

NASOPHARYNGEAL TUBERCULOSIS PRESENTING AS A MASS

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SYNOPSIS

A middle-aged Chinese lady developed tuberculosis of the nasopharynx presenting as a mass, while she was on treatment for active pulmonary tuberculosis.

INTRODUCTION

Tuberculosis of the upper airways is usually secondary to extensive smear-positive pulmonary tuberculosis. With the advent of modern chemotherapy, upper respiratory tract tuberculosis has become uncommon. A review of the literature indicates that nasopharyngeal tuberculosis is a rare entity. The present case is of particular interest as nasopharyngeal tuberculosis developed after the patient had been on treatment for pulmonary tuberculosis for about a year, and it presented as a mass in the CT scan.

CASE REPORT

A 54 year old Chinese housewife presented at our chest clinic on March 1983 complaining of unproductive cough for about 3 months. She had no fever, haemoptysis, nasal stuffiness or discharge. Clinical examination revealed a healthy middle-aged lady weighing 51 kg. Routine direct smears of sputum for acid-fast bacilli were negative. Mantoux test (ITU PPD) was strongly positive — 20mm of induration. Chest x-ray (Fig 1) showed soft opacities in the left apex and left first and second intercostal spaces. A repeat chest x-ray after a two-week course of Ampicillin showed no radiological change. In view of the strong tuberculin reaction and lack of response to antibiotics, a diagnosis of active pulmonary tuberculosis was made and she was commenced on Cap Rifampicin 450mg om, Tab INH 300mg om and tab Ethambutol 800mg om. After 3 months of intensive therapy, the Rifampicin was discontinued as the laryngeal swab cultures for acid fast bacilli were negative. She was continued on Ethambutol and Isoniazid and was reviewed at two monthly intervals. On April 1984, she complained of pain over the left side of her face for one week. She was febrile with a temperature of 38°C, post-nasal drip was seen on examination of the pharynx. A mass was noted in the right wall of the nasopharynx from which pus was trickling down. Investigations showed a haemoglobin of 12.7gm/dl, total white count was 12,500/cc (polymorphs 88%), and ESR was 85mm in 1st hour. Chest x-ray (Fig 2) showed no radiological deterioration. No acid-fast bacilli were seen on smear from the post-nasal drip, however tubercle bacilli were grown on culture. Histological examination of the nasopharyngeal mass (Fig 3) revealed a few caseating granulomas and acid-fast bacilli were seen. On the CT scan (Fig 4) a large mass was seen in the nasopharynx. Mucosal thickening was present at the posterior recesses of both maxillary sinus. There was no evidence of bony erosion or intra cranial spread. The patient was put on Rifampicin, Pyrazinamide, Isoniazid and Kanamycin. The pain on the left side of her face abated over the next few days. She was asymptomatic when reviewed a month later, and no post nasal drip was seen.

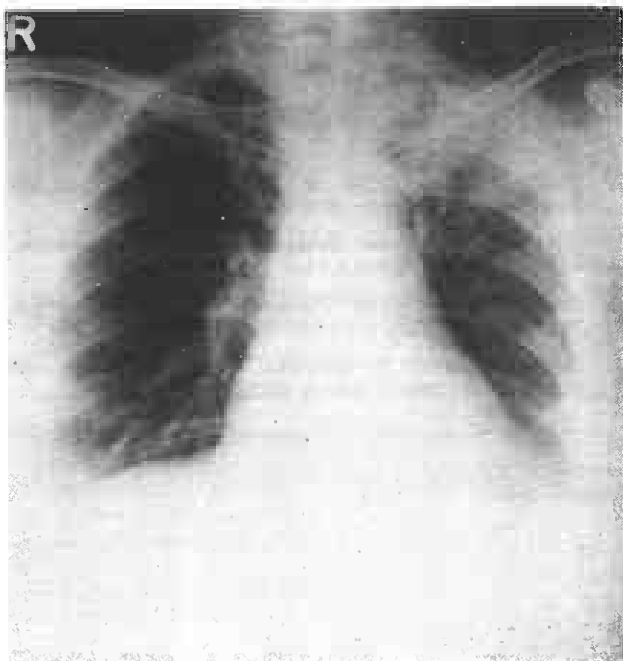


Fig 1 Chest x-ray showing tuberculous infiltrations in the left upper zone

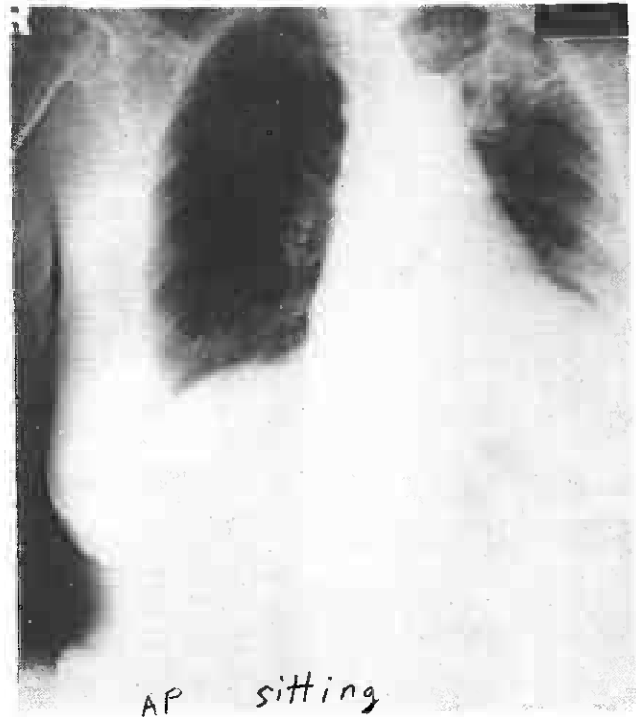


Fig 2 No significant radiological clearance one year after treatment

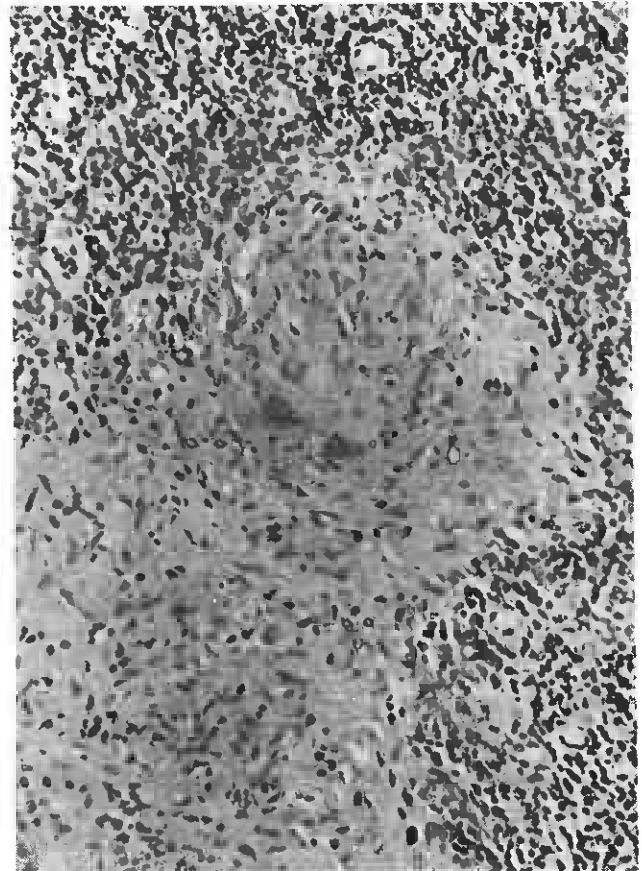


Fig 3 Histological section showing multiple confluent granulomas just beneath the surface epithelium. Granulomas show Langhans' giant cells, caseation and acid-fast bacilli (Ziehl-Neelsen $\times 200$)

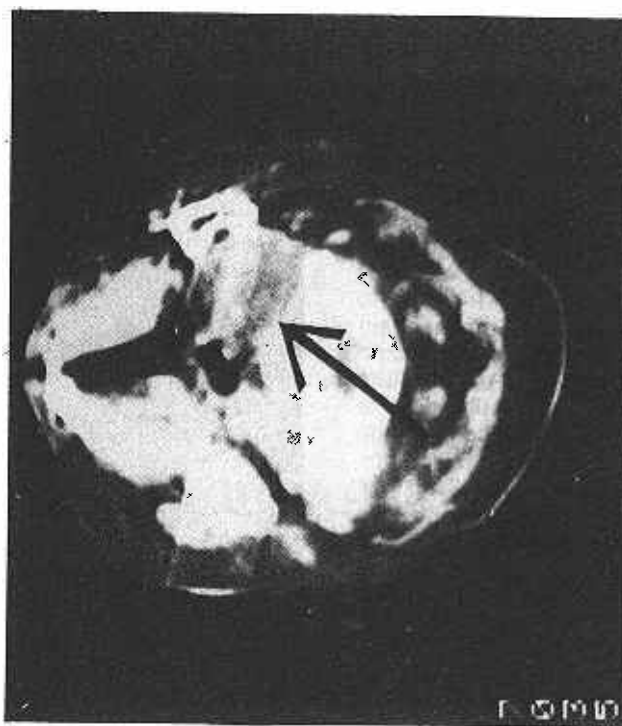


Fig 4 CT scan showing a mass (arrowed) in the nasopharynx

DISCUSSION

Though tuberculosis can affect any system in the body, upper respiratory tract involvement is almost always secondary to advanced cavitary pulmonary tuberculosis (1). It can however, also occur in patients with minimal or moderately advanced pulmonary tuberculosis, as well as in smear-negative cases. In Weidman and Campbell's series (2), 5.6% of the patients had persistently negative sputum, but all had radiological evidence of active tuberculosis. In Rhowedder's collection (3) of 843 admissions for pulmonary tuberculosis, 16 patients (1.8%) had tuberculosis of the upper respiratory tract, but had nasopharyngeal involvement. In the upper respiratory tract, the nasopharynx is the least common site to be affected by tuberculosis (4). Primary tuberculosis of the nasopharynx is extremely rare, and only on occasional convincing case report has been made from time to time (4, 5). An exhaustive search of the literature failed to reveal a single case of nasopharyngeal tuberculosis presenting as a mass in the CT scan. In a middle-age Chinese like ours carcinoma of the nasopharynx is the foremost cause of a space occupying lesion. Other likely causes are granulomatous conditions such as Wegener's granuloma, midline granuloma or leprosy. Tuberculosis should also be considered in the differential diagnosis of patients presenting with a mass in the nasopharynx,

especially if there is radiological evidence of active pulmonary tuberculosis. Post-nasal biopsy from such cases should be sent for culture for acid-fast bacilli, in addition to microscopic examination. It is difficult to explain how our patient developed nasopharyngeal tuberculosis, especially as she had been on anti-tuberculosis treatment for over a year. Furthermore the mycobacterial cultured from her post-nasal drip were sensitive to the drugs she was consuming. We can only speculate that she may have been non-compliant with her medication despite having attended her clinic regularly.

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