofloxacin^{3,4}. It was found to be resistant to all.

RESULTS AND DISCUSSION

Mycobacterium tuberculosis was the primary isolate bacteriologically confirmed in this patient. Tuberculous infection evolved due to an existing ear infection. Tubercular otitis media is not considered to be a common cause of chronic otitis media but is a major cause of concern and should also be taken into consideration while processing chronic ear discharge samples.

Pathogenesis of tubercular otitis media may be acquired by coughing up sputum laden with tubercle bacilli. In this case, the history suggests that the patient did not follow the subscribed drug therapy which resulted in the persistence of tubercle bacilli, leading to foci of infection at other sites of the body. There are chances of this state being confused with chronic conditions and hence neglected. Patients with

known or suspected TB and chronic otitis were therefore evaluated for tubercular otitis media.

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