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CHRONIC SUPPURATIVE OSTEOMYELITIS OF THE MANDIBLE: REPORT OF A CASE

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ABSTRACT

Osteomyelitis of the jaws is an inflammatory reaction of bone to infection which originates from either a tooth, fracture site, soft tissue wound or surgery site. Osteomyelitis of the jaws is a common complication of odontogenic infection. It can involve all three components of bone: periosteum, cortex, and marrow and is more commonly observed in the mandible because of its poor blood supply as compared to the maxilla, and also because the dense mandibular cortical bone is more prone to damage. Through this article we are presenting one such case of chronic suppurative osteomyelitis.

Keywords: Osteomyelitis, Jaws, Odontogenic Infection, Mandible, Medullary Cavity.

INTRODUCTION

The word “osteomyelitis” originates from the ancient Greek words osteon meaning bone and muelinos meaning marrow and means infection of the medullary portion of the bone. Osteomyelitis of the jaw is still a fairly common disease in dental clinics and offices despite the introduction of antibiotics and the improvement of dental and medical care. It may be classified as acute, subacute or chronic, depending on the clinical presentation. Suppuration, fistula formation and sequestration are characteristic features of chronic osteomyelitis. There are several etiological factors, such as traumatic injuries, radiation, and certain chemical substances, among others, which may cause inflammation in the medullary space of the bone. The term osteomyelitis is most commonly used to describe a true infection of the bone induced by pyogenic organisms. The infection becomes established in calcified portion of the bone when pus and edema in the medullary cavity and beneath the periosteum compromises or obstructs the local blood supply that leads to ischemia and the infected bone becomes necrotic and leads to sequestrum formation, which is considered a classical sign of osteomyelitis. Therefore, dentists will need to be aware of clinical features and management of this uncommon disease.

The typical age of presentation is in the fifties to the sixties, with males more likely to be affected. The commonest site is the posterior body of the mandible. The incidence, outside of those who have received head and neck radiotherapy and the immunocompromised, is increased in patients who have poor oral hygiene and are abusers of alcohol or tobacco. Chronic suppurative osteomyelitis can develop without an intervening acute phase. Some authors suggest that osteomyelitis must be present for at least a month before it is termed chronic. Several reports have concluded that chronic suppurative osteomyelitis can be successfully treated by antimicrobials or by a combination of antimicrobial therapy with surgery—either sequestrectomy or decortication of the affected bone. The aim of the surgery would be to eliminate all the infected and necrotic bony tissue and if incomplete may lead to persistence of the osteomyelitis.

CASE REPORT

A 45 year old male patient reported to the Department with a three month history of an swelling that was discharging pus from a cutaneous sinus present on the left inferior border of the mandible. Medical history of the patient was noncontributory. He gives history of betel quid chewing and smoking 5-6 times a day from last 25 years. On examination,
the patient was asymptomatic, afebrile with normal pulse and blood pressure. There was no limitation of mouth opening, and on specific testing there was no paraesthesia of the left lower lip and submental area. Single submandibular lymph node of left side was palpable, tender, and mobile. (Figure 1, 2). On intraoral examination, swelling was present involving the marginal and attached gingiva and buccal vestibule in the same region. Buccal vestibular obliteration was seen. The swelling was soft in consistency, tender on palpation, and associated with draining sinus. Buccal vestibular tenderness was present. Necrotic bone was seen in 36 and 37 edentulous region hyperkeratinized patch surrounded by erythema was present on buccal mucosa in same region.

Later on he was recalled after a month for reevaluation but patient failed to report for the same.

**INVESTIGATIONS**

OPG and mandibular occlusal radiographs shows, periapically localized mottled area of mixed radiolucency /radio-opacity which was irregular in shape, and measured 20 mm at its greatest diameter at the area of 35 – 37 region. Chest X-ray was taken which was noncontributory. Histopathological diagnosis confirmed the provisional diagnosis. (Figure 3, 4, 5)

**TREATMENT**

After final diagnosis, antibiotics, anti-inflammatory for 7 days and sequestrectomy was advised. The patient was recalled after a week post surgery and the healing was satisfactory.

**DISCUSSION**

Mandibular osteomyelitis may result in a variety of complications including local bone destruction, paraesthesia of mental or inferior dental nerves and cutaneous sinuses or fistulae. This case report demonstrates the typical features of Chronic Suppurative Osteomyelitis, a rare but well described potential complication of chronic odontogenic infections that dentists may more frequently encounter. Since odontogenic infections are common, osteomyelitis of the jaw is much more
common than that of long bones. It may also arise as a complication of dental extractions and surgery, maxillofacial trauma and the subsequent inadequate treatment of a fracture, and/or irradiation to the mandible. The typical age of presentation is in the fifties to the sixties, with males more likely to be affected. The commonest site is the posterior body of the mandible. The incidence, other than those who have received head and neck radiotherapy and are immunocompromised, is increased in patients who have poor oral hygiene and are abusers of alcohol or tobacco. Treatment of osteomyelitis of the jaws includes elimination of the cause, incision and drainage, sequestrectomy, saucerization, decortication, resection of the jaw, antibiotics and hyperbaric oxygen. The main treatment of localized osteomyelitis in a patient without any systemic conditions is to remove the etiology of the disease as well as antibiotic therapy to prevent post-surgical infection. In the present case treatment plan included removal of the localized necrotic bone and sequestrum. Management entailed a course of antibiotics in combination with surgical debridement. It has been suggested that the minimum duration of antibiotic therapy to treat chronic suppurative osteomyelitis is two weeks.

**CONCLUSION**

It has been suggested that the minimum duration of antibiotic therapy to treat Chronic Suppurative Osteomyelitis is two weeks to four weeks. In the present case treatment plan included antibiotic therapy and removal of the localized necrotic bone and sequestrum.

**REFERENCES**


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