ISSN: 2581-5989
PubMed - National Library of Medicine - ID: 101738774

International Journal of Dental Science and Innovative Research (IJDSIR)

IJDSIR : Dental Publication Service

Available Online at: www.ijdsir.com

Volume – 2, Issue – 1, January - February - 2019, Page No. : 77 - 80

Chronic Suppurative Osteomyelitis in Anterior Maxilla: A Rare Variety

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Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Osteomyelitis is an inflammatory disease of infectious origin. Progressive destruction of bone and sequestra formation are hallmark of osteomyelitis. Due to extensive vascular supply of maxilla it is less prone to infection, hence maxillary osteomyelitis is rare as compared to osteomyelitis of mandible. We report a case of chronic suppurative maxillary osteomyelitis in a 40 year old male patient. CT scan was advised to confirm diagnosis which ultimately got confirmed by histopathologic reports. Patient underwent surgical resection and proper antibiotic therapy was given. Satisfactory healing was seen and long term follow up was done to check for recurrence.

Keywords: Chronic suppurative osteomyelitis, CT scan, Maxilla, Sequestra.

Introduction

Osteomyelitis is an inflammation of bone, begins as infection of medullary cavity leading to rapid involvement of haversian system and extends to involve the periosteum of affected area.[1] It is an acute or chronic inflammatory process in cortical region or in medullary spaces of bone. Bone destruction along with sequestration is the common presentation of osteomyelitis. The cause of osteomyelitis may include bacterial, viral, fungal infection or may be due to micro-organisms from roots of tooth, fractured site, extraction socket etc.[2] Osteomyelitis as classified by Hudson[3] is divided into two major category that is acute osteomyelitis and chronic osteomyelitis, depending on the duration of disease. According to Peterson it is classified into three types- a) osteomyelitis with contiguous focus, b) Progressive type of osteomyelitis, c) Hematogenous type of osteomyelitis. The chronic osteomyelitis. Chronic osteomyelitis is further classified as recurrent multifocal Garre's osteomyelitis, suppurative osteomyelitis and non- suppurative and sclerosing osteomyelitis.[4] Maxillary osteomyelitis is rare as compared to mandibular osteomyelitis. The reason for this is the rich vascular supply and thin cortical bone of maxilla, thus promoting faster healing. If the infection does not get resolved by regular treatment, then aggressive intervention by surgeon is necessary to avoid complication. The treatment objectives of osteomyelitis include removal of dead bone, elimination of causative microorganism by a combination of surgical resection, antibiotic coverage and post-operative care[5]. This report presents a case of chronic suppurative osteomyelitis of anterior maxilla involving left maxillary sinus which is a rare entity in a 40 year old male.

Case Report

A 40 year old male patient reported to department of Oral and Maxillofacial Surgery with the chief complaint of pus discharge from anterior region of maxilla since 1 month. Past history revealed pain in anterior teeth of maxilla following which the symptomatic teeth were extracted and curettage was done in private dental clinic 15-20 days before. Post extraction patient complained of pus discharge from anterior region of maxilla. On intra-oral examination edentulous anterior maxillary region was seen. On palpation the region was tender and pus discharge with offensive odour was noted. A provisional diagnosis of chronic suppurative osteomyelitis of maxilla was made. Patient was adviced CT scan (Fig1a,1b). CT scan showed extensive bone loss, presence of sequestra and lesion involving anterior maxillary arch and extending to floor of left maxillary sinus was seen, provisional diagnosis was made as chronic suppurative osteomyelitis of anterior maxilla which is a rare variety. The lesion was extensive thus surgical management was planned. Surgical resection of infected bone was done following which complete curettage and debridement was done (Fig 2, 3,) Whole of the necrosed bone came out in small bony chunks, the largest of it measuring about 2x2.5cm approximately . The defect was closed with 3-0 silk suture (Fig4). The excised specimen was sent for histopathological investigation (Fig5a,5b). The patient was put on antibiotics post operatively, inj. Amoxicillin and clavulanic acid (1.2gm) twice a day, inj. Metronidazole (500mg) thrice a day for given for 5 days and the patient was adviced betadine gargle for 30 days.

The histopathologic reports confirmed the diagnosis. Dense irregular bony trabeculae were seen along with empty lacunae. Presence of necrotic bone and inflammatory cells along with granulation tissue was also seen as stated on histologic report. Patient is followed up till date and there are no signs of recurrence seen. Patient is not willing for reconstructive surgery.

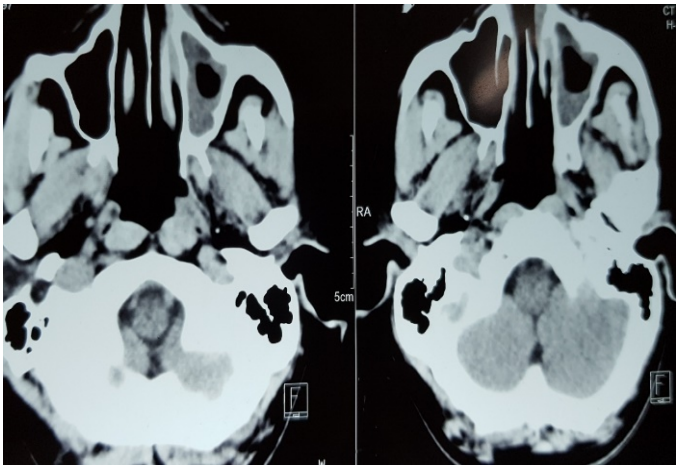

Fig:1 a: Preoperative

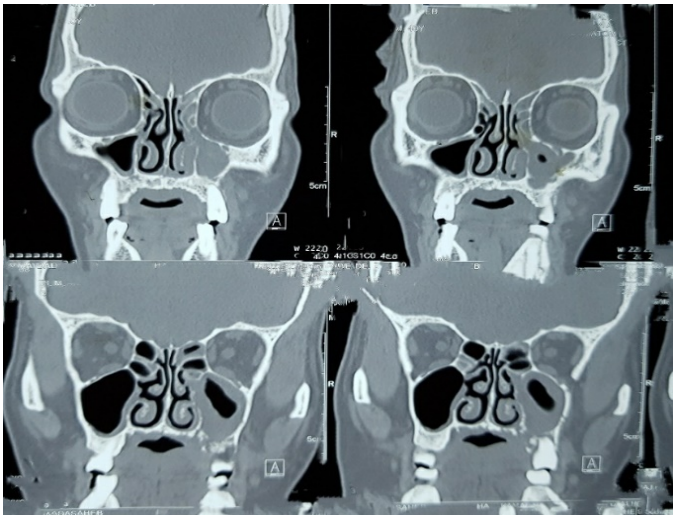

Fig:1b: Preoperative

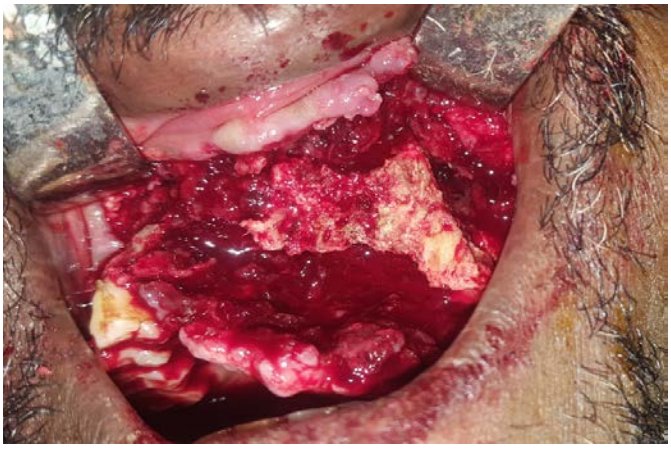

Fig:2 : Exposure of necrotic bone

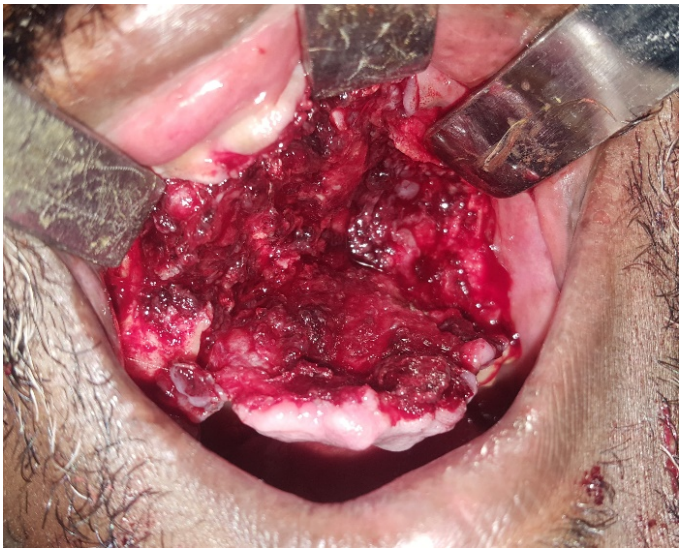

Fig:3: After removal of necrotic bone

Fig:4: Suture

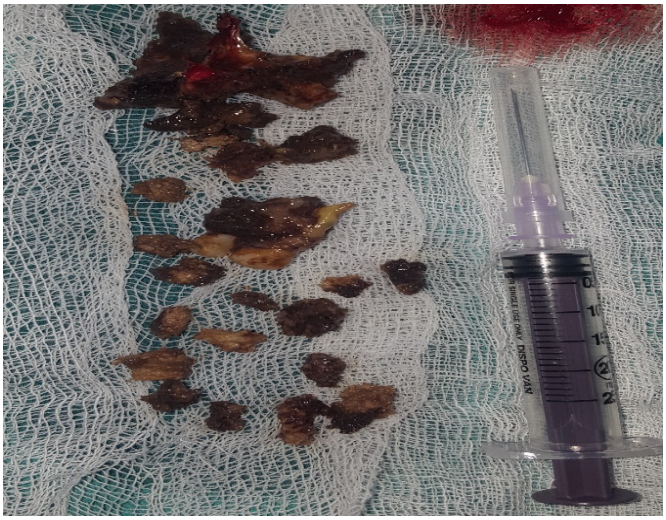

Fig:5a: Excised specimen

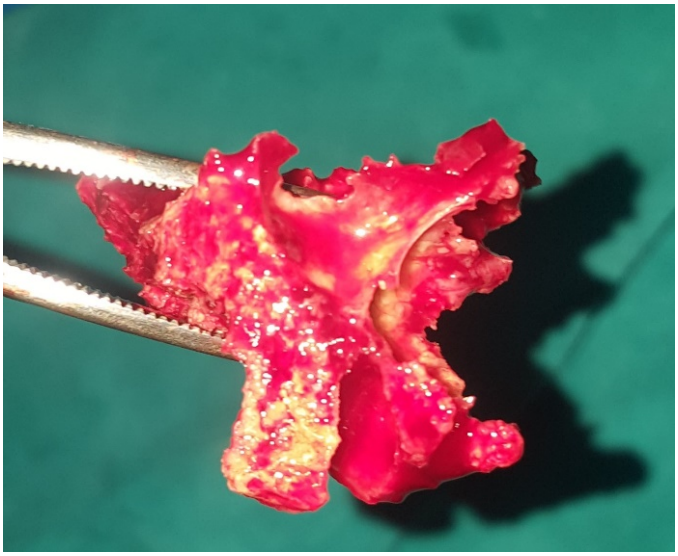

Fig:5b: Excised specimen

Discussion

Osteomyelitis of maxilla is a rare entity due to its rich vascular supply. Osteomyelitis is an inflammatory disease of bone affecting cortical bone and periosteum. It is one of the difficult lesion to treat because of its pathophysiology and clinical presentation. Hallmark of osteomyelitis include progressive bony destruction and formation of sequestra. Factors causing osteomyelitis of maxilla include maxillary sinusitis, trauma, dental infection and radiation. Mostly it is due to maxillary sinusitis and trauma. [6] Chronic osteomyelitis usually develop following an acute osteomyelitis due to improper treatment and local as well as systemic contributing factors. Clinical features include pain, swelling, purulent discharge, unhealed soft tissue in oral cavity, associated paresthesia etc.[7] Diagnosis can be made by proper history, proper clinical evaluation and appropriate radiographic evaluation. Features distinguishing chronic osteomyelitis include sequestra and laminating new periosteal bone.[8] Infection of maxilla may lead to complication's such as infection of cranial cavity and brain, hence should be treated as early as possible. The treatment of maxilla ranges from noninvasive approach to invasive treatment. Antibiotic treatment along with

surgery is effective in the treatment of osteomyelitis. Surgical management include removal of mobile teeth and sequestra, decortication, debridement, resection and reconstruction.[9] extensive necrosis of maxillary bone is due to ischemia in affected region. Hence resection of necrotic maxilla and mucosa has to be done to obtain complete clearance. In this case the affected bone was removed and complete curettage was done. And patient was kept on proper antibiotic therapy.

Conclusion

Osteomyelitis is a multifactorial disease. Infection of maxilla may lead to serious dreaded complication. Hence it is important that based on specific diagnosis procedure early identification and treatment should be done. The treatment should aim at complete removal of lesion. Chances of recurrence is more with osteomyelitis, thus the long term follow up is necessary.

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