CASE REPORT

EXTENSIVE JAW SWELLING WITH INFRATEMPORAL FOSSA ABSCESS WITH SINUS LEFT TEMPORAL CAUSE OSTEOMYELITIS MANDIBLE AND UNIRRUPED LAST MOLAR IN 70 YEARS OLD FEMALE: CASE REPORT

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ABSTRACT: Osteomyelitis of maxillofacial skeleton is more common in developing countries than developed countries. Osteomyelitis mandible is a rare clinical presentation in 70 year old female. Osteomyelitis Mandible result from odontogenic infection and Post extraction complication trauma or radiation to mandible. A 70 yrs. old female presented to ENT OPD, with 6-8 weeks, h/o pain in Retromolar area left & foul smelling discharge from scalp of left temporoparietal region & swelling left side of face. On examination, there was a tender swelling with purulent pus and discharge from left temporoparietal region of scalp with Necrosis of skin. On x-ray PNS and OPG showing lytic lesion of left mandible with unirrupted tooth.

KEYWORDS: Osteomyelitis mandible, impacted tooth, scalp abscess, tooth extraction.

INTRODUCTION: The word osteomyelitis originates from the ancient Greek words osteon (Bone) and mylinos (Marrow) and means infection of medullary portion of the bone, osteomyelitis was first described in 1852 by a French surgeons Edouard Chassaignac. In 1764 John Hunter describes pocket of dead cortical bone which term sequestra which also describe involucrum.

It is considered as inflammatory condition of bone beginning in medullay cavity and haversion system and extending to involve the periosterm of affected area after chronic infection.⁽¹⁾ Although, other etiological factor such as traumatic injuries, radiation (Osteoradionecrosis), malignancy, anemia, malnutrition, immune compromised,⁽²⁾⁽³⁾⁽⁴⁾ including diabetics and chemical substance such as white phosphorus, bisphosphonate may also produce inflammation of meduallry space, the term osteomyelitis is mostly used in medical literature to describe a true infection of bone induced by Pyogenic microorganism (Marx 1991). In children trauma is commonest predisposing factor.⁽³⁾

Commonly bones involved in osteomyelitis of skull are mandible, frontal bone, maxilla, nasal bone, temporal bone, and skull base bone.⁽⁵⁾

The prevalence clinical course and management of osteomyelitis of jaw bone have changed profoundly over past 50 yrs. This is imputable to the mainly one factor, the first appearance of antibiotic therapy.

In preantibiotic era, the classical presentation of jaw bone osteomyelitis was an acute onset, usually followed by transition to the secondary chronic process. A Massive clinical system with widespread bone necrosis neosteogenesis larger sequester formation and intra and extra oral fistula formation were commonly present.

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Wald Vogal and Medoff (1970) and Wald Vogl et al (1970 a,b) distinguish 3 types of classification of osteomyelitis.⁽⁶⁾

1. Hematogenous spread.
2. Contagious factor.
3. Vascular insufficiency.

It is based on etiopathogenesis.

Cieny et al., (1985) and mader and Calhoun (2000) describe classification on basis of anatomy of bone infection and physiology of the host. Now currently term used in classification of osteomyelitis of jaw are.⁽⁶⁾

1. Acute / sub-acute osteomyelitis.
2. Chronic osteomyelitis.
3. Chronic suppurative osteomyelitis.
4. Chronic non suppurative osteomyelitis.
5. Diffuse sclerosing osteomyelitis.
6. SAPHO syndrome – chronic recurrent multifocal osteomyelitis.
7. Periostitis ossificans (Garre's osteomyelitis).

The primary cause of chronic osteomyelitis of the jaw is infection by odontogenic microorganisms.⁽⁴⁾ The typical age of presentation is in the fifties to sixties with males more likely to be affected. The commonest site is the posterior body of the mandible.

CASE REPORTS: A patients 70 years old female presented to ENT OPD with pain in the oral cavity and left cheek and enlarging swelling for 2 months and foul smell discharging pus from scalp from 15 days, fever for 15 days and trismus for 15 days.

LOSS OF TOOTH WITH
DISCHARGE IN ORAL

Fig. 1

A Local examination revealed swelling in the left cheek and left temporoparital region which was warm smooth surface, fluctuant tender and skin of temporal region was necrosed and pas trickled from this area. There was restricted mouth opening, there was no paresthesia of left lower lip

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and mental area and no history of diabetes mellitus, hypertension, tuberculosis. On general examination vitals were normal, no regional lymphadenopathy.

The intra oral examination loss of tooth present with draining sinus noted on the crest of edentulous alveolar ridge from which pus was trickling. These clinical features were also described by koorbusch et al⁽⁷⁾ and Hudson⁽²⁾ in their cases.

On OPG and x-ray Pns mottled area of mixed radiolucency and radio-opacity with erosion of bone and impacted last molar tooth present in left side of the mandible. This was consistent with radiological feature described in literature.^{(2),(7), (8), (9)}

Fig. 2

Fig. 3

Patients had Hb 9.6 GM, PLT. 5.49 lacs, TLC 14000/cu mm and lymphocyte 4000/cu mm.

Then we planned for incision and drainage of abscess along with broad spectrum antibiotics, extraction of impacted tooth and flap reconstruction of necrosed skin of the left temporoparital region after infection subsided and granulation developed. After 3 months patient was clinically and radiologically normal.

DISCUSSION: Osteomyelitis of the jaw is a rare clinical entity.⁽³⁾ Anatomically bones involved in osteomyelitis of skull are mandible, frontal bone, maxilla, nasal bone, temporal bone, and skull base bone.⁽⁵⁾

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Osteomyelitis classified in to acute & chronic form. Acute form may be further divided into suppurative & non-suppurative form. It may be caused by trauma infection and odontogenic mandibular osteomyelitis is more common than maxillary.

Swelling in left cheek, pain and discharging sinus present over the left temporoparietal region. Discharge was thick foul smelling. In this case we proceed for patients x-ray PNS and OPG. In OPG impacted tooth present with osteolytic lesion seen. CECT is the investigation of choice. This case report demonstrates a typical feature of chronic mandibular osteomyelitis.

Differential diagnostic includes dentigerous cyst, periapical cyst, osteo- radio necrosis all these cases excluded by radiology examination mention above.

The treatment modalities of this patient was incision and drainage of abscess along with broad spectrum antibiotics, extraction of impacted tooth with grafting of the left temporoparietal region of scalp after infection subsided and granulation tissue developed. Some surgeon suggested antibiotics for 2 weeks.⁽¹⁰⁾ and some surgeon Bamberger.⁽¹¹⁾ for 4 weeks, in this case we were given for 4 weeks.

Necrosis of skin of left temporoparietal region of scalp was due to ischemia, Grafting was done later on.

REFERENCES:

1. Bernier S, Clermont S, Maranda G, Turcotte JY. Osteomyelitis of the jaws. J Can Dent Assoc 1995; 61:441-442, 445-448.
2. Hudson JW. Osteomyelitis of the jaws: a 50-year perspective. Oral Maxillofac Surg 1993; 51:1294-1301.
3. Osei-Yeboah C, Neequaye J, Bulley H, Darkwa A. Osteomyelitis of the frontal bone. Ghana Medical Journal.2007; 41(2):88-90. [PMC free article] [PubMed].
4. Aitasalo K, Niinikoski J, Grenman R, Virolainen E. A modified protocol for early treatment of osteomyelitis and osteoradionecrosis of the mandible. Head Neck 1998; 20:411- 417.

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5. Prasad K. C, Prasad S C, Mouli N, Agarwal S. Osteomyelitis in the head and neck. Acta Otolaryngol.2007; 127:194–205. [PubMed].
6. Marc Baltensperger and Gerold Eyrich, Osteomyelitis of the Jaws: Definition and Classification. page no.7-11.
7. Koorbusch GF, Fotos P, Goll KT. Retrospective assessment of osteomyelitis: Etiology, demographics, risk factors, and management in 35 cases. Oral Surg Oral Med Oral Pathol 1992; 74:149-154.
8. Daramola JO, Ajagbe HA. Chronic osteomyelitis of the mandible in adults: a clinical study of 34 cases. Br J Oral Surg 1982; 20:58-62.
9. Kim S, Jang H. Treatment of chronic osteomyelitis in Korea. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2001;92:394-398.
10. Marx RE. Chronic osteomyelitis of the jaws. In: Laskin D, Strass R, eds. Oral and maxillofacial surgery clinics of North America. Philadelphia: Saunders, 1992:367-381.
11. Bamberger DM. Osteomyelitis. A commonsense approach to antibiotic and surgical treatment. Postgrad Med 1993; 94:177-182.

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