

Ridge Preservation and Implant Placement in a Case with Florid Cemento-Osseous Dysplasia - Case Report

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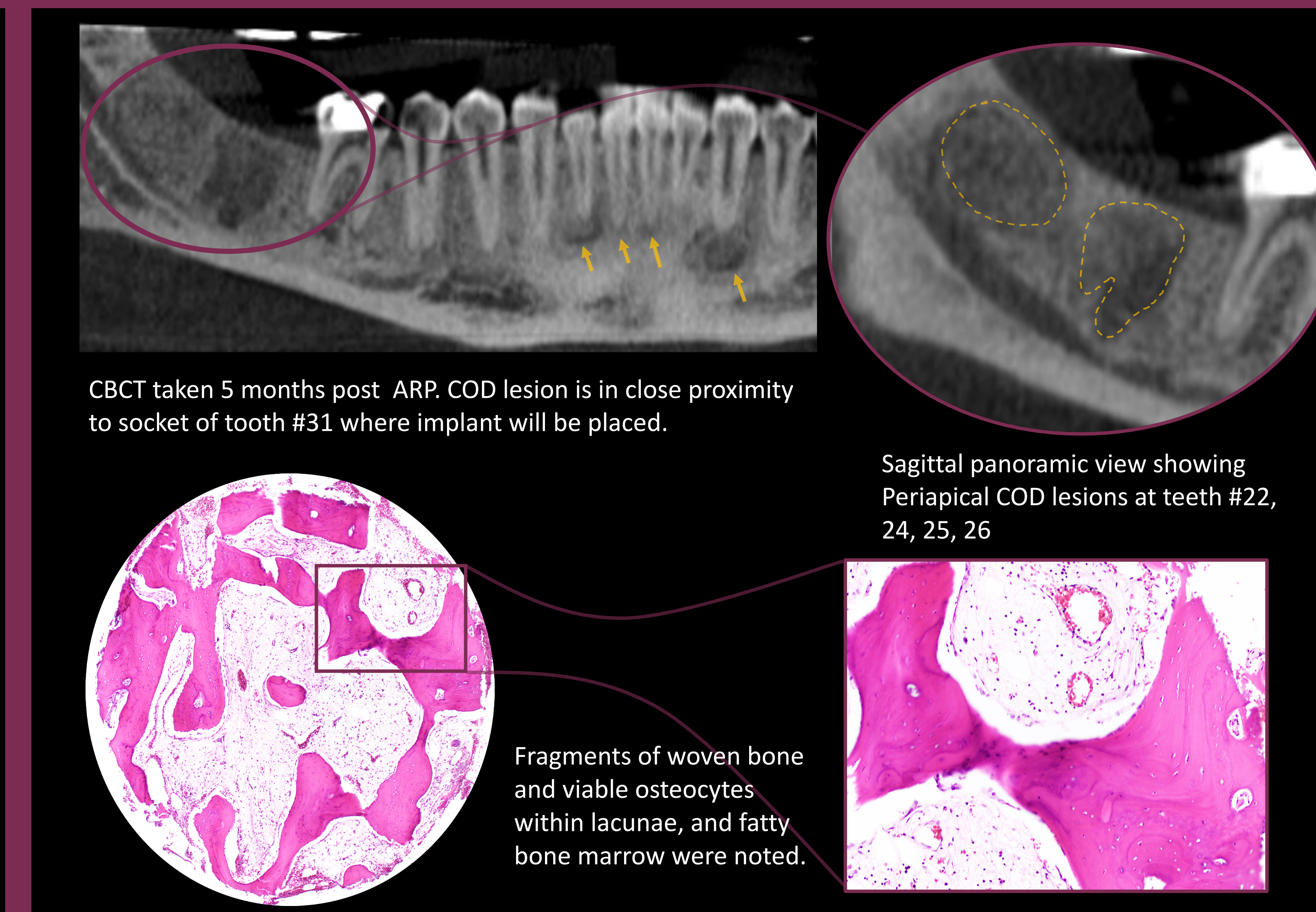
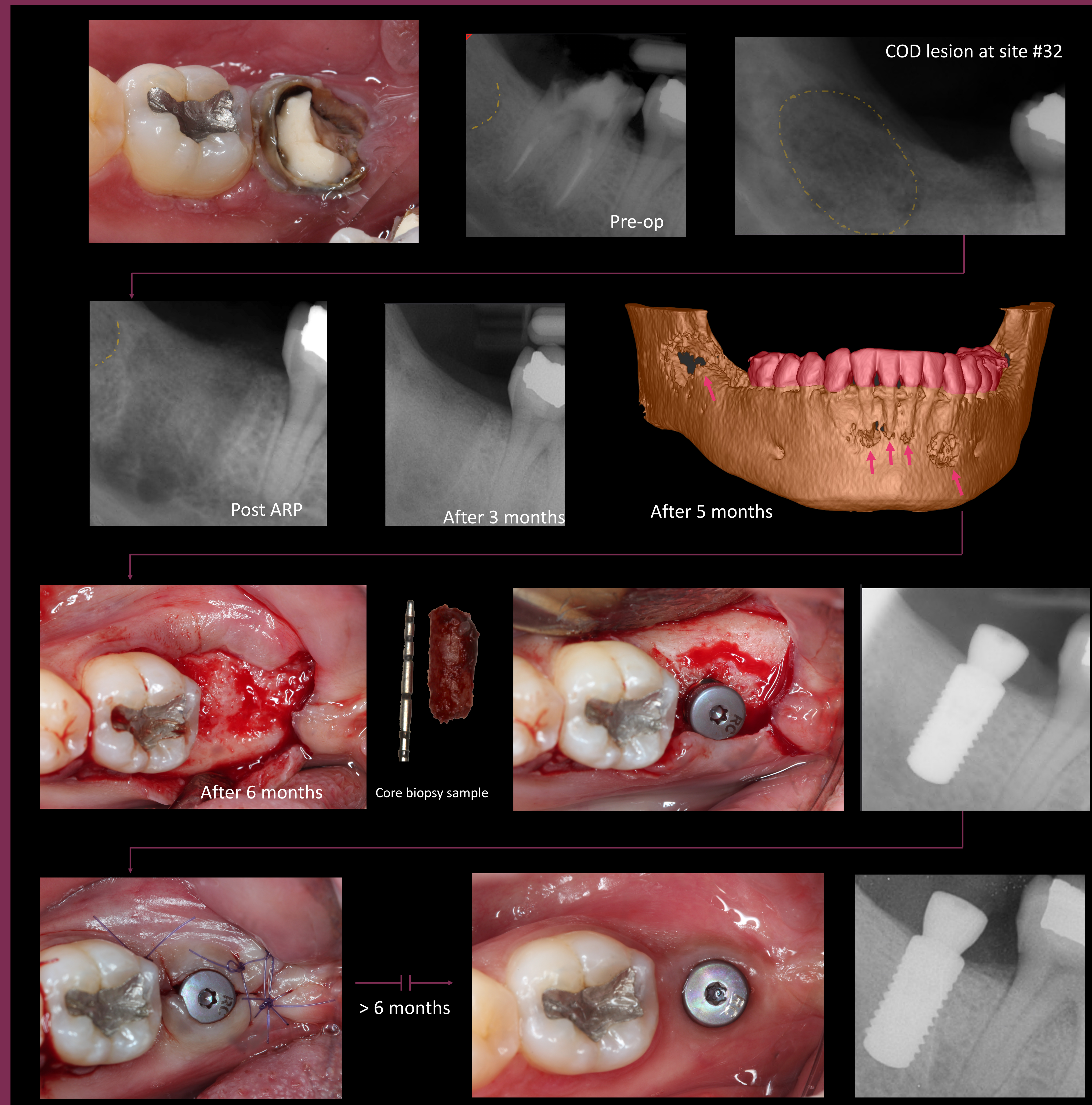


1 Background

Cemento-Osseous Dysplasia (COD) is a non-neoplastic condition characterized by the replacement of normal maxillary or mandibular bone by a mixture of woven bone and cementum-like particles in a connective tissue stroma. Radiographically, COD may range from completely radiolucent to mixed to radiopaque with a radiolucent rim. COD occurs more commonly among women in the fourth and fifth decades of life. The lesions are usually asymptomatic and are discovered on radiographs.^{1,2} In 2017, the WHO described different clinical forms of COD; 1) Periapical Cemento-Osseous Dysplasia (PCOD); 2) Focal COD; 3) Florid COD.³ Increased risk of complications that have been reported occurring in COD, such as secondary infections, are hardly controllable due to the low vascularity of the lesion site and, therefore, the inefficiency of antibiotics. For these reasons, dental implants are usually avoided in such a disease.⁴

2 Case Presentation

A 31-year-old African American male was referred from the predoctoral clinic for extraction of non-restorable tooth #31 and implant placement. CBCT was taken, and an incidental finding of multiple lobular and irregularly shaped radiopaque and radiolucent lesions around the apices of lower anterior teeth and distal to tooth #31 were observed. These findings were diagnosed by an oral radiologist as Florid COD. The patient was not aware of the lesions. After explaining to the patient the risks involved with extraction and implant placement, we obtained his consent to extract tooth #31 was surgically sectioned and extracted then alveolar ridge preservation (ARP) with FDBA were performed. Six months later, a 2X6 mm core biopsy of grafted extraction site was harvested with a trephine bur. The sample was sent for histopathology and it revealed fragments of woven bone with fatty marrow and mild chronic inflammation. The patient was prescribed a prophylactic antibiotic (azithromycin 500 mg an hour before surgery. Straumann BL implant with a 4.1 mm by 10 mm length was placed. Good primary stability was achieved. Six months later, the implant demonstrated good stability and is being restored.



3 Conclusion

This case report shows an osseointegrated implant in site where extraction, ridge preservation and implant placement were done near florid COD lesion. There are limited number of published cases reporting success and failure of implant osteointegration at site of COD lesions.⁵⁻¹⁰ The rate of osteomyelitis in COD cases is variable in the literature ranging from 11-31%.^{1, 11} The potential risk for such complication mostly arise because of previous tooth extraction and implant placement. Knowing the risk of complications with proper case selection and atraumatic surgical technique, implant placement in patients with COD might be possible. It is generally recommended to follow up those cases clinically and radiologically to monitor the progress of the lesions and the health of the dental implant.

