

Not All Primary Osteolytic Mandibular Swelling Is Malignant

Ashish Kumar Gupta*, **Aditya Kumar Gautam****, **Adesh Kumar*****,
Somnath Bhattacharya****, **Prashant Yadav *******

*Assistant Professor, **Assistant Professor, ***Professor, ****Resident, *****Senior Resident, Department Of Pulmonary Medicine, U.P RIMS & R, Saifai, Etawah, India

Abstract: Tubercular infection of the oral tissues can be primary or secondary. Primary lesions develop when tuberculosis bacilli are directly inoculated into the oral tissues of a person who has not acquired immunity to the disease. Here we present a case of 66yrs old non-smoker male presenting with a swelling in the left mandibular region (Lumpy jaw) over a period of last 1yr now presenting with weight loss, pain and trismus for 6month. No past history of tuberculosis or dental extraction. On examination there was a 6x5cm firm to hard nonfluctuant mildly tender swelling with trismus and no palpable cervical lymph nodes. Investigations revealed leucocytosis, ESR 45mm and Mantoux 24mm after 48hrs. PNG radiograph showed osteolytic lesion in angle & body of left mandible with CECT showing retro mandibular trigon extension. USG guided FNAC was consistent with tubercular osteomyelitis with Ziehl Neelsen stain positive for acid fast bacilli. He was started on antitubercular therapy for 9 month showing reduction in size and symptom. [Bhattacharya S NJIRM 2016; 7(1):127-129]

Key Words: Osteomyelitis, Lumpy jaw, Primary extrapulmonary Tuberculosis.

Author for correspondence: Dr. Somnath Bhattacharya, Resident, Department Of Pulmonary Medicine, U.P RIMS & R, Saifai, Etawah, India. [Email: drsnbhattacharya@gmail.com](mailto:drsnbhattacharya@gmail.com)

Introduction: Tubercular osteomyelitis of mandible is extremely rare. Up to 1939, only 64 cases were reported in literature^{1,2}. Khosla³ reported a case of tubercular osteomyelitis secondary to pulmonary involvement. Osteoarticular tuberculosis accounts for 1–2% of all the types of bone tuberculosis. Bone tuberculosis forms about 10% of extrapulmonary tuberculosis, of which 50% occur in the spine⁴. Tuberculosis of the flat bones of the skull is uncommon and that of the mandible is especially rare as it contains less cancellous bone⁵. We report a case of tubercular osteomyelitis of mandible in a old tobacco chewer man after taking valid consent from the patient and the Institutional Ethical Committee, who was initially suspected of neoplasia of mandible and proved later on as primary tubercular osteomyelitis.

Case Report: A 66yrs old male nondiabetic nonsmoker patient attended our OPD as referral in the department of Pulmonary Medicine, UP RIMS&R, Saifai, Etawah, U.P for the evaluation of a left sided preauricular swelling (Lumpy jaw). The swelling started insidiously 1yr back and had been increasing in size since then painlessly. However it caused difficulty opening mouth and some pain with trismus in recent days that resulted him to attend our OPD for checkup. He also complains of low grade fever on and off with loss of weight(>5kg) for last six month. The patient denied any history of dental extraction, oral trauma. There was no past history or family history of tuberculosis or any chronic ailment. However he was addicted to chew tobacco (10packets /day for 20yrs) but left for 2yrs now. Clinical examination revealed a

6 x5 cm sized swelling on the left side of his face in the preauricular region that was firm to hard in consistency, non-fluctuant, mildly tender with normal overlying skin. Due to the presence of marked trismus, only restricted examination of the oral cavity could be achieved which showed erythematous buccal mucosa in the region of the molars on the left side with tenderness over the retro-molar trigon region. Examination of the cervical lymph nodes was normal. The rest of the general physical and systemic examination was normal. He was treated with oral antibiotics, analgesic and oral dental hygiene for a week and send for investigations. His investigations revealed hemoglobin of 11.6 g/dL with a TLC of 13000/cu. mm. with a differential count of 70% polymorphs. The ESR was was 45mm in the first hour. A skiagram of the chest was normal. Gram's smear and Ziehl–Neelsen staining of the sputum was negative for any organisms. A 5-TU tuberculin skin test was positive with an induration of 24mm after 48 h. A Orthopantomogram(OPG) of the mandible after consultation with dental surgeon (Fig: 2) showed diffuse radiolucency in the left body and angle of the mandible with a loss of cortication. Computerized tomography (CECT) of the mandible (Fig:3) revealed rarefaction and destruction of bone with a large mass measuring 3x3cm² in retro & mandibular region. USG guided FNAC from the swelling was performed which showed presence of chronic inflammatory cells with granulation tissue admixed with central caseation and focal epithelioid cell granulomas and Langerhans giant cells, with Ziehl–Neelsen stain positive for acid fast bacilli consistent with tubercular osteomyelitis. He

was put on antitubercular therapy for 9 months (New patient regime DOTS-2mRHEZ+7mRH) and the swelling exhibited a marked reduction in size and improved symptomatically.

Discussion: In our patient we had features of tuberculosis and jaw malignancy, hence we emphasized the consideration of bone tuberculosis in the differential diagnosis of all osteolytic mandibular swellings. Tubercular infection of the oral tissues can be primary or secondary. Primary lesions develop when tuberculous bacilli are directly inoculated into the oral tissues of a person who has not acquired immunity to the disease. These frequently involve gingiva, tooth extraction sockets and buccal folds. Secondary infection of oral tissues can result from either haematogenous or lymphatic spread or from autoinoculation by infected sputum and direct extensions from neighbouring structures. Most of the reported cases of mandibular tuberculosis are secondary to focus elsewhere in the body and primary tuberculosis of the mandible is a rare occurrence^{6,7,8}. The infected sputum or in some cases infected milk serves as a direct source of infection. The tubercular bacilli gain access through a break in the oral mucosa which can be either in the form of opened tooth socket because of extraction or a mucosal abrasions or gingival margin or perforation of an erupting tooth. Other routes for the occurrence of infection can be by extension from a nearby soft tissue lesion which involves the underlying bone. In a patient of mandibular tuberculosis, evidence of primary bone lesion can be accepted only if a history and medical evidence of pulmonary tuberculosis are excluded by radiographs and laboratory tests⁹. In our patient there were no indications in laboratory or radiographic findings that were suggestive of pulmonary tuberculosis. Mandibular tuberculosis is often insidious¹⁰ and patients usually cannot recall when the symptoms started. The diagnosis of a case of primary tuberculosis of mandible is extremely difficult¹¹ as there are no specific signs pathognomonic of infection. The only manifestation may be a localized swelling of the jaw and it may be misdiagnosed as a pyogenic abscess or if sinuses are present, may be confused with actinomycosis. The diagnosis must be established by histological examination of tissue and demonstration of the organisms in the lesion as we have done here. Treatment of mandibular tuberculosis is with conventional antitubercular therapy- rifampicin, isoniazid, pyrazinamide and

ethambutol initially as two month intensive regimen followed by rifampicin and isoniazid for a total period of 9–12 months.

Figure 1: Lumpy Jaw swelling



Figure 2: Orthopantomogram (OPG) radiograph on mandible showing osteolytic lesion



Figure 3: Computerized tomography (CECT) of the mandible revealed rarefaction and destruction of bone with a large mass measuring 3x3cm² in retro & mandibular region



Conclusion: Though extrapulmonary tuberculosis affecting the bones are common as secondary spread,

primary cases of bone involvement is also a possibility. Hence we presented this case which created a suspicion of malignancy affecting the mandible, eventually proved to be a primary tubercular lesion that was treatable successfully.

References:

1. Chapotel S. Tuberculose mandibulaire. *Rev Odont* 1930;51:444-445
2. Meng CM. Tuberculosis of the mandible. *J Bone JointSurgery* 1940; 22:17-27
3. Khosla VM. Tuberculous osteomyelitis of the mandible:report of a case. *J Oral Surg* 1970; 28:848-853.
4. N. Ur-Rahman, Atypical forms of spinal tuberculosis, *J. BoneJoint Surg. Br.* 62 (1980) 162–165.
5. S.A. Sachs, L. Eisenbud, Tuberculous osteomyelitis ofmandible, *Oral Surg. Oral Med. Oral Pathol.* 44 (1977) 425–429.
6. J. Fukuda, Y. Shingo, H. Miyako, Primary tuberculous osteomyelitis of the mandible: a case report, *Oral Surg. Oral Med. Oral Pathol.* 73 (1992) 278.
7. G.T. Richard, F.B. Donald, Tuberculosis osteomyelitis of mandible, *Oral Surg. Oral Med. Oral Pathol.* 18 (1964) 7–13.
8. Masaru Imamura, Toshio Kakihara, Kohsuke Yamamoto,Chihaya Imai, Atsushi Tanaka, Makoto Uchiyama, Primarytuberculous osteomyelitis of the mandible, *Pediatr Int.* 46(2004) 736–737.
9. Nwoku LA, Kekere-Ekun TA, Sawyer DR, Olude OO.Primary tuberculous osteomyelitis of the mandible. *JMaxillofac Surg* 1983; 11: 46-8.
10. A.D. Dinkar, V. Prabhdesai, Primary tuberculosis of the mandible, *Dentomaxillofacial. Radiol.* 37 (2008) 415–420.
11. Darlington CC, Salman I. Oral Tuberculous Lesions. *AmRev Tuberc* 1937; 35: 147-149.

Conflict of interest: None
Funding: None
Cite this Article as: Gupta A, Gautam A, Kumar A, Bhattacharya S, Yadav P. Not All Primary Osteolytic Mandibular Swelling Is Malignant. <i>Natl J Integ Res Med</i> 2016; 7(1): 127-129