



Management of Florid Cemento-Osseous Dysplasia in Complete Arch Fixed Implant Supported Prosthodontic Patients: A Case Series

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Introduction

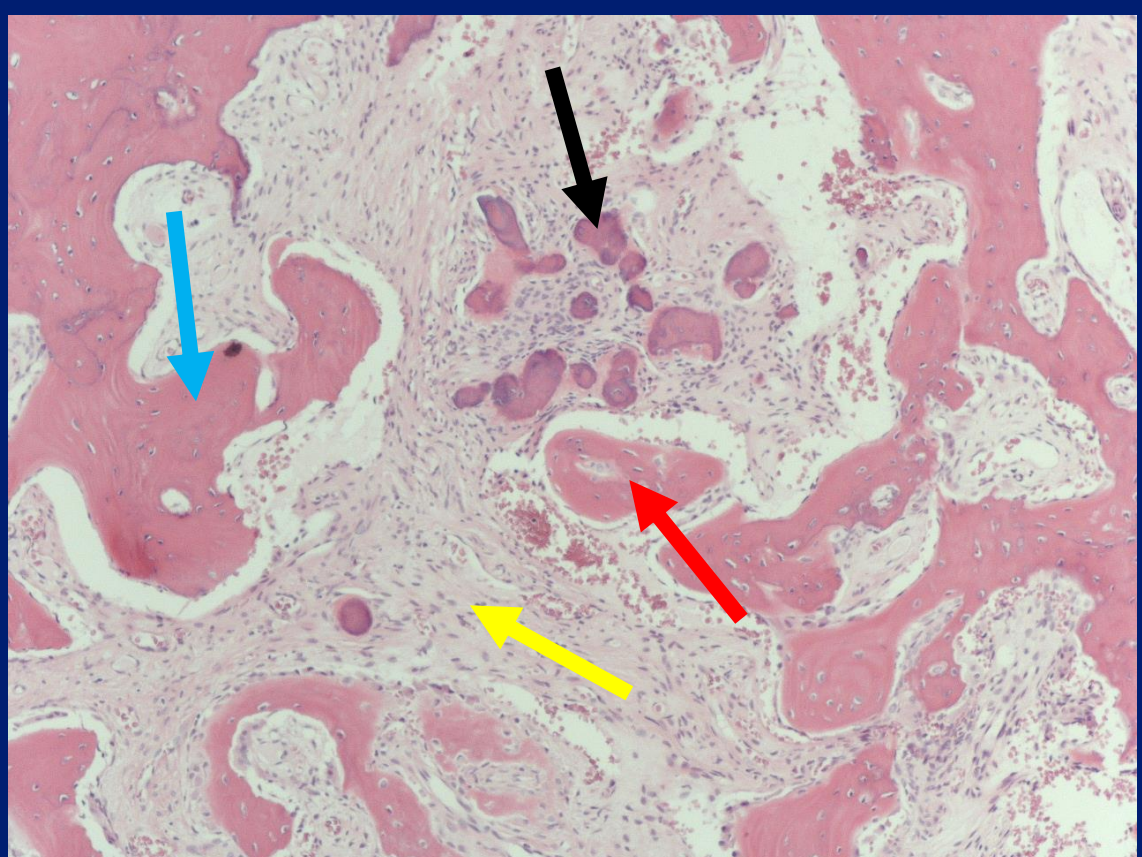
- Florid Cemento-Osseous Dysplasia (FCOD) is a benign osseous condition that is defined by the presence of dysplastic inostoses commonly seen in the mandible.⁴
- The osseous lesions may be of mixed radiopacity, often containing cementum-like tissue (CLT) and loose, fibrous tissue noted during histopathological analysis.⁴
- Affected bone is a poor substrate for osseointegration as it has been shown to have poor vascularity (mineralized areas) and can lead to fibrous encapsulation.²
- COD has been reported in the literature to be as high as 5.5% in prevalence amongst its primary demographic- women of African descent.⁴
- Previous case reports show success of dental implants placed adjacent to FCOD lesions, but full arch management of these cases in the literature is sparse and morbid risks and implant failures have been reported with surgical interventions.^{1,4}

Case Descriptions

Both patients present for Complete Arch Fixed Implant Prosthodontic Treatment

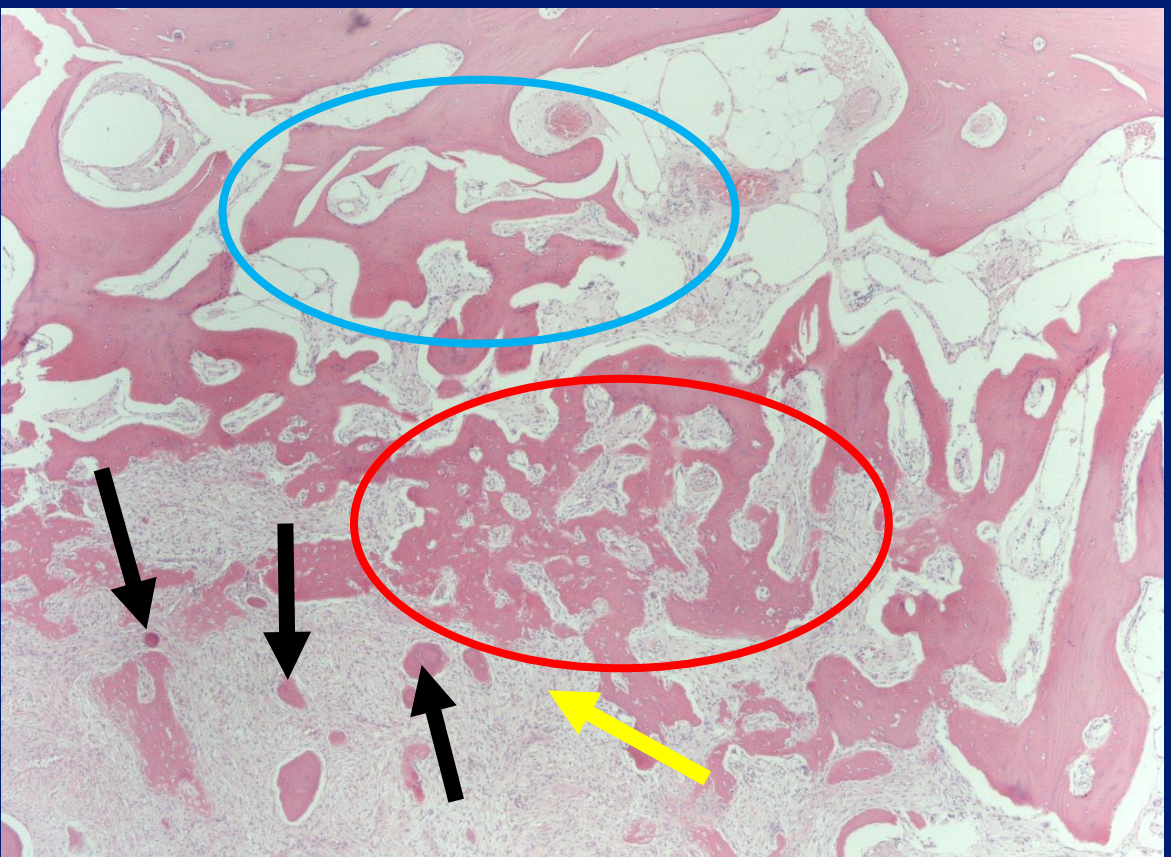
- Case 1 presents with the need for double jaw treatment, Case 2- mandibular only
- The presence of FCOD was radiographically noted in the mandible of each patient during the pre-surgical radiographic and CBCT examination

Histological Examination



Key
Red: Abnormal Bone Formation
Blue: Normal Trabecular Bone
Black: Cementum
Yellow: Fibrous Tissue

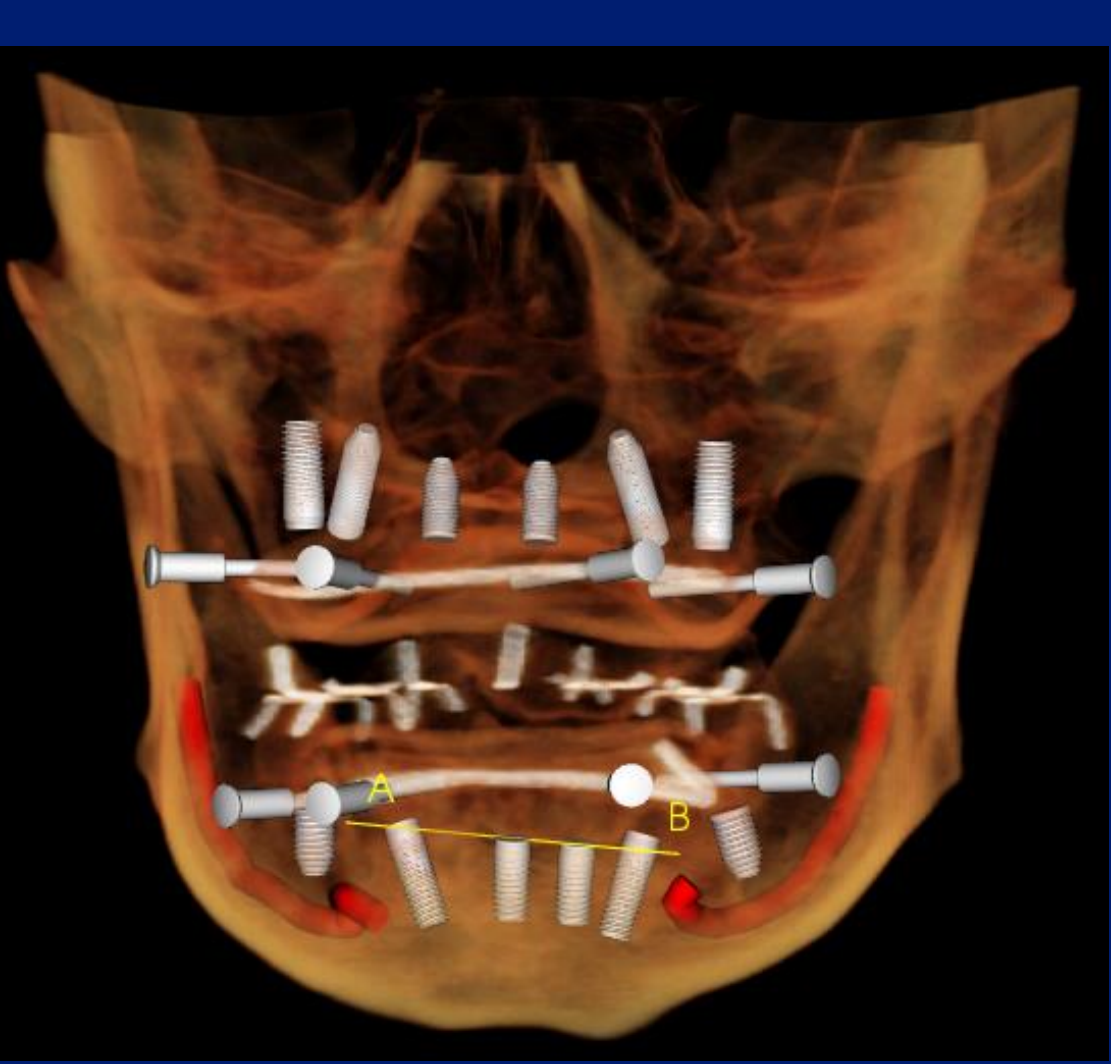
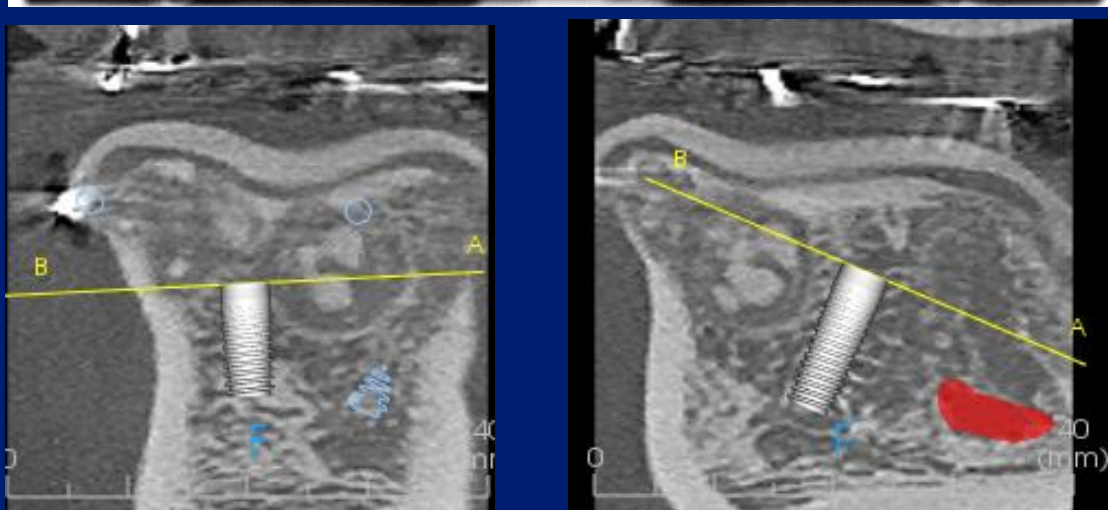
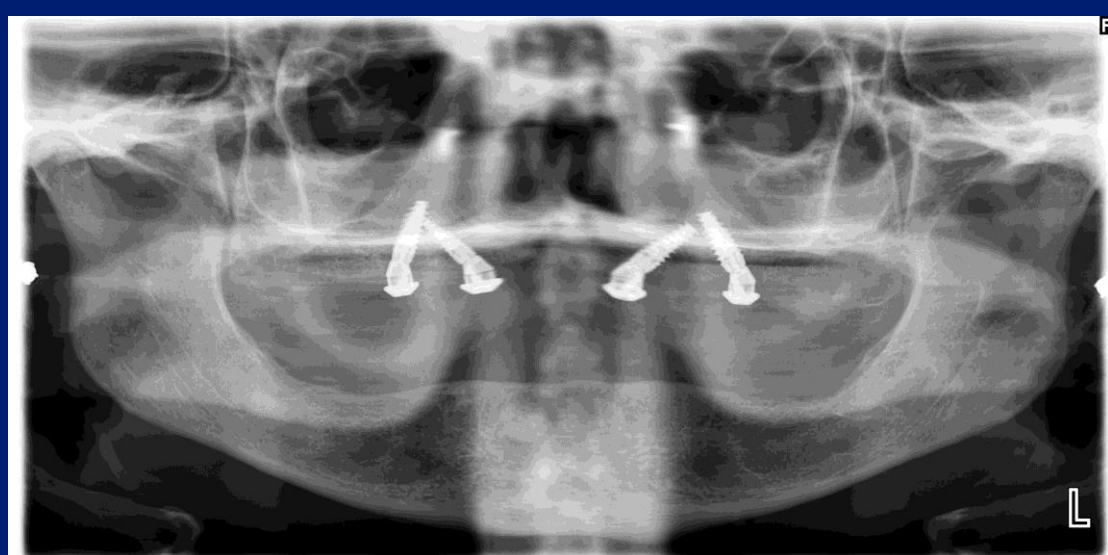
Histological Imaging:
Dr. Easwar Natarajan



References

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Case 1- Double Jaw CAFIP



- CBCT Planning conducted prior to surgery to evaluate areas of normal bone for implant placement after adequate alveoloplasty
- Anterior 4 implants were placed with adequate primary stability and immediately loaded
- All 6 mandibular implants have passed osseointegration check (5mo) and are waiting for final prosthetic placement

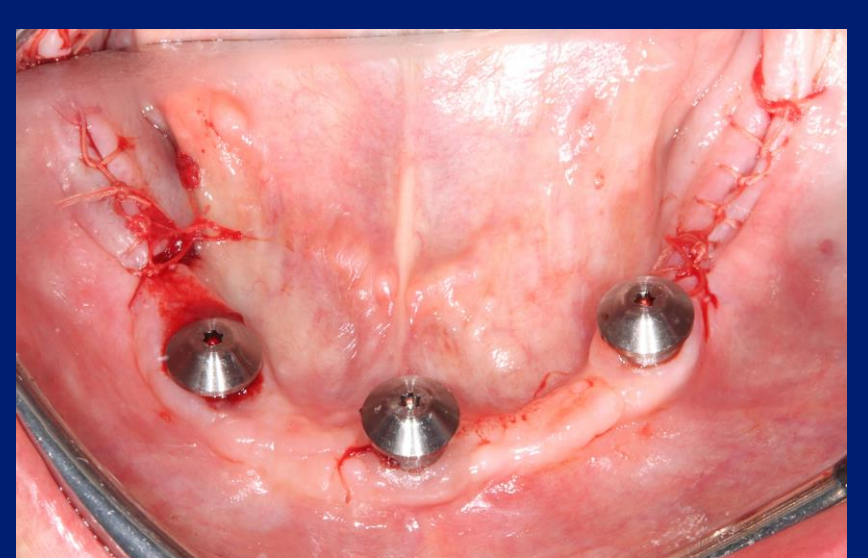
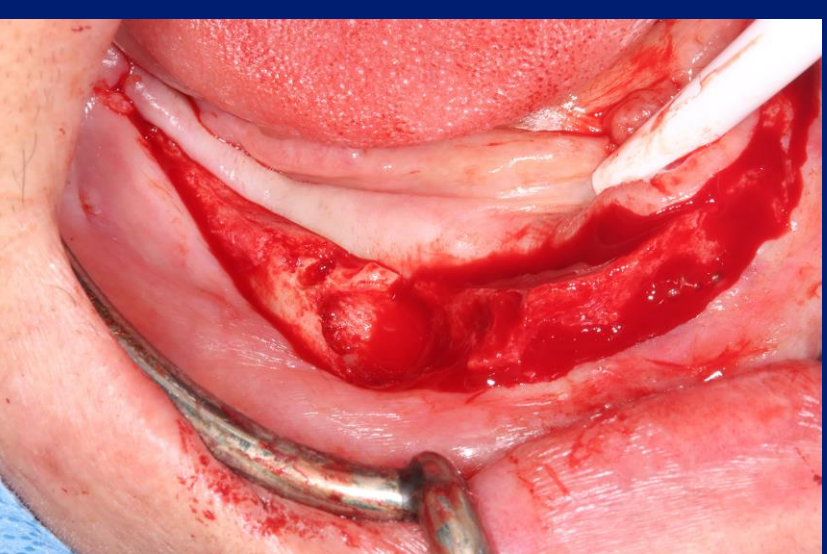
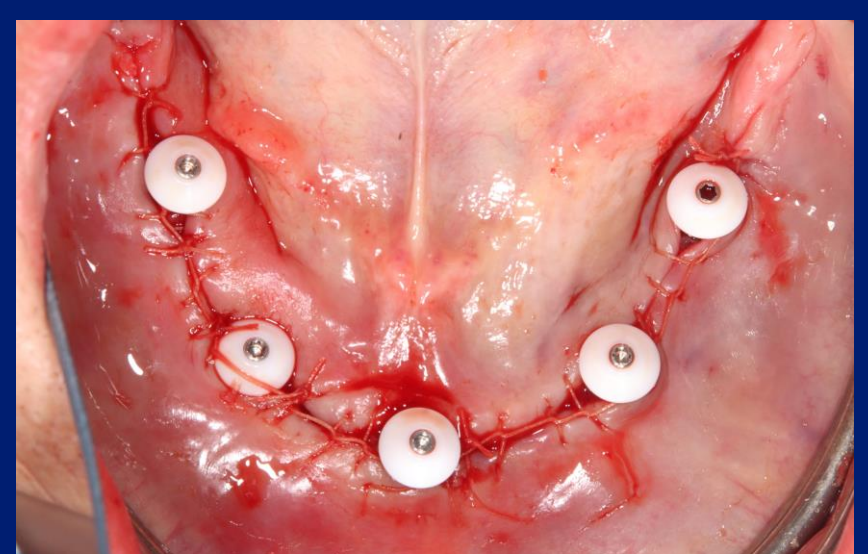
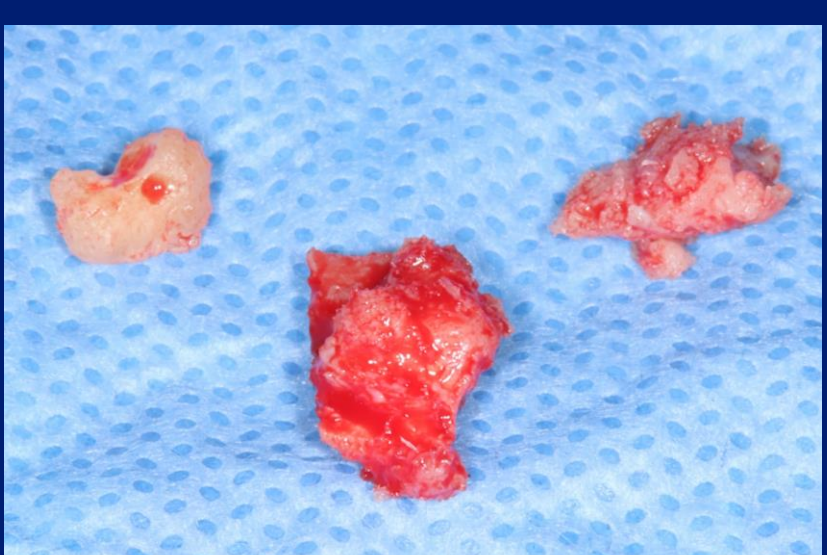
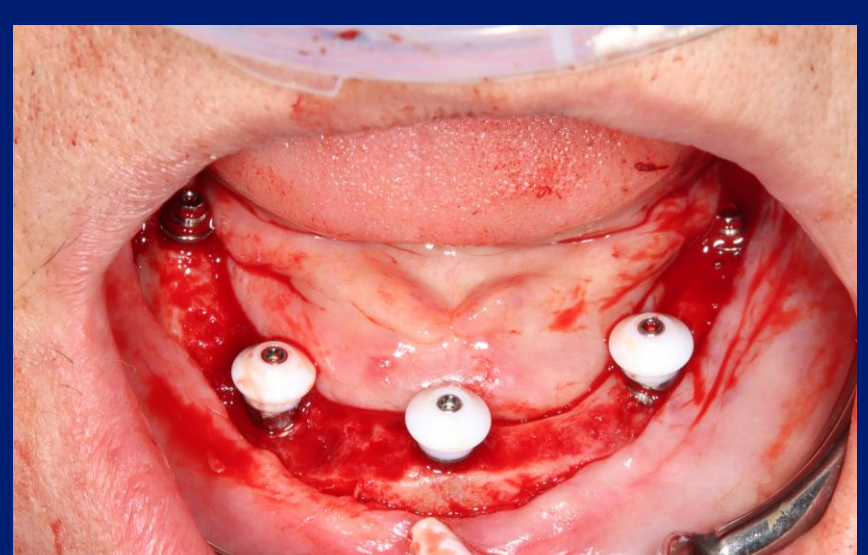
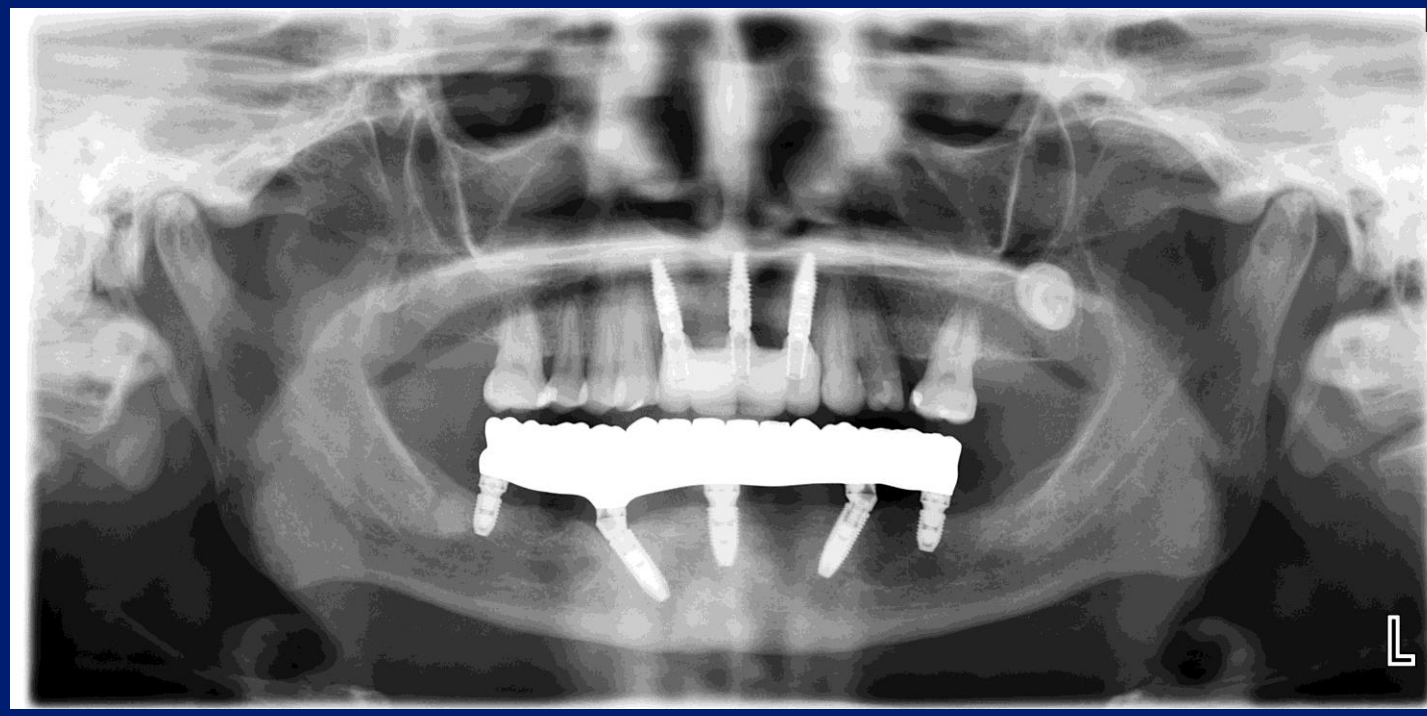
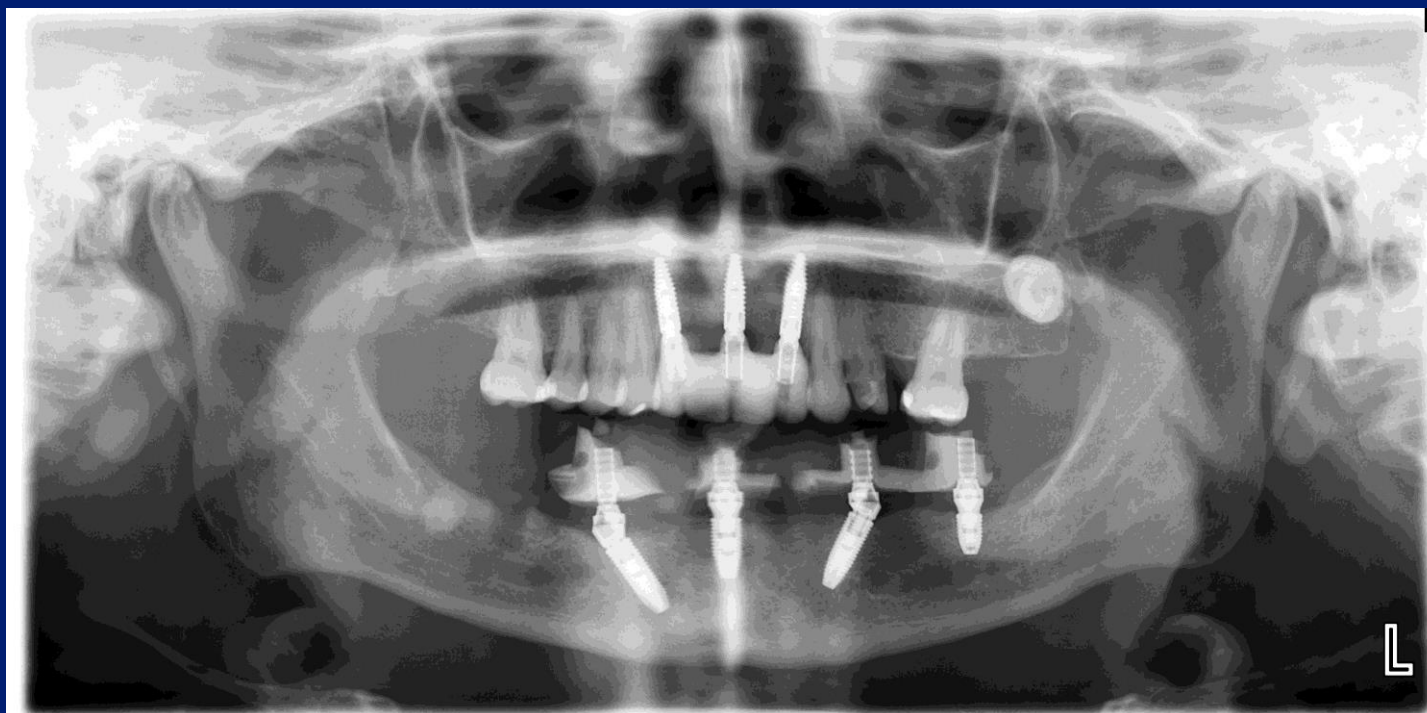
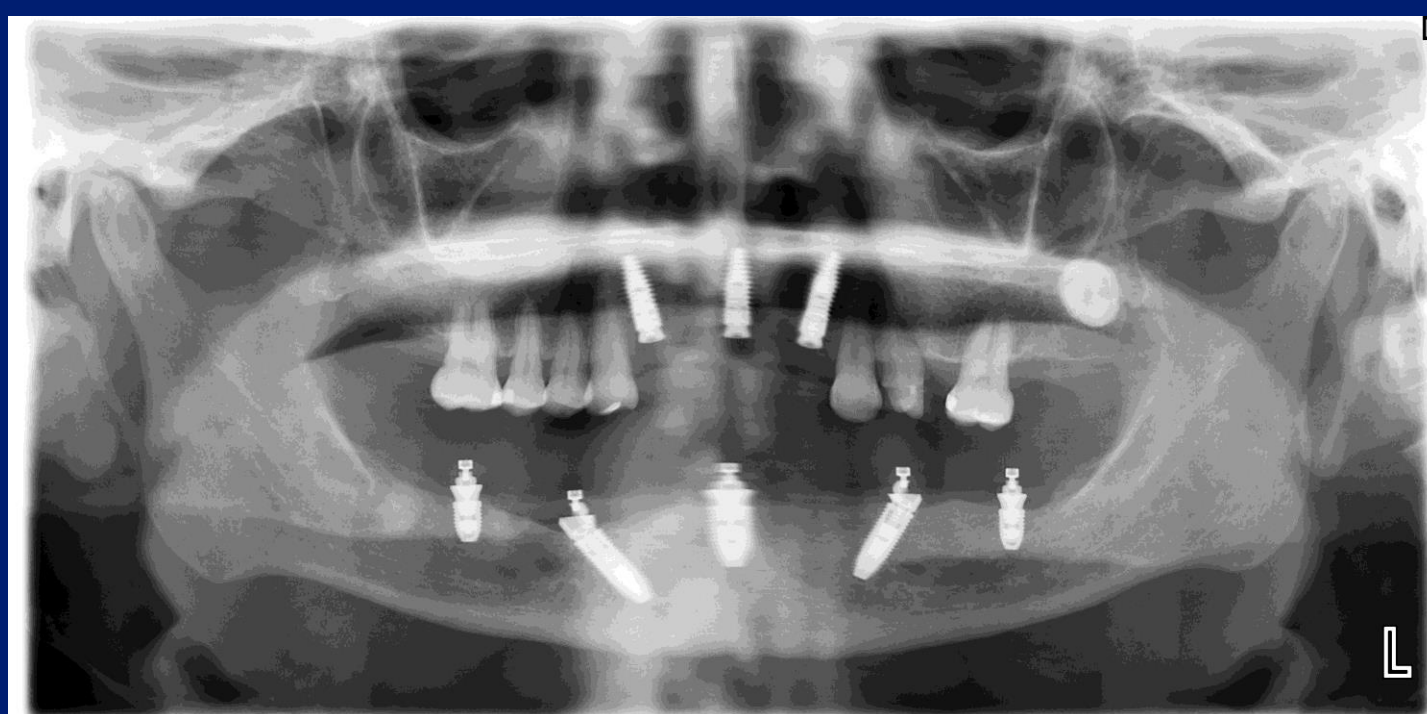
Microscopic Description

Decalcified sections reveal fibro-osseous tissue. Delicate viable osseous trabeculae, osteoid and droplets of cementum-like tissue are seen within a cellular fibrous stroma. All cytological features are benign. Inflammation is not evident.

Conclusions

- FCOD can present distinct challenges for implant placement and CAFIP treatment planning
- Care should be taken to avoid placing implants directly into FCOD lesions
- Implant treatment may be successful in such patients, but both mechanical and biological risks are higher in both the short and long term, and patients should be informed of these risks prior to starting treatment

Case 2- Mandibular CAFIP



Microscopic Description

Decalcified sections reveal fibro-osseous tissue consisting of large and smaller viable osseous trabeculae, osteoid and droplets of cementum-like tissue within a cellular fibrous stroma. All cytological features are benign. Inflammation is not evident. Peripherally there is dense cortical bone and a large fragment of cementum-like tissue.

- 5 implants were initially placed and loaded due to lack of intraforaminal, unaffected bone. Relevant lesions were enucleated during alveoloplasty
- Retroforaminal implants subsequently failed (3mo, 5mo) post-op accompanied by a unilateral interim prosthetic failure attributed to bruxism
- Patient converted to a 3D-printed, fixed, all-on-3 prosthesis
- New retroforaminal implants placed with 3 months of submerged healing and subsequently loaded with a monolithic zirconia interim prosthesis