
CASE REPORT

Tuberculous Mastoiditis in Children

by

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Abstract

A case of tuberculous mastoiditis

The authors emphasized that though up till now such cases are still unfrequently encountered one should always be aware that tuberculous mastoiditis in infants and young children has quite high prevalence.

Introduction

Despite the introduction of effective therapeutic agents three decades ago, tuberculosis remains the most common infectious cause of death in the United States, moreover in developing countries (Saltzman and Feigin, 1971).

Tuberculous mastoiditis is today a rare disease in civilized communities, as the incidence of tuberculous mastoiditis

Walfowitz (1972) stated that in patients with chronic suppurative otitis media, active tuberculosis was the cause in 50% of the infants under one year of age, in 27% of the patients under two years and only in 2% of the patients under 15 years.

Soeharjono et al., (1968), found three cases of tuberculous mastoiditis over a period of ten years in the Dr. Cipto Mangunkusumo General Hospital, Jakarta, and ten years later we had only one case that will be presented in this manuscript. But as the diagnostic procedure for tuberculous mastoiditis is not routinely done in all cases of chronic mastoiditis in children with tuberculosis, the exact incidence of tuberculous mastoiditis in our hospital is not known.

Adam and Rubio (1977) reported 13 cases of tuberculous mastoiditis over a period of 17 years in the Children's Memorial Hospital Oklahoma. Saltzman and Feigin (1971) reported one case of tuberculous mastoiditis in a three months old child as a manifestation of miliary

tuberculosis. Walfowitz (1972), reported three cases with particular emphasis on the complication expected in tuberculous mastoiditis.

This is to report a case of tuberculous mastoiditis in a young boy of two years old, with particular emphasis on the awareness that tuberculous mastoiditis in infants and young children has a high prevalence, though till now such cases are infrequently discovered (Adam and Rubio, 1977).

Case report

The patient was a 2-year-old Indonesian young boy, who was admitted to the Dr. Cipto Mangunkusumo General Hospital, Department of Child Health, with chronic perforated otitis media and abscess of the mastoid. Based on the history, physical and laboratory examination the possibility of tuberculous mastoiditis was not thought of. The most likely diagnosis was simple bacterial mastoiditis, since the boy had no history of contact with a tuberculous patient, lived in a healthy family, was active though rather undernourished, had normal heart and lungs, negative tuberculin skin test and segmented leucocytosis on differential count.

Mastoid surgery was undertaken to remove sequestrars and to obtain material for histological examination. The histological examination revealed tubercle formation with Langhans giant cells and some caseation (Fig. 1).



FIG. 1



FIG 1 A

On consecutive examination the tuberculin skin test was positive, and the X-ray of the lung revealed consolidation of the upper right lung, infiltration of the lung tissue, marked pleural reaction and enlargement of the paratracheal lymphnodes (Fig. 2).

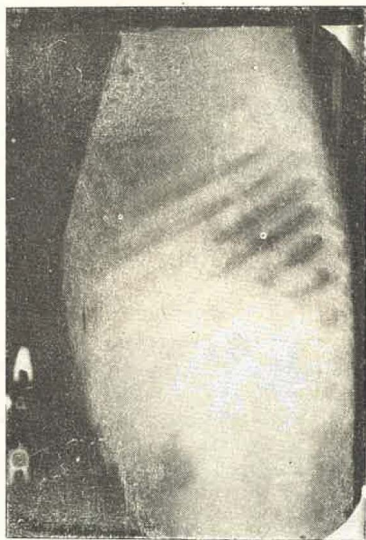


FIG 1 B



FIG 2

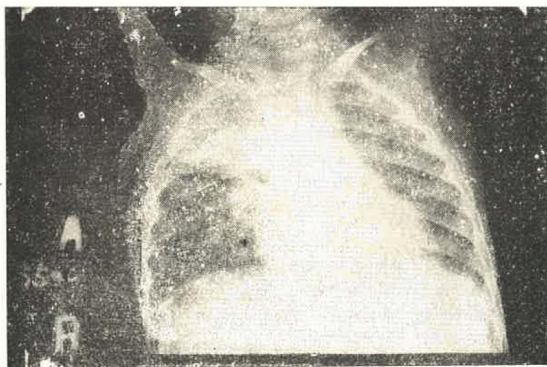


FIG. 2 A

The response to chemotherapy with streptomycin, isoniazide and para amino salicylic acid was satisfactory.

Unfortunately we failed to demonstrate the presence of acid fast bacilli, either from the auricular drainage, gastric lavage or from the sequester.

Discussions

Effective therapy for tuberculosis has existed for three decades, but the diagnosis of the disease remains a difficult problem, especially in children. Culture often could not be expected and the growth is too slow to be of benefit in the initiation of therapy. Tuberculin skin test may give a false negative reaction, such as in our case, which may be due to technical error or others, so that eventually the diagnosis was established based on histological examination.

Saltzman and Feigin (1971), noted that 60% of cases of tuberculous otitis media are characterized by a painless lesion, associated with profound hearing loss, 65% are accompanied by cervical adenopathy, 68% associated with pulmonary lesion and facial palsy occurs in 36%.

Tuberculous mastoiditis which is supposed to be infrequent must be considered in the differential diagnosis of chronic mastoiditis, chronic perforated otitis media, with or without systemic tuberculosis.

Lincoln and Sewell (1963), stated that the diagnosis of tuberculous mastoiditis was based on:

- Positive tuberculin skin test
- Painless chronic perforated otitis media
- Presence of tuberculosis in other organs
- Discovery of acid fast bacilli from aural discharge or sequester
- Profound, progressive and early hearing loss.

Walfowitz (1972) added that in case there were difficulties in finding acid fast bacilli, the diagnosis of tuberculous mastoiditis could be made if cure was observed with specific therapy.

In our case, although acid fast bacilli could not be demonstrated in the aural discharge or others, the diagnosis of tuberculous mastoiditis was established based on the positive tuberculin skin test, painless chronic perforated otitis media, the presence of pulmonary tuberculosis, specific picture of the sequester on histologic examination and lastly the cure with specific therapy.

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