

Tuberculous Osteomyelitis in 9 year female patient: a rare case report

Amit A. Sangle¹, Aruna A. Tambuwala², Kavina Mansukhani³, Ashvini K. Vadane^{4*}, Ashvini S. Anikhindi⁵

¹Guide & Professor, ²Guide & Professor, HOD, ⁴PG Student, Dept. of Oral & Maxillofacial Surgery, ³Guide & Professor, ⁵PG Student, Dept. of Pedodontics, M.A. Rangoonwala College of Dental Sciences & Research Centre, Pune, Maharashtra

***Corresponding Author:**

Email: drashvinivadane@gmail.com

Abstract

Osteomyelitis is an inflammatory condition of the bone.⁽¹⁾ The word “osteomyelitis” is derived from two greek words “osteon” means ‘bone’ and “myelions” means “marrow”.⁽⁶⁾ The meaning of “osteomyelitis” is the infection of medulla of bone. “Tuberculous osteomyelitis” is the osteomyelitis occurring in patients who are immunocompromised as they suffer from tuberculosis.⁽⁹⁾ Here, in this article, we are highlighting a case report of a 9 years old female patient suffering from tuberculous osteomyelitis of mandible. This case is a rare case and was successfully managed.

Keywords: Osteomyelitis, Tuberculous osteomyelitis, Tuberculosis.

Case Report

A 9 year female patient visited M.A. Rangoonwala College of Dental Sciences & Research Centre, Pune, with the chief complaints of pain and swelling in the lower left back teeth region of jaw. Patient was also complaining of pus discharge from the punctum present over the lower left back region of jaw. This patient was suffering from tuberculosis 6 months back and she had completed the treatment with “DOTS” for tuberculosis, 6 months back.

On clinical examination, we noticed that with relation to the patient’s chief complaint, there was carious permanent first molar tooth. On radiographic examination, we observed that, there was periapical radiolucency and bone loss with relation to 36. We started antibiotics medication administration to the patient. Under antibiotic coverage, we performed extraction with the lower left first molar tooth and this was followed by the surgical excision of odontogenic oro-cutaneous fistula after some period.

In this way, this case was managed in the M.A. Rangoonwala College of Dental Sciences and Research Centre, Pune.



Worm-eye view picture



Pre-operative orthopantomogram



Left lateral Profile Picture



10 days postoperative photograph

Discussion

Osteomyelitis of jaws can also be defined as “the presence of exposed bone in oral cavity which fails to

heal after appropriate intervention.”⁽²⁾ The diagnosis of osteomyelitis is based on the basis of patient’s history, clinical examination, radiographic findings.⁽²⁾

Resorption, suppuration, inflammatory processes like necrosis of mineralized and marrow tissues, sclerosis are various characteristics of “osteomyelitis”.⁽¹⁾ Odontogenic infection, early termination of antibiotic therapy, trauma are the various causes of osteomyelitis.⁽¹¹⁾ Radiologic examination of osteomyelitis patients show radiolucent areas, sequestrum formation and bone destruction.⁽¹⁾

In these patients, fistula may or may not be developed. Formation of oro-cutaneous fistula associated with dental cause is a relatively rare condition. It drains all the infection to outside. Fistula is defined as an abnormal pathologic pathway between that lesions form an internal cavity or organ to the surface of body.⁽¹⁴⁾

The present case describes draining fistula, bony destruction which are related to the diagnosis of osteomyelitis. Tuberculosis is one of the oldest disease known, affecting human beings. The causative organism is *Mycobacterium tuberculosis*.⁽⁸⁾ It infects about 33% population of the world as per the world health organization. “DOTS”, i.e., “Directly Observed Treatment, Short Course” is the internationally accepted therapy for drug-susceptible tuberculosis. “DOTS” consists of many antibiotics like isoniazid, rifampicin, pyrazinamide and Ethambutol. This treatment is lengthy upto 6 months for drug-susceptible variant of TB whereas upto 9 months for drug – resistant variant of TB.⁽¹³⁾ In the present case patient has completed 6 months treatment with DOTS, about 6 months back.

Tuberculous osteomyelitis is rare entity and contributes less than 2% of skeletal TB. Involvement of jaws in tuberculosis is even rarer phenomenon and mostly it affects older individuals. Occurrence of tuberculous osteomyelitis in children is a very rare case.⁹Hence, the present case is very rare case.

References

- Hemant Mehra, Sumit Gupta, Hemant Gupta, V. Sinha, Jasmeet Singh. “Chronic Suppurative Osteomyelitis of Mandible: A Case Report.” *Craniomaxillofac Trauma Reconstruction* (2013);6:197-200.
- Saeed Nezafati, Mohammad Ali Ghavimi, Amir Saeed Yavari.”Localized Osteomyelitis of the Mandible Secondary to Dental Treatment: Report of a case.” *Journal of Dental Research, Dental Clinics, Dental Prospects*.Vol.3 No.2, Spring (2009).
- Kochli Channappa Niranjana, Niharika Sarathy, Devendra Alrani, Kaveri Hallikeri. “Prevalence of fungal osteomyelitis of the jaws associated with diabetes mellitus in north Karnataka population: A Retrospective study.” *International Journal of Current Research*, March (2016), Vol. 8, Issue 03,pp.27705-27710.
- Yukiko Kusuyama, Ken Matsumoto, Shino Okada, Ken Wakabayashi, Noritami Takeuchi, Yoshiaki Yura. “Rapidly Progressing Osteomyelitis of the Mandible.” *Case Reports in Dentistry*, Volume 2013,Article ID 249615.
- Gaetti-Jardim, E.JR, Ciesielski, F, I, N., Possagno R; Castro, A.L., Marque TI, A.C. & Gaetti-Jardim. “Chronic Osteomyelitis of the maxilla and mandible: microbiological and clinical aspects.”*Int.J.Odontostomat*.,4(2):197-202,2010.
- Shah KM, Karagir A, Adaki S.BMJ Case Rep 2013,doi : 10.1136/bcr-2013-009859.
- Sunil Yadav, Sunita Malik, Hitesh C. Mittal, Punnet Puri. “Chronic Suppurative Osteomyelitis of posterior maxilla: A rare presentation.” *J Oral Maxillofac Pathol*.(2014) Sep –Dec;18(3):481.
- S Sheikh, S Pallagatti, D Gupta, A Mittal. “Tuberculous Osteomyelitis of mandibular condyle: a diagnostic dilemma.” *Dentomaxillofacial Radiology* (2012) 41,169-174.
- Freny Karjodkar, Vasu Siddhartha Saxena, Anuradha Maideo, Subodh Sontakke. “Osteomyelitis affecting mandible in tuberculosis patients.” *J Clin Exp Dent*. (2012);4(1):e72-76.
- Saeed Nezafati, Mohammad Ali Ghavimi, Amir Saeed Yavari. “Localized Osteomyelitis of the Mandible Secondary to Dental Treatment: Report of a case.” *Journal of Dental Research, Dental Clinics, Dental Prospects*, Vol. 3 No. 2, Spring 2009.
- V. Patel, A. Harwood, M. McGurk. “Osteomyelitis presenting in two patients: a challenging disease to manage.”*British Dental Journal* .Volume 2009 No.8,Oct 23 2010.
- Burnei G, Georgescu I, Gavrilu S, Vlad C, Hodorogeu D, Dan D, Hurmuz L. “Acute osteomyelitis –special cases with particularities related to specific locations.” *Rom J Intern Med*.(2007);45(4):321-5.
- Sultan Tousif, Shaheer Ahmad, Kuhulika Bhalla, Prashini Moodley, Gobardhan Das. “Challenges of Tuberculosis Treatment with DOTS: An Immune Impairment Perspective.” *Journal of Cell Science & Therapy*.(2015);6:5.
- Johnson BR, Remeikis NA, Yan Cura JE. “Diagnosis and treatment of cutaneous facial sinus tracts of dental origin.” *J Am Dent Assoc*. June(1999)130(6):832 -6.
- Nafisa Samir, Abdulaziz Al-Mahrezi, Salim al-Sudairy. “Odontogenic Cutaneous Fistula Report of two Cases.” *SQU Medical Journal*, February (2011),Volume 11, Issue 1.