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Case Report

Tuberculous osteomyelitis of maxilla: a rare case report

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ABSTRACT

Tuberculosis, caused by *Mycobacterium tuberculosis* can affect almost any part of the human body. Tuberculous osteomyelitis is rare and constitutes less than 2% of the skeletal tuberculosis. Jaw involvement of the maxillary bone by tuberculous infection is extremely rare. Here we document a case of tuberculous osteomyelitis of maxilla who presented with history of multiple infraorbital abscesses. The case is unique due to its rarity and diagnostic dilemma.

Keywords: Osteomyelitis, Tuberculosis, Maxilla

INTRODUCTION

Tuberculosis is one of the most common chronic granulomatous infectious disease in developing countries which is caused by *M. tuberculosis*. It can affect any part of the body. Oral and ENT manifestations of tuberculosis occur in about 3% cases.[1] It may present as ulcers, patches, nodules or as a bony-lesions.[2] Osteomyelitis of maxilla itself is a rare event. Two prominent causes are odontogenic infections and sinusitis. Owing to wide range of clinical presentations, these lesions can be overlooked, and treatment delayed. We document a rare case of tuberculous osteomyelitis of maxilla in a 45 years male patient, who initially treated for multiple infraorbital abscesses, which later proved to be tuberculous origin. Although rare occurrence with advent of newer drug therapy, occasional cases may be seen in clinical practice.

CASE REPORT

A 45 year old male patient reported to the department of otolaryngology, with a complaint of repeated swelling below right eye and purulent discharge from it since 4 months. The patient also had low grade fever and weakness for last 2 months. Patient had history of dental extraction and multiple incision and drainage done for the infraorbital swelling. The medical history revealed that patient was diabetic on regular treatment. On examination, the patient was moderately nourished, comfortable. Local examination showed evidence of diffuse swelling over right cheek, 1-2 cm below and lateral to lateral canthus of right eye. It was firm and tender with red tense overlying skin and a small pus-point. Intra-oral examination normal and oral hygiene was fair. Based on above clinical examination and history, provisional diagnosis of infected sebaceous cyst was made.

On haematological investigations, erythrocyte sedimentation rate was found to be raised. Haemoglobin was 11.5 gm%. TLC 11,450 /mm, platelets 4.5 lakhs, CRP positive. Mantoux test was negative. Rest of the investigations were within normal limits. Chest x-ray was also found to be normal. On x-ray paranasal sinuses there was haziness in right maxillary sinus. CT scan of paranasal sinuses was done, showed evidence of lytic lesion involving right maxillary bone, anterior wall of maxillary sinus, right zygomatic bone and right inferior orbital wall along with soft tissue thickening in right pre maxillary region. Microbiological examination of the pus was done for routine microscopy and special stain of actinomycosis but it was not contributory and only pus cells were seen. Sputum examination for acid fast bacilli, was done as a routine, was negative.

Initially we managed the patient conservatively with intravenous antibiotics and partial response was observed. But patient presented with persistent symptoms so debridement of right maxillary bone was done with inferior antrostomy. Right anterolateral wall of maxillary sinus was found to be irregular and eroded, 5-6 cc purulent discharge was drained. The spongy bone of the anterolateral maxilla was debrided and sent for histopathological examination. Even the polypoidal mucosa from the maxillary sinus was cleared and sent for histopathological examination. Post-operative gentamycin wash was given repeatedly. The post-operative period was uneventful. To our surprise, the histopathology report came out to be non caseating granulomas along with abundant Langerhans type of giant cells suggestive of tuberculosis. On the basis of histopathology report patient was started on antitubercular therapy and he improved gradually without any recurring acute symptoms.

Figure 1: Clinical profile of patient.

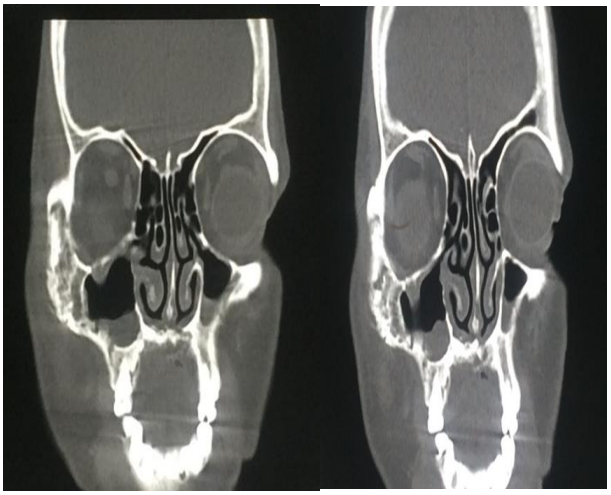

Figure 2: CT scan of paranasal sinuses of lytic lesion in right maxillary sinus.

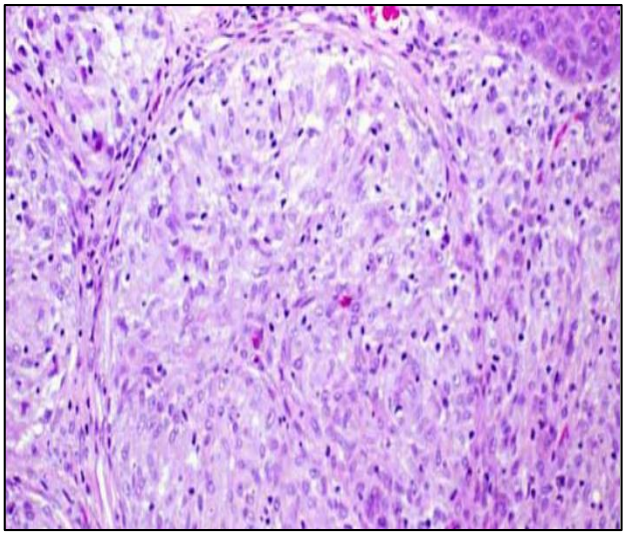

Figure 3: Histopathological examination of non caseating granuloma with Langerhans cells.

DISCUSSION

In spite of the considerable improvement in public health and drugs, tuberculosis still remains a dreaded disease in the developing countries like India.[3,4] The epidemiology of tuberculosis depends on the age and socioeconomic condition.[4,5] Primary oral tuberculosis is rare because of various barriers in the oral cavity like intact oral mucosa, various salivary enzymes and tissue antibodies. If any breach occurs in these barriers then there are chances of infection by the Tubercle bacilli.[3,6] Tuberculous osteomyelitis is even rarer and constitutes less than 2% of the skeletal tuberculosis. Jaw involvement of the maxillary bone by TB infection is extremely rare.[7,8]

Generally, tuberculosis is diagnosed based on history, clinical findings and radiographs, along with sputum examination showing Acid Fast bacilli. The smear and culture for AFB from the sputum have been negative in our case, which is quite common in extra-pulmonary tuberculosis.[9] Also in our cases, none of the routine investigations suggested tuberculosis leading to a significant delay in the diagnosis threatening the extension of disease process towards the orbit and further complications. However, the initiation of the anti-tubercular treatment drastically reduced the recurring inflammatory changes and prevented any further complications.

CONCLUSION

Tuberculous osteomyelitis of maxilla is extremely rare event. Although a rare occurrence tuberculosis should be considered in the differential diagnosis of chronic paranasal sinuses infection involving destruction of the bony walls. In spite of potent and effective drug regimen, complications due to tuberculosis are still encountered in developing countries like India.

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