Chronic tuberculous osteomyelitis of mandible: A case report

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Abstract

Chronic suppurative osteomyelitis of the mandible is a rare occurrence in children. Treatment of the same is considered challenging and may lead to refractory osteomyelitis. In the present report, the case of a 13-year-old female patient has been described, who visited the Out Patient Department with the history of a large swelling over the lower left jaw. History revealed that the swelling gradually increased after a traumatic surgical removal of tooth 38. A thorough history was recorded, and clinical and laboratory examinations were carried out. It was on radiographic examination that the typical moth eaten appearance, suggestive of osteomyelitis, was observed. Incision and drainage of the lesion, followed by curettage, sequestrectomy, and decortications was performed under general anesthesia. The post-operative recovery and healing was satisfactory.

Key words: Child, Mandible, Osteomyelitis, Tuberculous.

Introduction

Inflammation of the bone and bone marrow is called as osteomyelitis. In the jaws, it is usually known to occur after a chronic infection. It may be classified as acute, subacute, or chronic osteomyelitis, depending on the clinical presentation. In children, chronic osteomyelitis may also be seen after traumatic injuries or as a complication of surgical procedures. Moreover, tuberculous osteomyelitis is a rare entity that often occurs in young individuals and is detected in the late stage of the disease. The occurrence of tuberculous osteomyelitis in the jaw bone is very low. It seldom arouses clinical suspicion because of the rarity of tuberculous osteomyelitis of the mandible. We report a case of a 13-year-old female who presented with a draining sinus over the left mandible for one month, which later proved to be tuberculous osteomyelitis in absence of a primary focus, and which responded well to anti-tubercular treatment (ATT).

Case history

A 13-year-old girl reported to the Department of Oral and Maxillofacial Surgery, ITS Dental College Hospital and Research Centre, with a large swelling with a draining sinus in the lower left region of the face for the past 30 days (Fig.1).

Figure 1: Pre-op photograph of the patient showing sinus opening

The patient’s mother gave history of the child having episodes of pain and pus discharge from the lower back left tooth region for the past two months,
for which the patient reported to a local hospital where the patient was prescribed analgesics.

When there was no relief, she visited another hospital where surgical extraction of the offending tooth (which was identified as tooth bud w.r.t. 38) was done under local anaesthesia. Post-extraction, the patient was prescribed antibiotics and analgesic. The patient started developing swelling within one week after extraction, which gradually increased in size. Increase in the swelling resulted in restricted mouth opening due to which the patient was unable to take solid food, which compromised her nutritional state. History of tuberculosis in the family was positive.

On general examination, the patient was pale, malnourished, and febrile with a body temperature of 100.2 degrees F. Mentally, she is a slow learner with compromised cognitive functions.

An extra-oral examination of the left side revealed a diffused tender swelling, which was firm in consistency, with erythematous overlying skin. There was a local rise of temperature over the swelling and the left submandibular lymph nodes were palpable. Patient had a reduced mouth opening of 10 mm.

There was also the presence of a draining sinus opening in the region of the swelling with indurated margins. A purulent yellowish discharge was seen through the sinus, which was thick in consistency.

Intraoral examination could not be carried out as the patient was uncooperative and could not open mouth.

A provisional diagnosis of chronic suppurative osteomyelitis of the left side of the mandible was made.

Surgical intervention was sought, which included surgical debridement and sequestrectomy followed by decortication under general anesthesia (Fig.3).

The patient was kept on soft and liquid diet for three to four weeks to prevent the risk of fracture of weakened mandibular bone. Specimens taken were sent for histopathological examination and a swab from the site of pathology was taken for culture and AbST before starting antibiotics. Meropenem and metronidazole were given as empirical therapy.

The histopathology reports revealed tuberculous osteomyelitis of the mandible and the patient was immediately started with anti-tubercular therapy.

The patient was kept on antibiotics; analgesics and betadine mouthwash were prescribed. A regular recall every 15 days was kept for a period of two months and then monthly recall for a period of six months. The affected area showed a complete healing clinically, and a panoramic radiograph was taken. The radiograph showed healing and a new bone formation in the area where previously the osteolytic lesion was present.

Six months later, radiographs were repeated (Fig.4) after the patient had completed anti tubercular therapy. There was no clinical or radiological evidence of the residual infection.
Discussion
It is rare to observe tuberculosis of the mandible. It is seen to affect both sexes, with males being affected more. Chapotel reported that more than 60% of cases of tuberculous osteomyelitis of the mandible are seen in patients less than 15 years of age; but it can be seen in old age as well. Mandible is seen to be more involved than the maxilla. In the mandible, alveolar and angle regions are affected more often. Tuberculosis of the mandible presents as a multifocal lesion elsewhere in the body, involving other bones and lungs. Out of 64 cases reported up to 1939, about 43% of the patients with tuberculosis of the mandible had tubercular lesion in the bones elsewhere in the body. Chaudhary et al. reported a case of tuberculosis of mandible in a 4-year-old child who failed to respond to antibiotics, and tuberculosis was diagnosed subsequently. Mishra et al. reported a primary TB of mandible who recovered after two years of ATT.

The diagnosis of a case of tuberculous osteomyelitis of mandible is extremely difficult as there are no specific signs that are pathognomonic of the infection. The only manifestation may be a localised swelling of the jaw, which may be misdiagnosed as a pyogenic abscess, or if sinuses are present, may be confused with other granulomatous diseases like actinomycosis. The diagnosis must be established by histological examination of the tissue and demonstration of the organisms in the lesions, and a prompt treatment with ATT should be started as early as possible.

References