Case Report

Tuberculosis of the Malar and Zygomatic bone: A case report"

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Abstract:

A young female presented with painful swelling of right lower neck followed by swelling in the left side of the face associated with dental infection. There was no history of systemic illness. Family history for pulmonary tuberculosis was negative. The hematological, serological and biochemical investigations were normal, however, tuberculin test was strongly positive. CT scan of the face and neck showed a ring-enhancing swelling over the left zygomatic bone with underlying bone erosion and right lower neck lymphadenopathy. The affected areas were excised and histopathology confirmed chronic granulomatous inflammation consistent with tuberculosis of the zygomatic bone. Patient responded to anti-tuberculosis treatment and showed significant improvement upon 9 months follow up. Head and neck tuberculosis can confuse with cancer. This case is presented to make awareness of this rare condition and to familiarize the clinicians. So far only few cases of primary tuberculosis of zygomatic bone have been reported in the literature.

Key words: Tuberculosis, malar, zygomatic bone, dental infection.

Introduction

The resurgence of tuberculosis world-wide and its association with a number of factors such as Acquired Immunodeficiency Syndrome, [1] the emergence of strains with multiple drug resistance, defects in immunization and disease control programmes means a greater likelihood of Otolaryngologists encountering the disease in one form or another. Tuberculosis has been reported in various head and neck sites but involvement of the malar and zygomatic bone is a rare manifestation. [2]

Case report

A 33-year old Indonesian female patient initially presented with history of painful neck swelling of two months duration associated with sore throat. There was another swelling in the left side of the face for two weeks duration associated with toothache. No history of constitutional symptoms or systemic diseases. Family history was negative.

Clinically, the general condition of the patient was satisfactory. A diffuse tender, swelling was noted in the left side of the face associated with another 2 x 2cm size fluctuant, tender swelling in the right lower part of the neck (Figure 1). Two decayed upper molar teeth with pericoronitis in left side were detected.

Blood total leukocyte count, differential counts, erythrocyte sedimentation rate, and serum electrolytes were within normal limits. Tuberculin test was strongly positive. Chest x ray was done and showed no signs of active or old pulmonary tuberculosis. X ray paranasal sinuses showed no bony erosion. CT-scan of head and neck showed an erosion of the left zygomatic bone with rim enhancing soft tissue swelling. (Fig 2-3). The CT scan neck showed a 2 x 2 cm size right cervical lymphadenopathy. The report of fine needle aspiration cytology obtained from cervical lymphadenopathy showed the presence of mycobacterium tuberculosis and no malignant cells.

Anti-tuberculous first line drugs including rifampicine (10 mg / kg), isoniazid (5 mg/kg) and pyrazinaamide (20 mg/kg) was started and the two decayed teeth were extracted. After one month of treatment with antituberculous treatment, the neck lymphadenopathy showed no improvement and patient was not satisfied.

The neck mass and zygomatic mass were excised. The zygomatic swelling was excised via a sublabial approach and curettage of the bone was done (Figure 4).

Histopathological examinations of both removed masses showed giant cells, ganuloma and caseation suggestive of chronic granulamatous inflammation. The Zeil Nelson staining showed acid fast bacilli in the removed neck and face masses consistent with tuberculosis (Figure 5). Fewspicules of bone were also demonstrated in the tissues removed from zygoma.

Anti-tuberculous medication with first line drugs were continued post-operatively for another five months. The patient condition gradually improved and after 8 months of antituberculous treatment, patient showed complete recovery. The follow up investigations including the Mantoux test appeared negative. The WHO recommends 9-12 months treatment for the bone tuberculosis.

(Figure 1): Picture of patient showing swelling in the right lower neck.

Figure 2 - 3: CT scan soft tissue with bone window of face showing erosions in the left zygomatic bone as well as ring-enhancing soft tissue.

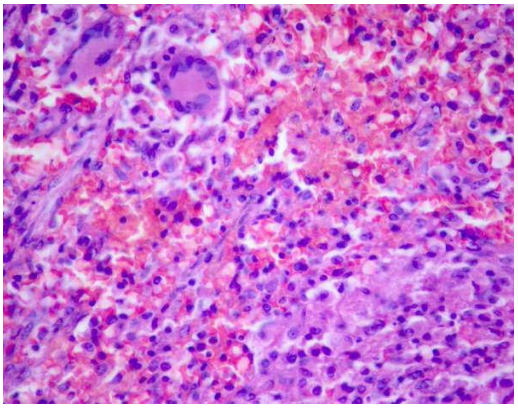

Figure 4. Photomicrograph showing curettage process.

Figure 5 Histopathology showing chronic inflammatory cells.

Discussion

Head and neck tuberculosis is more of a diagnostic and therapeutic problem than is pulmonary tuberculosis, partly because it is less common and less familiar to clinicians. In addition, non-myocobacterial or "a typical" myobacterial infection is frequent in the head and neck. (2)

Tuberculosis of the head and neck can be confused with malignant lesions. The diagnosis may be suspected from the history, physical examination, tuberculin test, radiological-features, histopathology examination and fine needle aspiration cytology supported by demonstration of acid fast bacilli. Treatment consists of administration of multiple anti-tuberculous drugs and surgical intervention may be needed occasionally. (3)

Cervical lymphadenopathy is the most common manifestation of tuberculosis of the head and neck. (4)

The condition may occur in other areas of the head and neck such as: the larynx, the oral cavity, the ear, the pharynx, the sino-nasal cavity, the eye, the thyroid gland, the salivary glands, the cervical spine and the skull base.

Involvement of the zygoma is rare. Penfold and Revington reported one case of tuberculosis of the zygoma in review of a series of 23 patients with tuberculosis of the head and neck. (5) Similarly, Pillai et al (1995) described a case of orbital tuberculosis with the involvement of the zygoma and he proposed that the involvement is secondary to a direct extension from paranasal sinus, lacrimal gland or maybe due to hematogenous spread from the site of a primary

complex. [6] Abhijit A Rahut reported 42 cases of calvarial tuberculosis in 2003 in AJNR. [7]

The tuberculous cervical lymphadnitis was suspected in our case but the presence of decayed teeth and dental infection suggestive of dental abscess and the negative plain X-ray of the paranasal sinus were misleading and delayed the diagnosis. Dramatic improvement was noted after surgery and administration of anti-tuberculous medication.

Conclusion

The rising incidence of tuberculosis is a global issue. The Otolaryngologist should be aware of the different clinical manifestations of tuberculosis in the head and neck including the rare ones. Cervical lymphadenopathy is a key finding in the head & neck tuberculosis. Pulmonary tuberculosis may be absent in such cases. Early diagnosis with fine needle aspiration of the cervical lymph node and treatment with antituberculosis drugs decreases the morbidity and mortality.

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