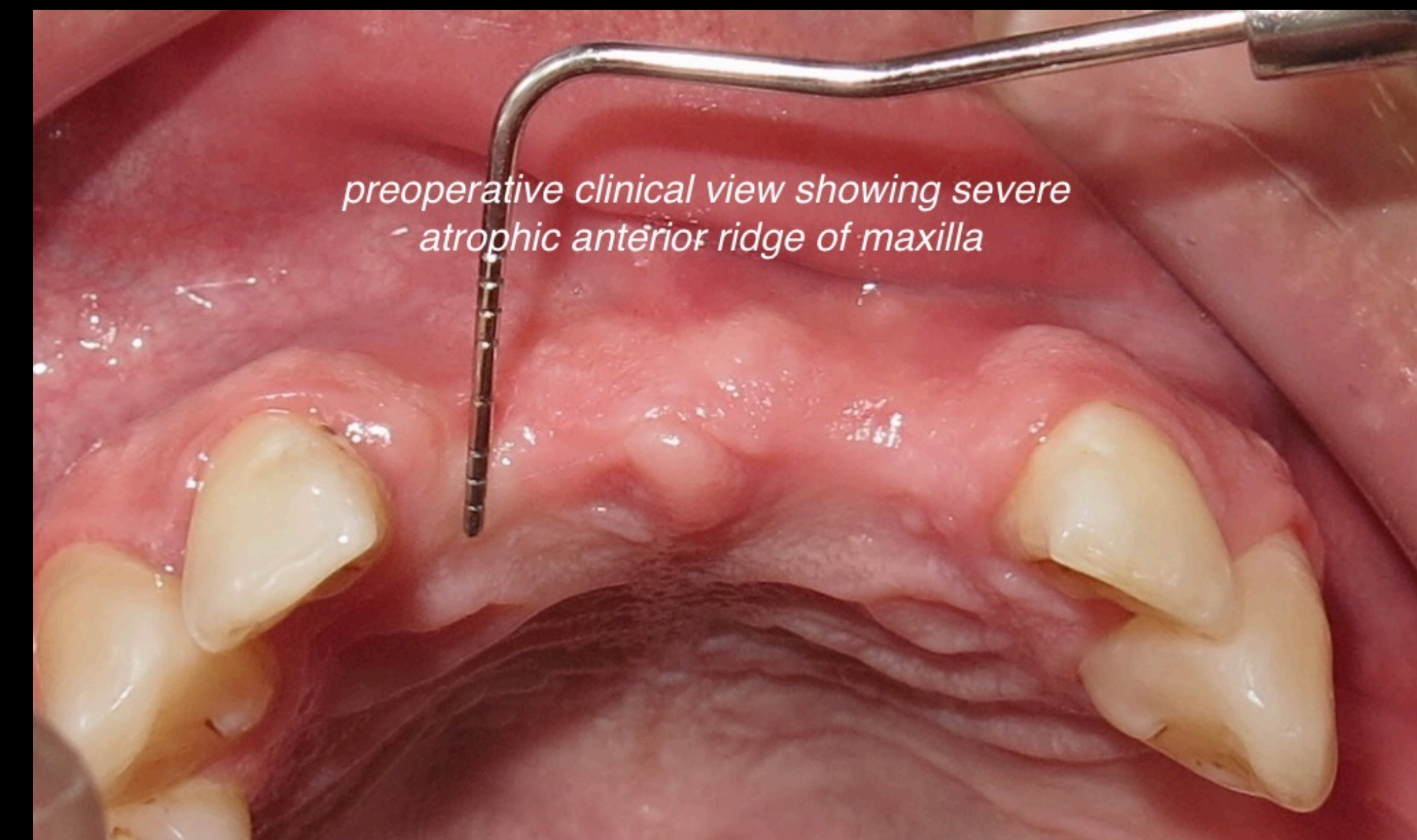
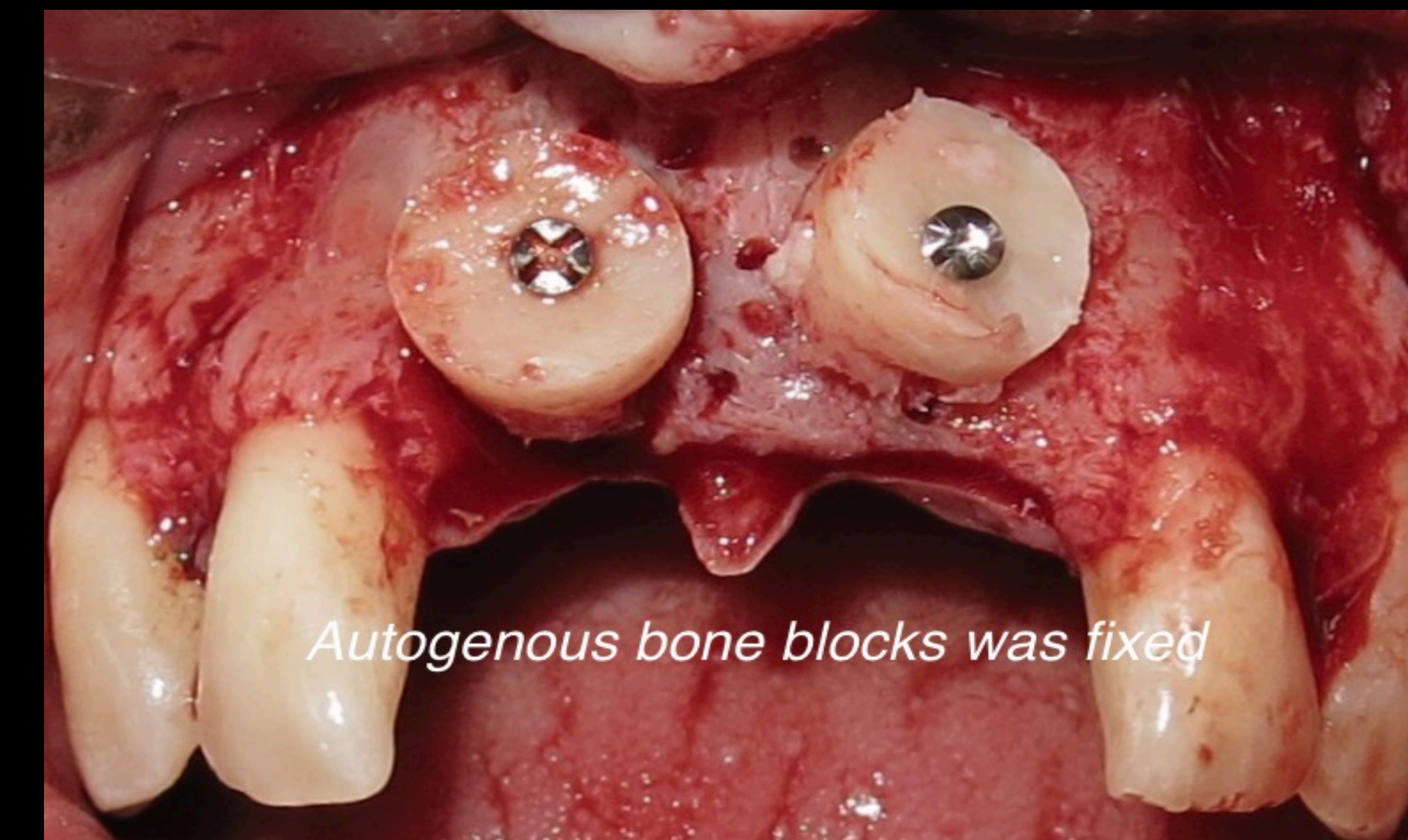
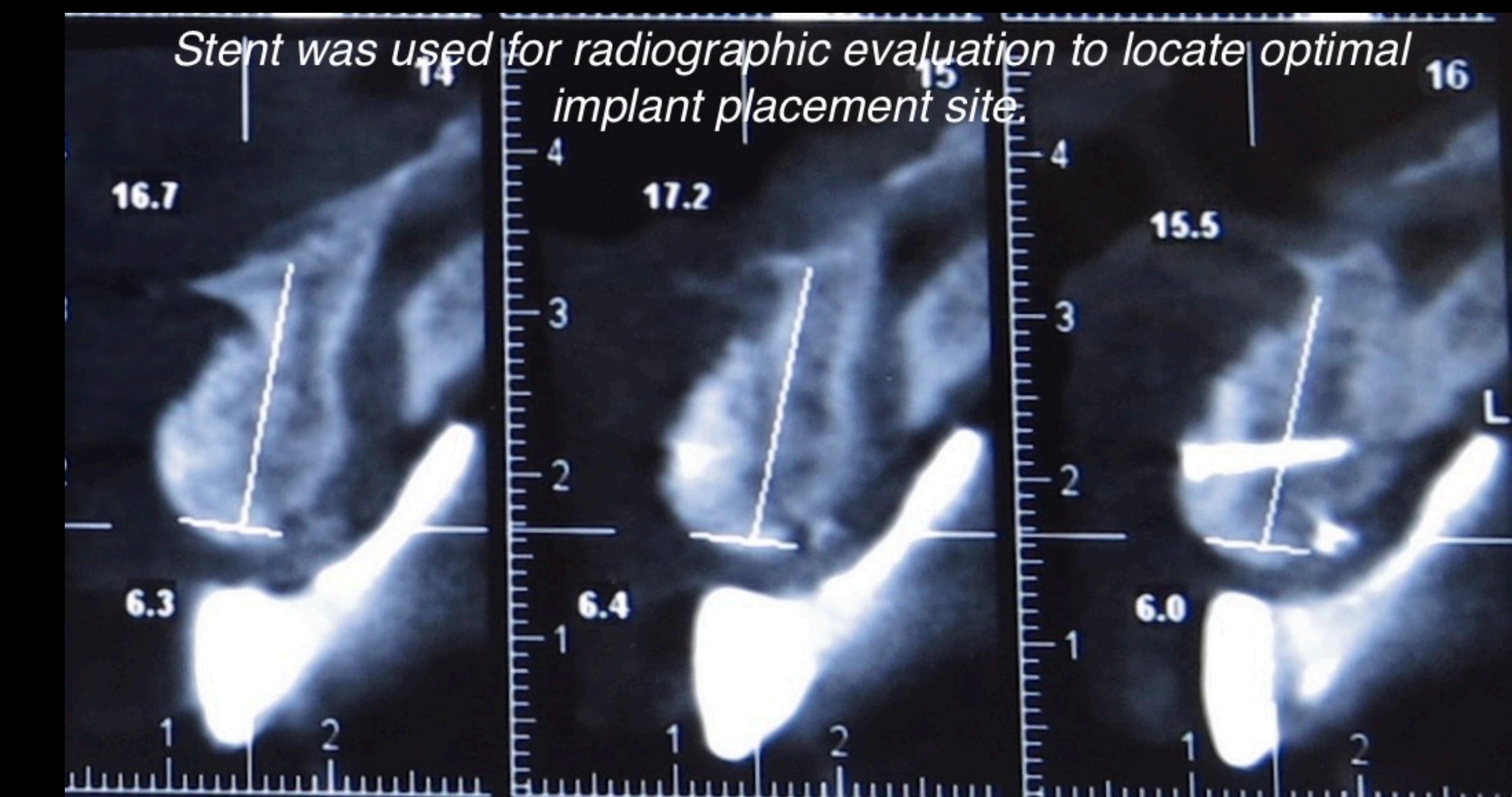
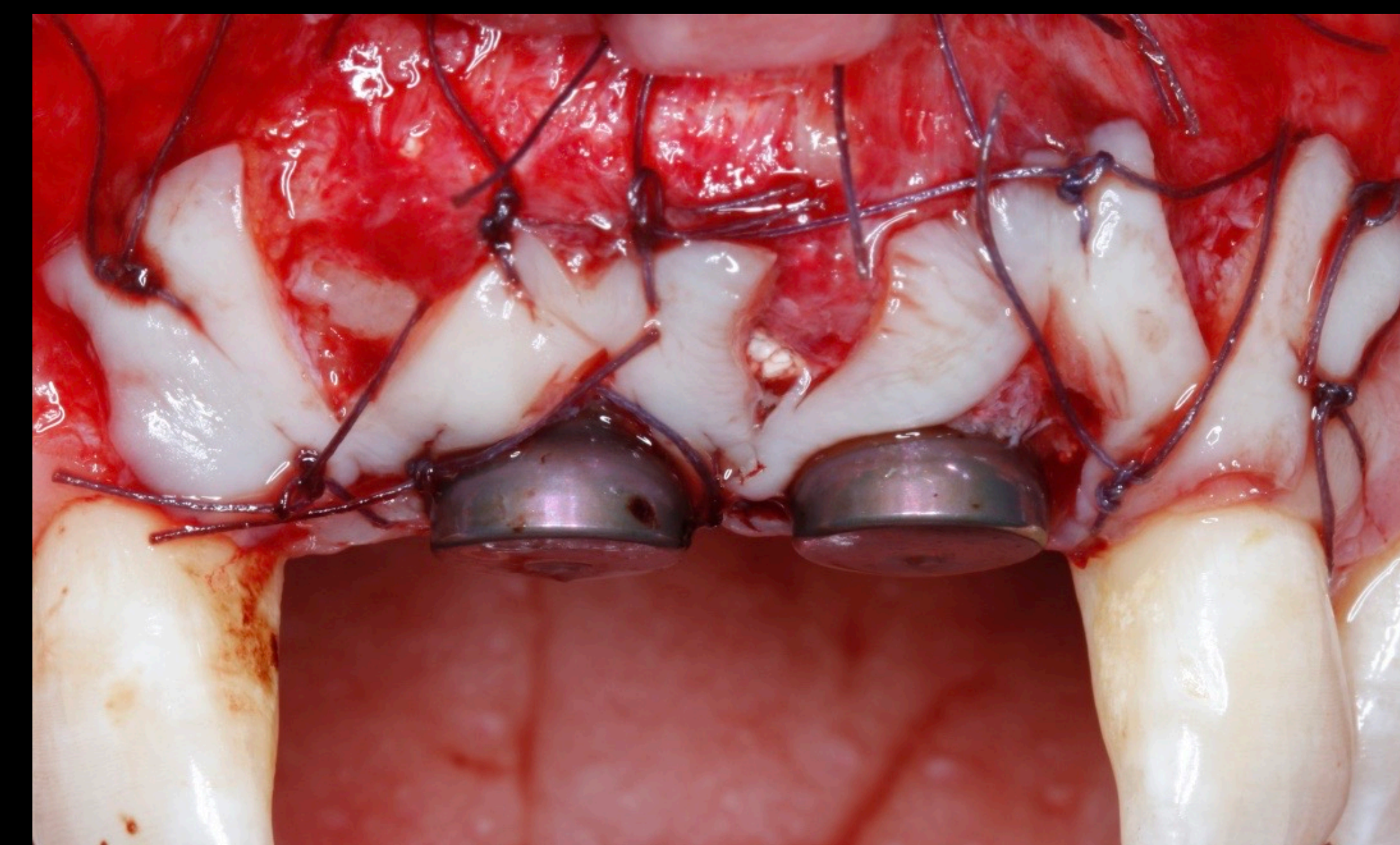
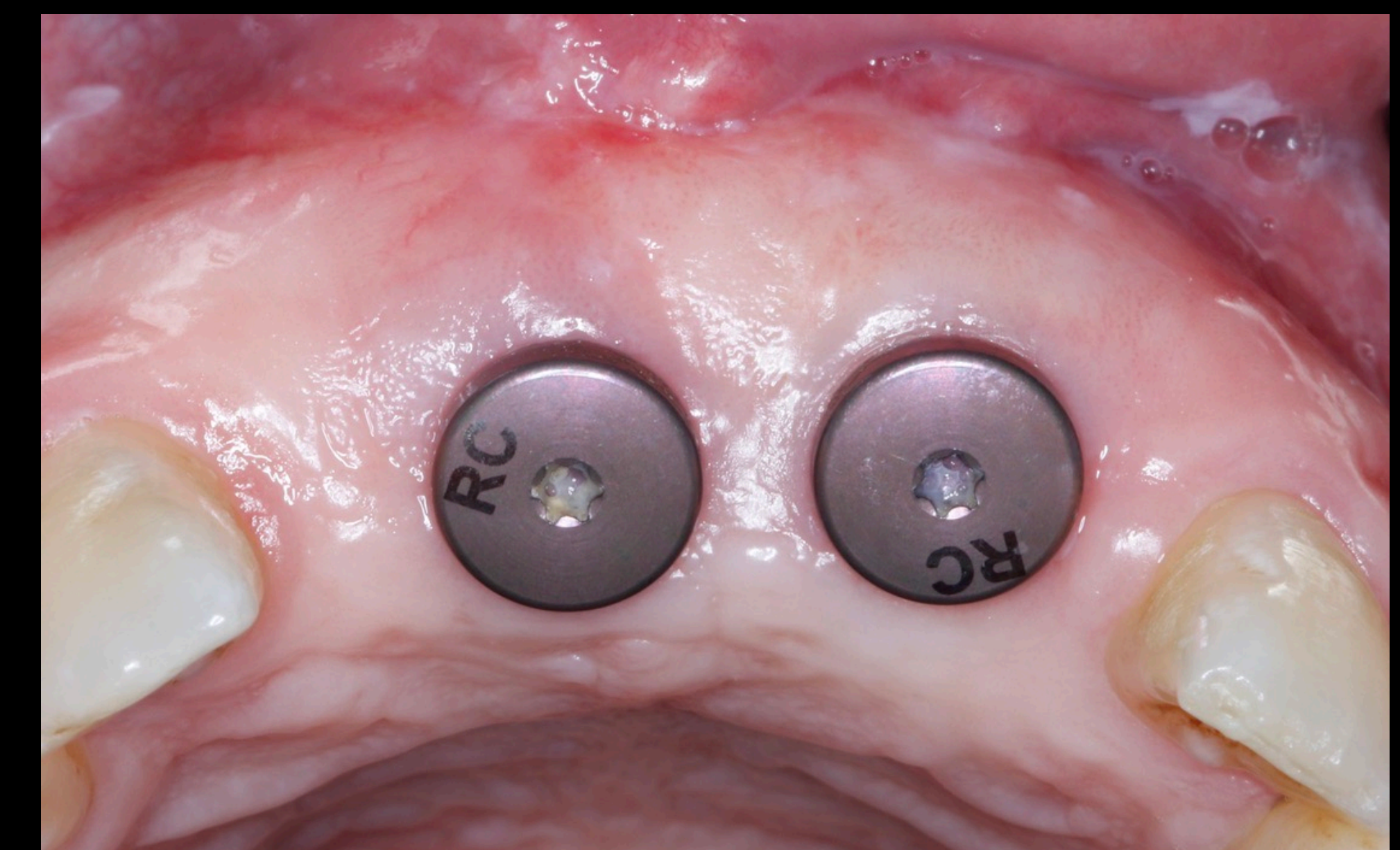
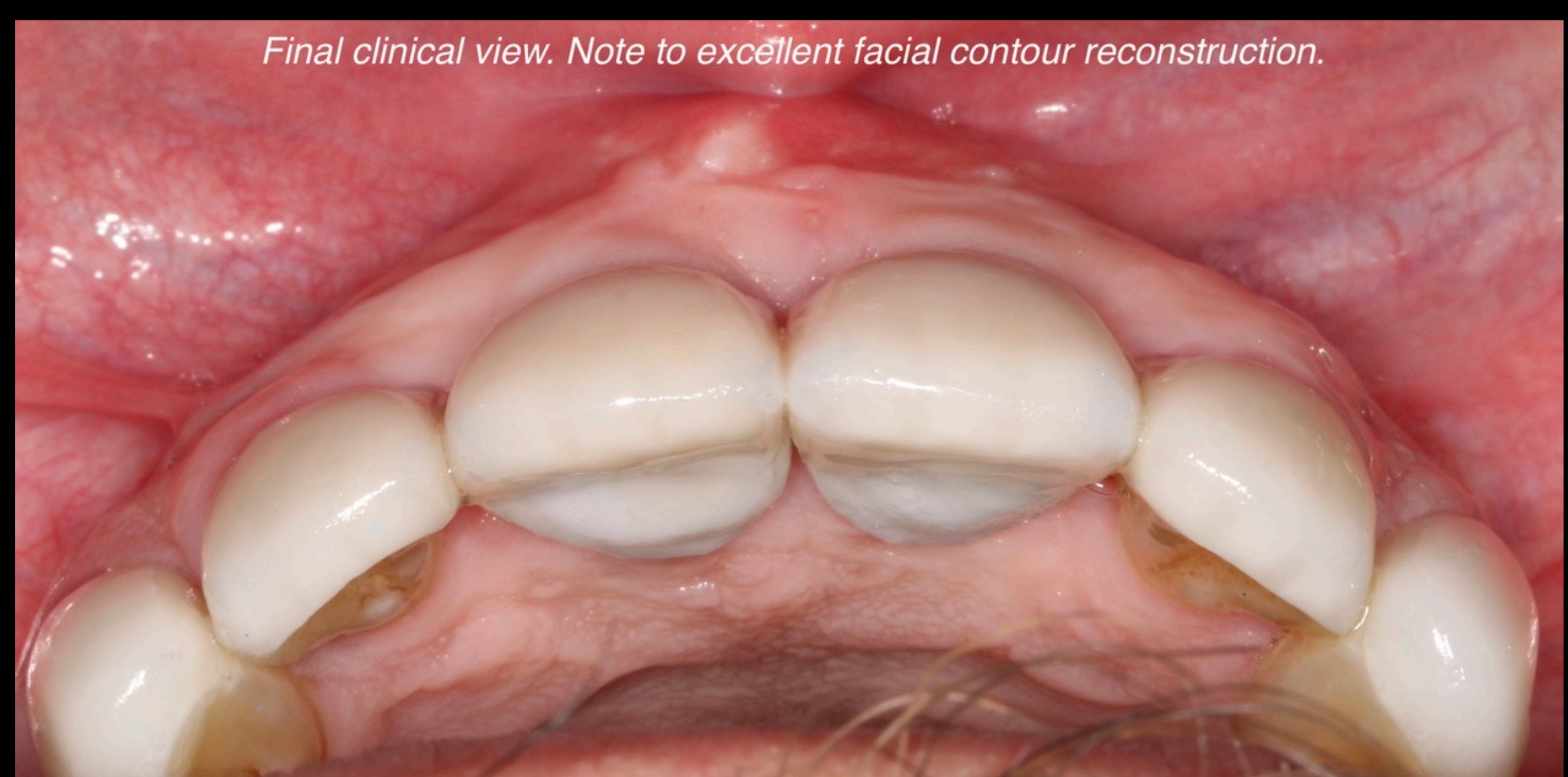


New Approaches To Re-Establish Implant's Buccal Convexity In Severe Bone Deficiency In The Esthetic Zone

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INTRODUCTION

The alveolar process undergoes dimensional changes after tooth extraction. Lack of buccal convexity in aesthetics especially for implant treatment is the major considerations. Soft and hard tissue augmentation compensate the buccal aspect deficiency. soft tissue augmentation can be performed to make up missing volume at the buccal aspect. In this case series we present methods to augment the soft and hard tissue deficiency in paradigm.

METHOD

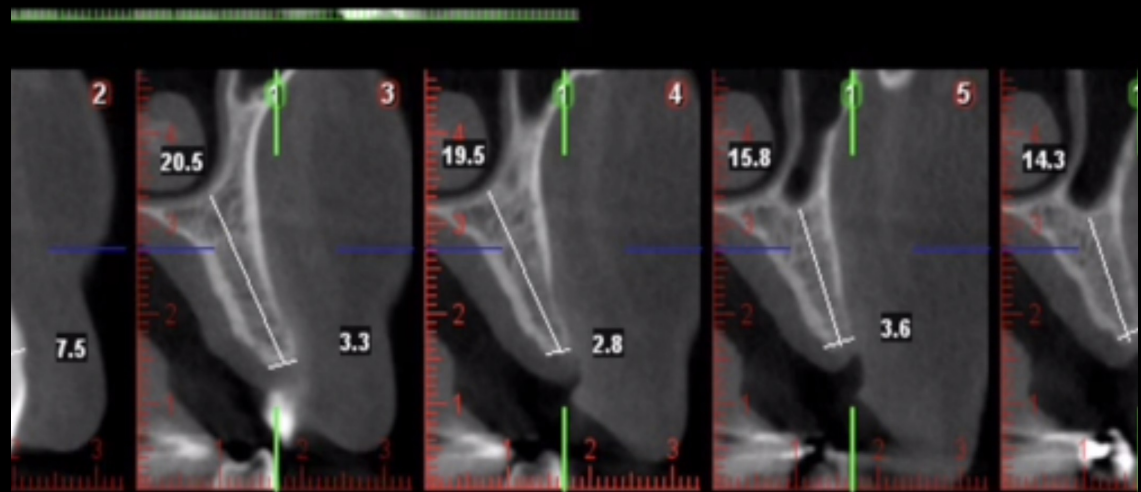
Buccal contour reconstruction has different approaches in patients with severe bone defects. These interventions could be performed through soft tissue, hard tissue, or a combination of both. Regarding hard tissue augmentations, ridge splitting, particulate guided bone regeneration or block graft with supportive guided bone regeneration should be considered. Ramus bone graft recently extracted area or bony peaks surrounding the recipient area could be best sites selected as a donor area. (Case 3,4,6 and 7) Pedicle graft, Connective tissue graft or free gingival graft (such as accordion technique) can be used as possible ways for soft tissue augmentation. (Case 1,2,3 and 5) The necessity of frenectomy still has been suggested in immediate cases of augmentations, in especial cases with flap advancement there is also the need for soft tissue augmentation as well as hard tissue procedures. (Each technique was mentioned earlier.)



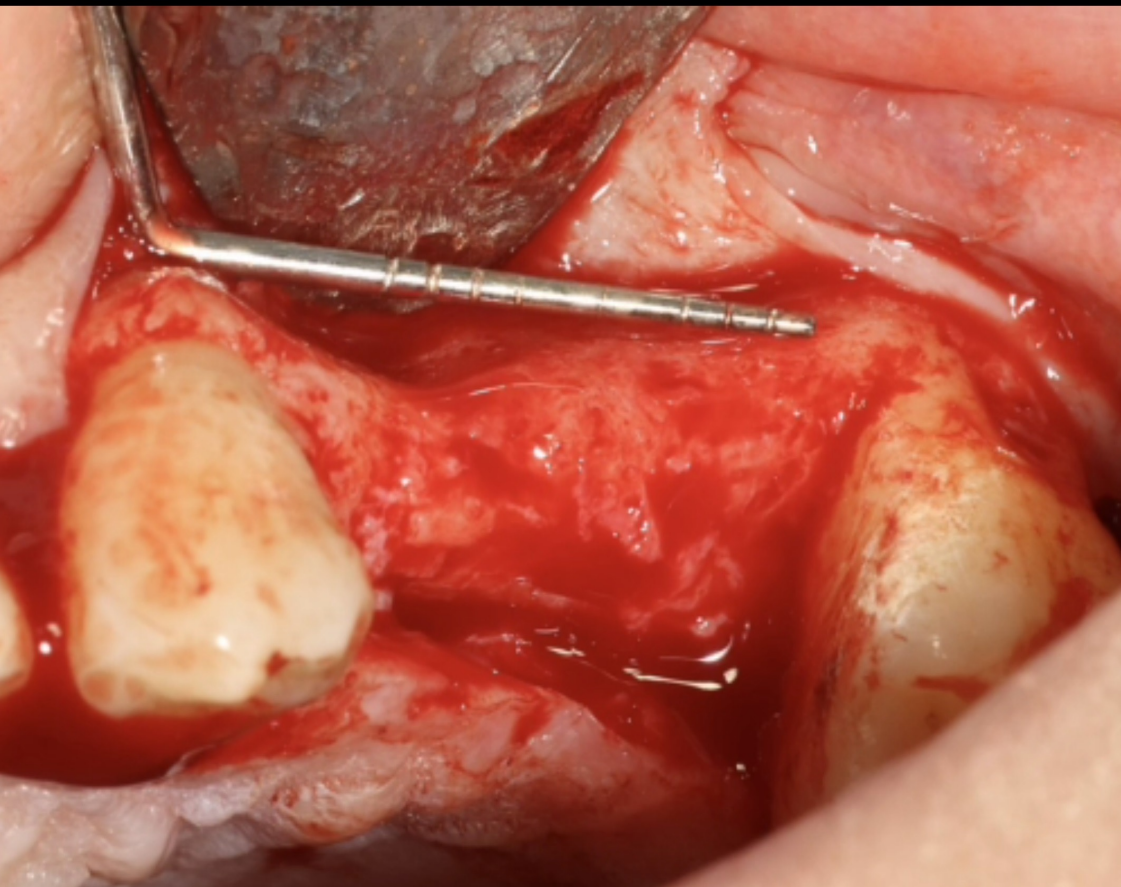
Buccal Deficiency



Mesio-Distal view



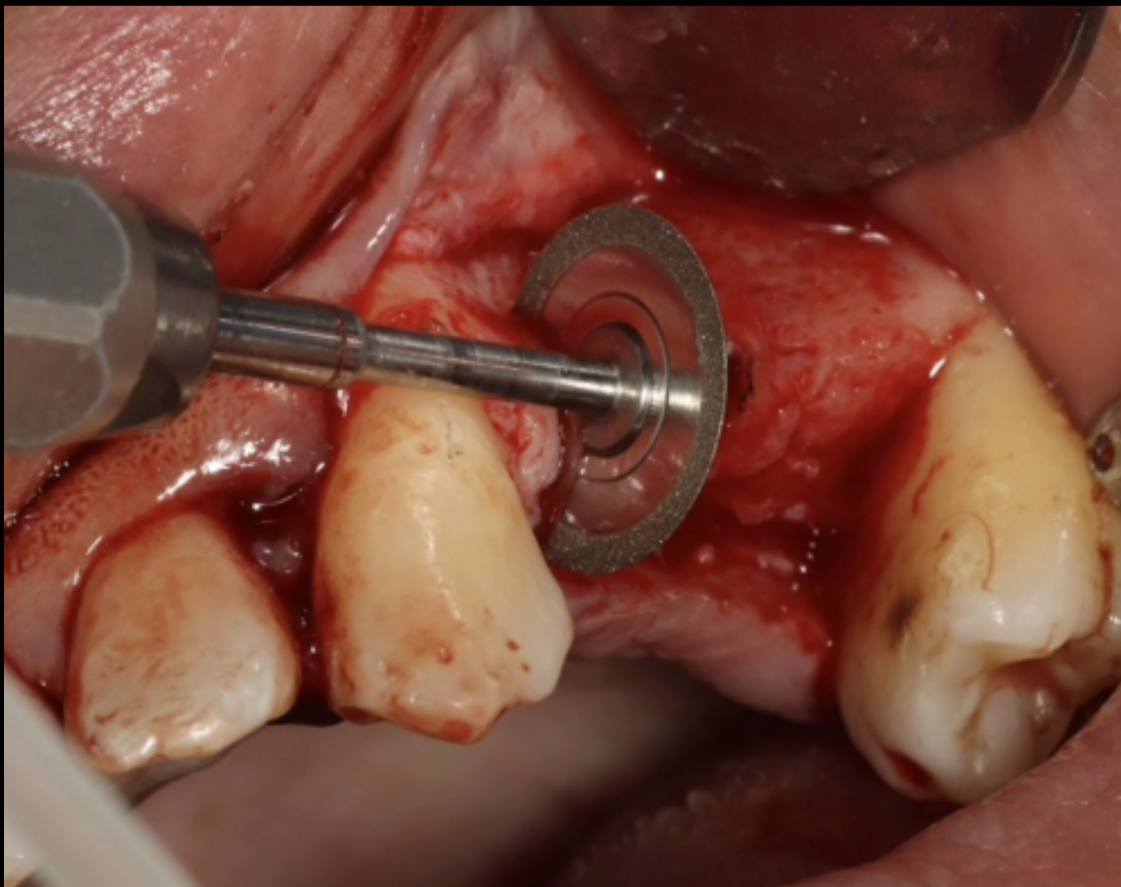
Baseline CBCT



Mesio-Distal View after reflection



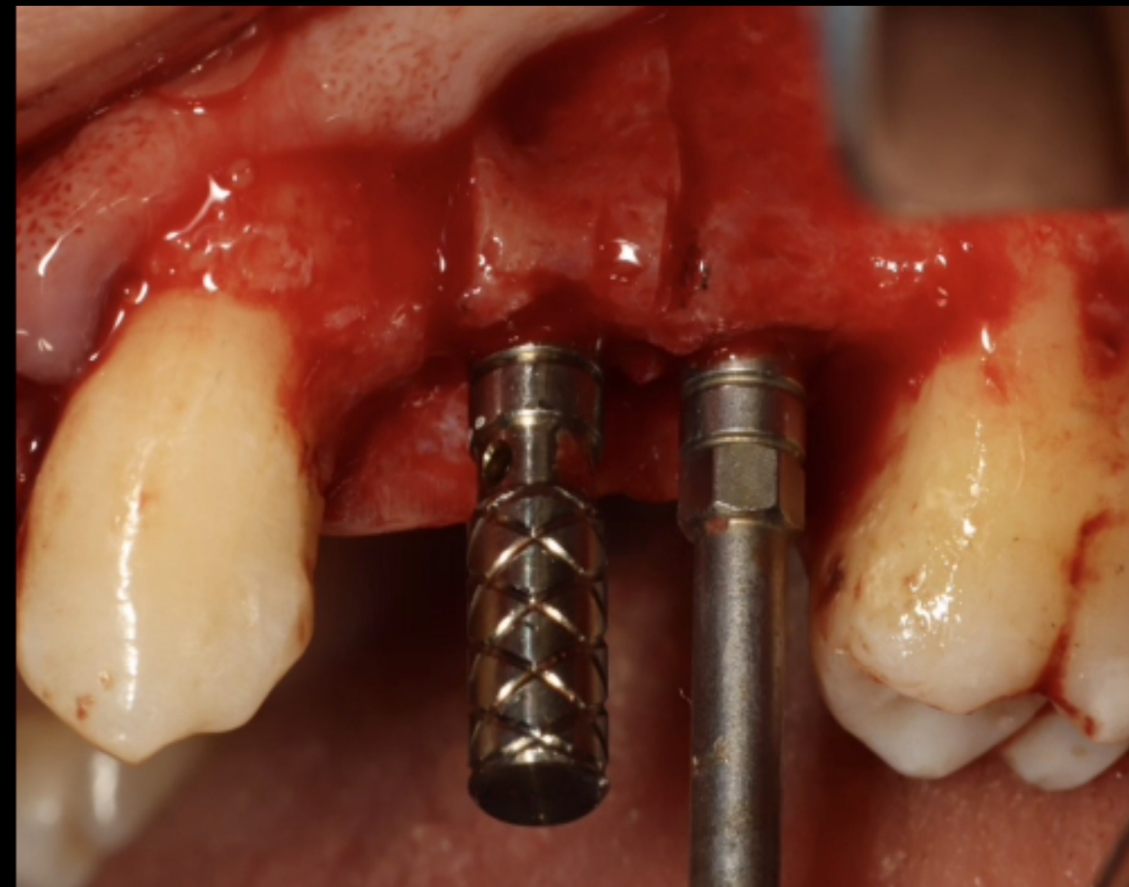
Buccal View after reflection



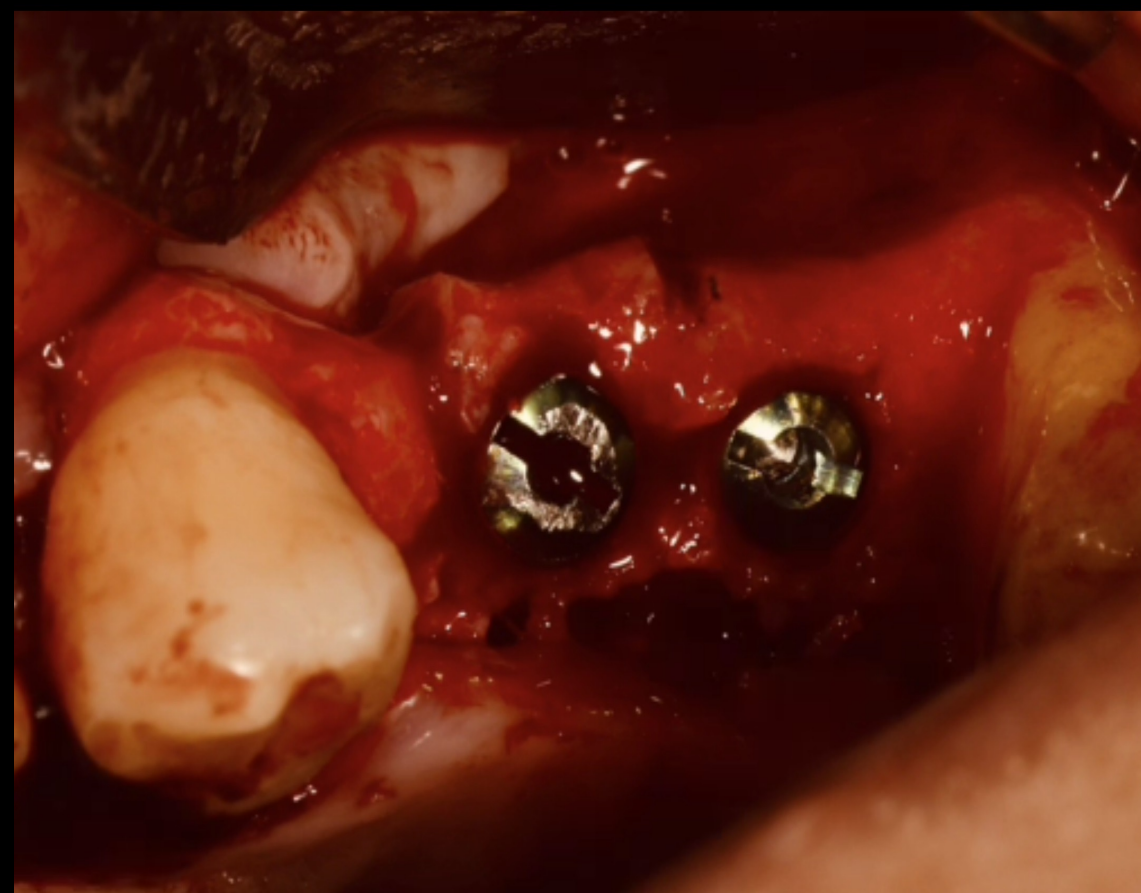
Ridge expansion



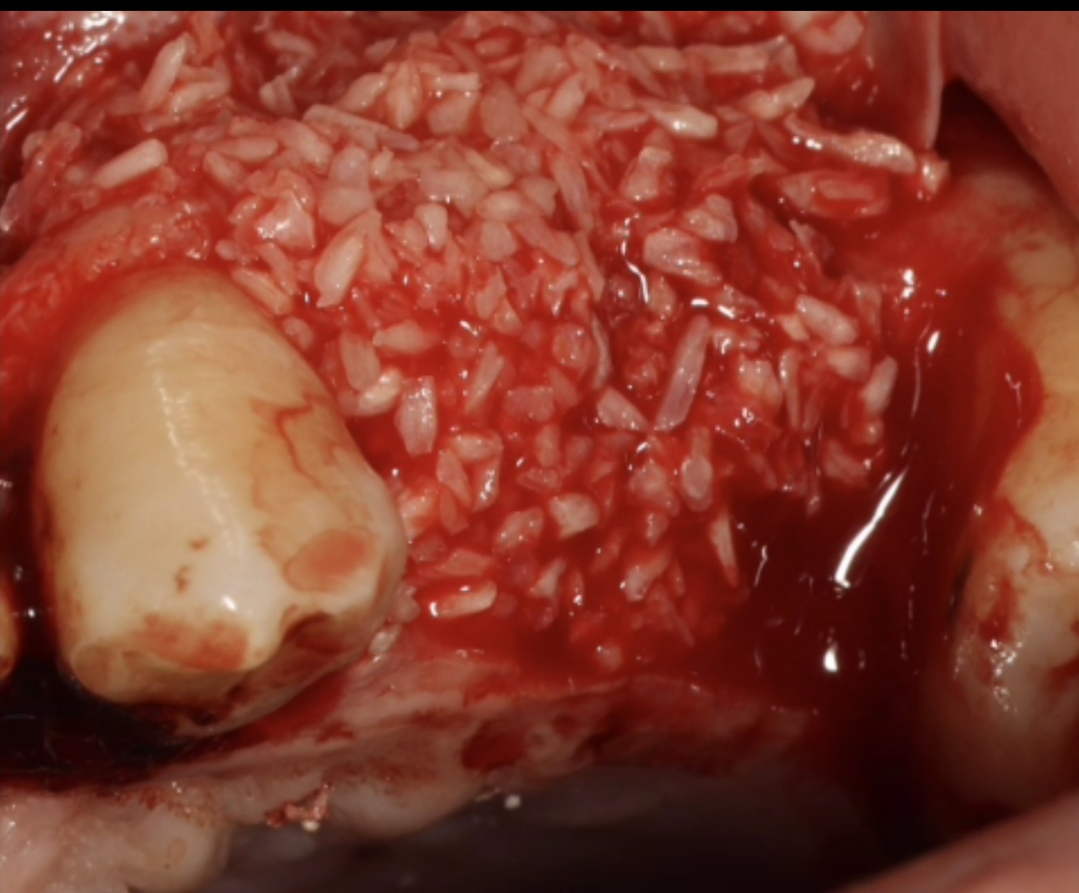
Ridge expansion



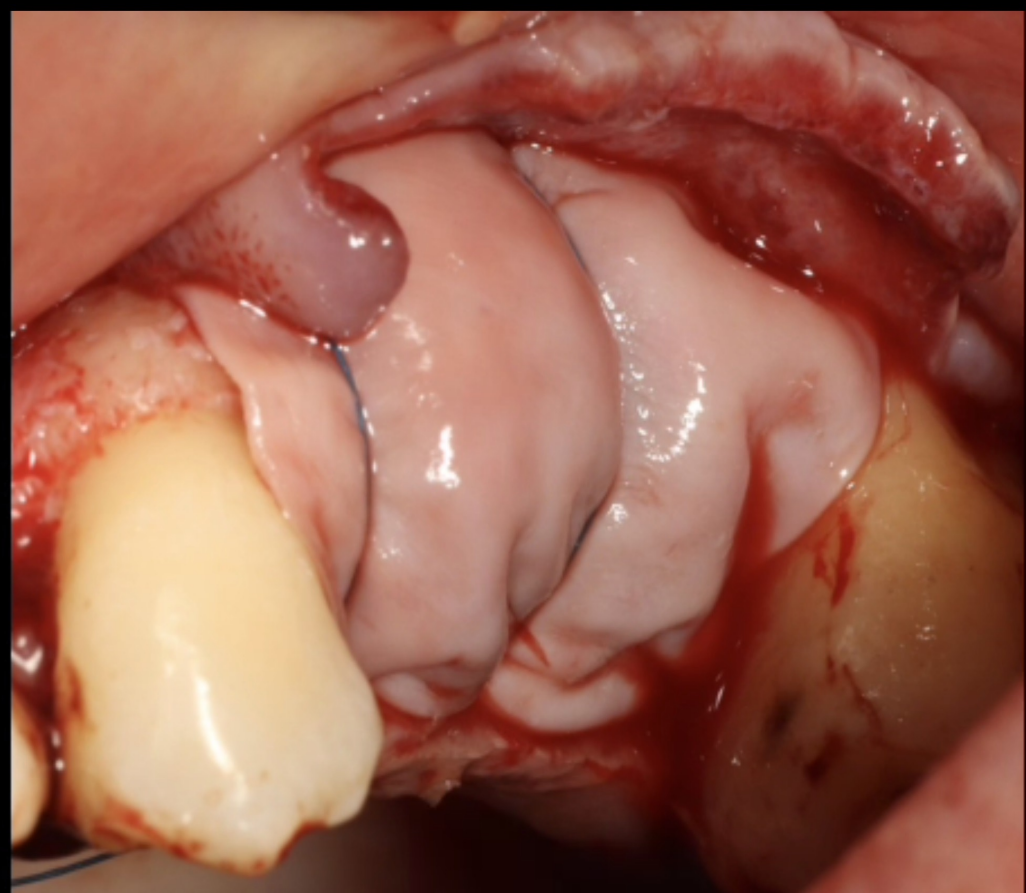
Implant insertion



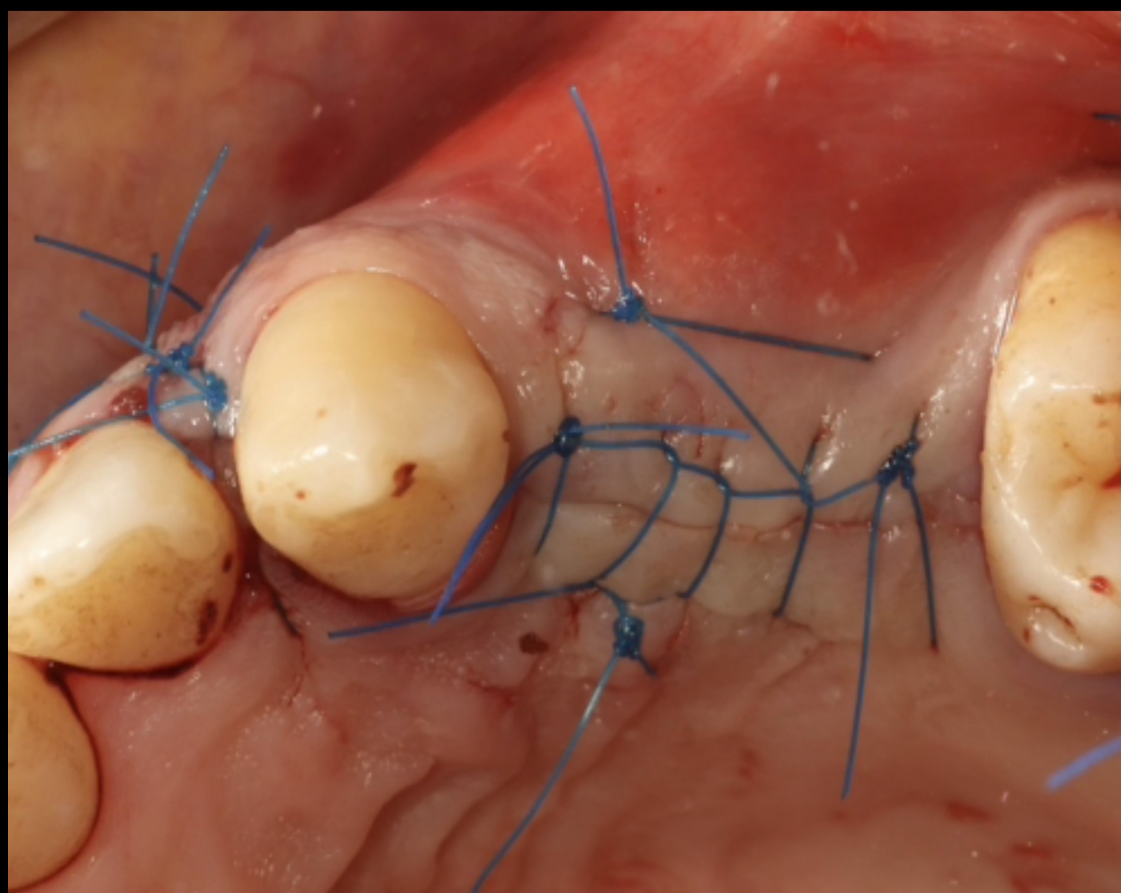
Covers crews were tighten



GBR with allograft



Membrane covering



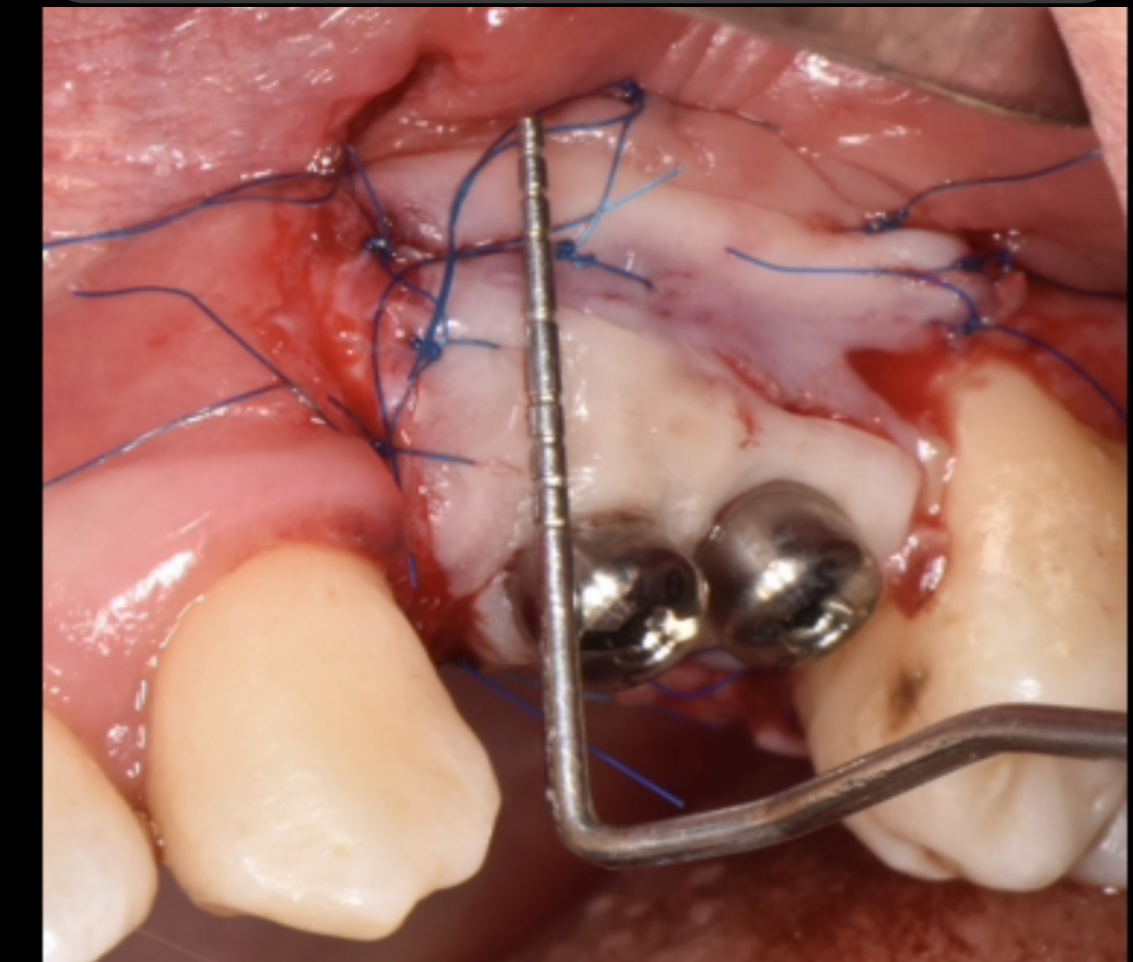
Water-tight suturing



MGJ problem



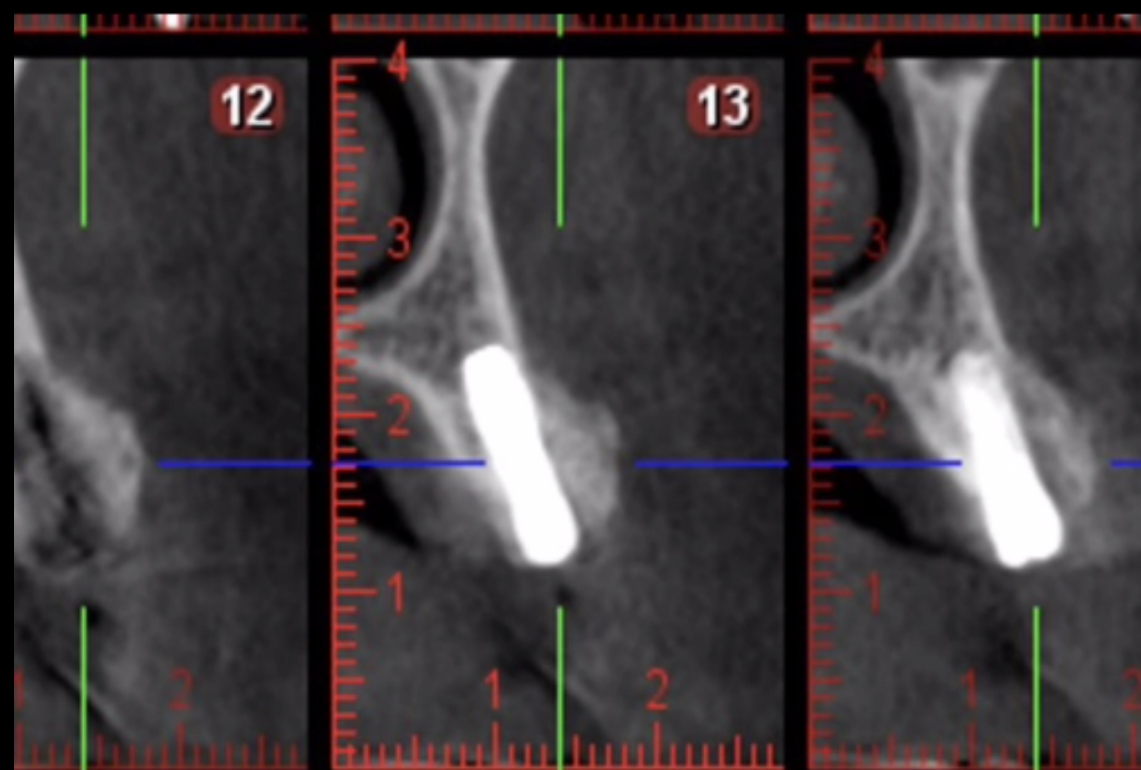
Palatal incision



Flap Fixation



After 1 Month



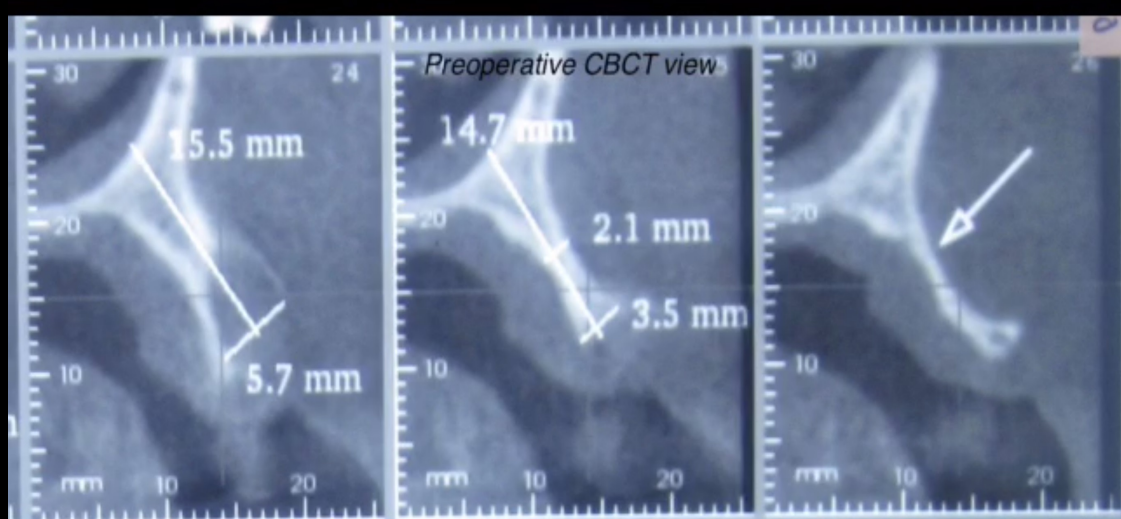
CBCT after surgery



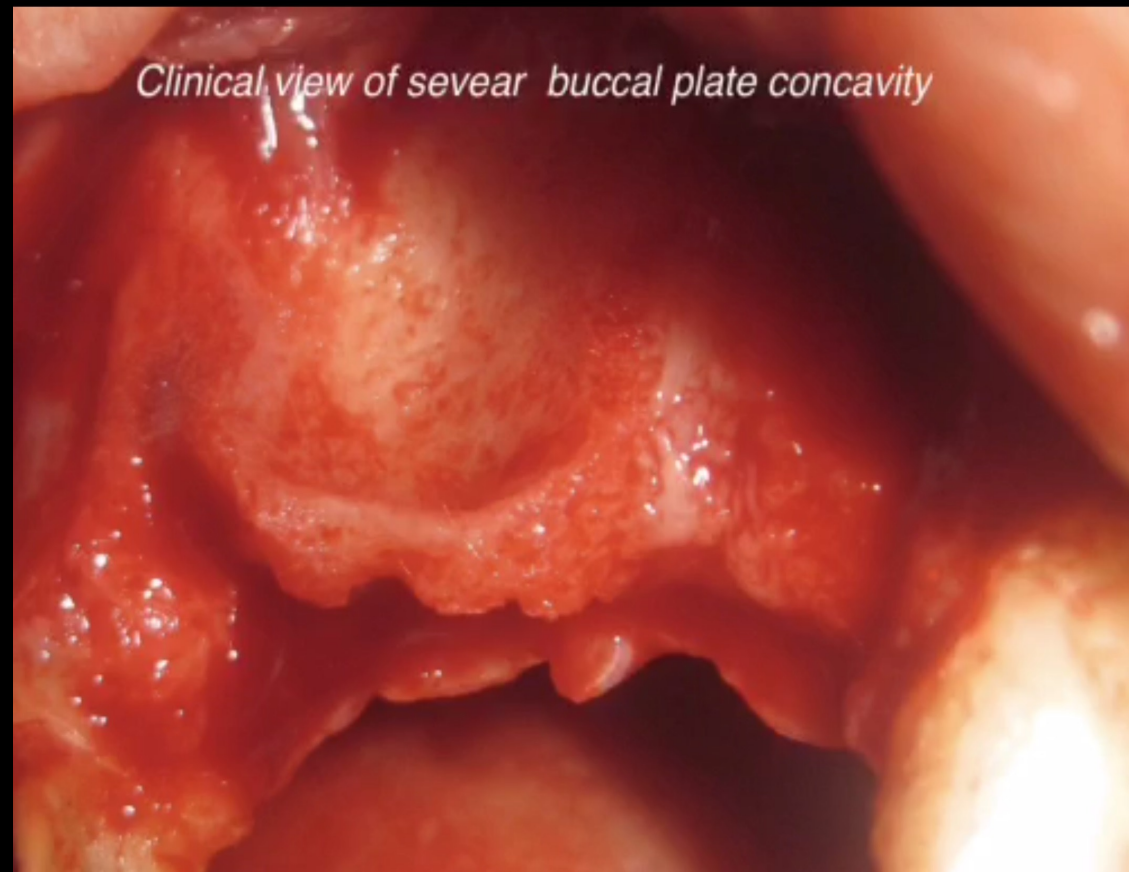
After 3 months



Severe bone defect



Baseline CBCT



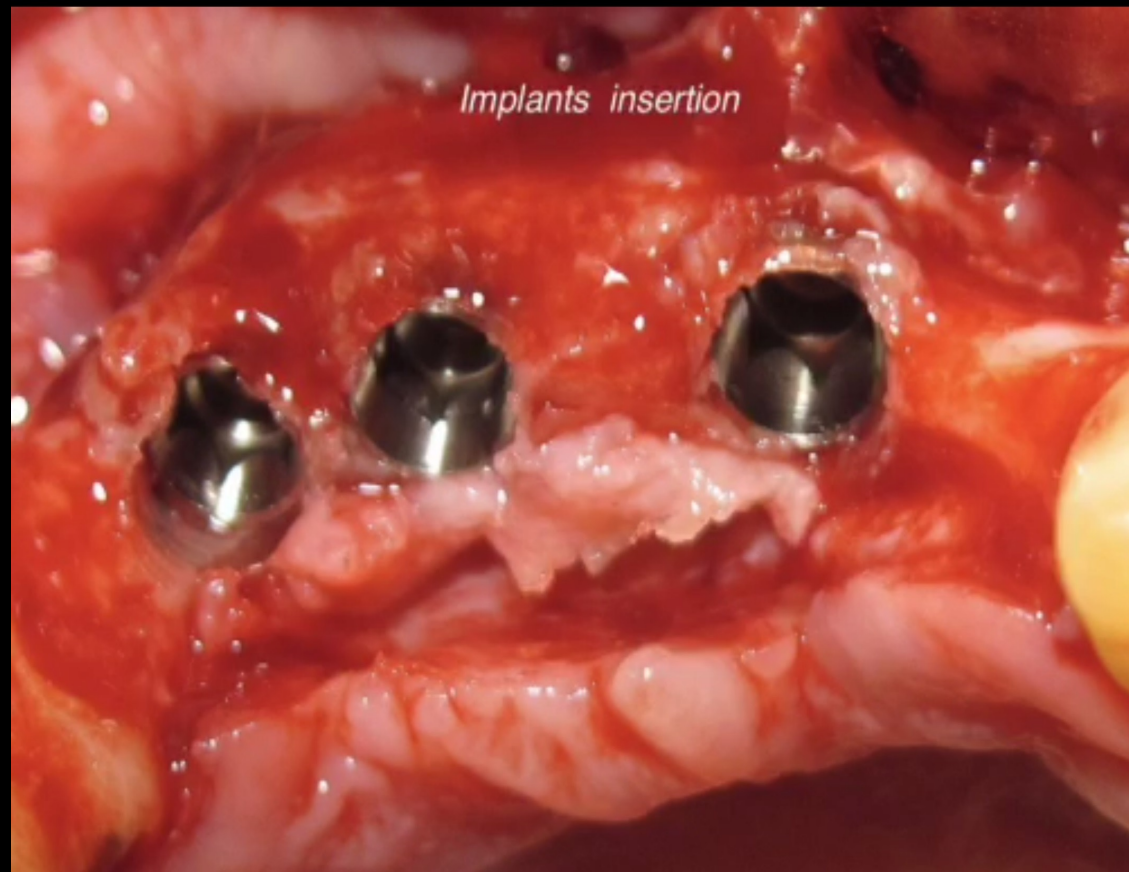
Flap Reflection



Reconstruction Plate
Fixation



Facial Tissue
Reconstruction



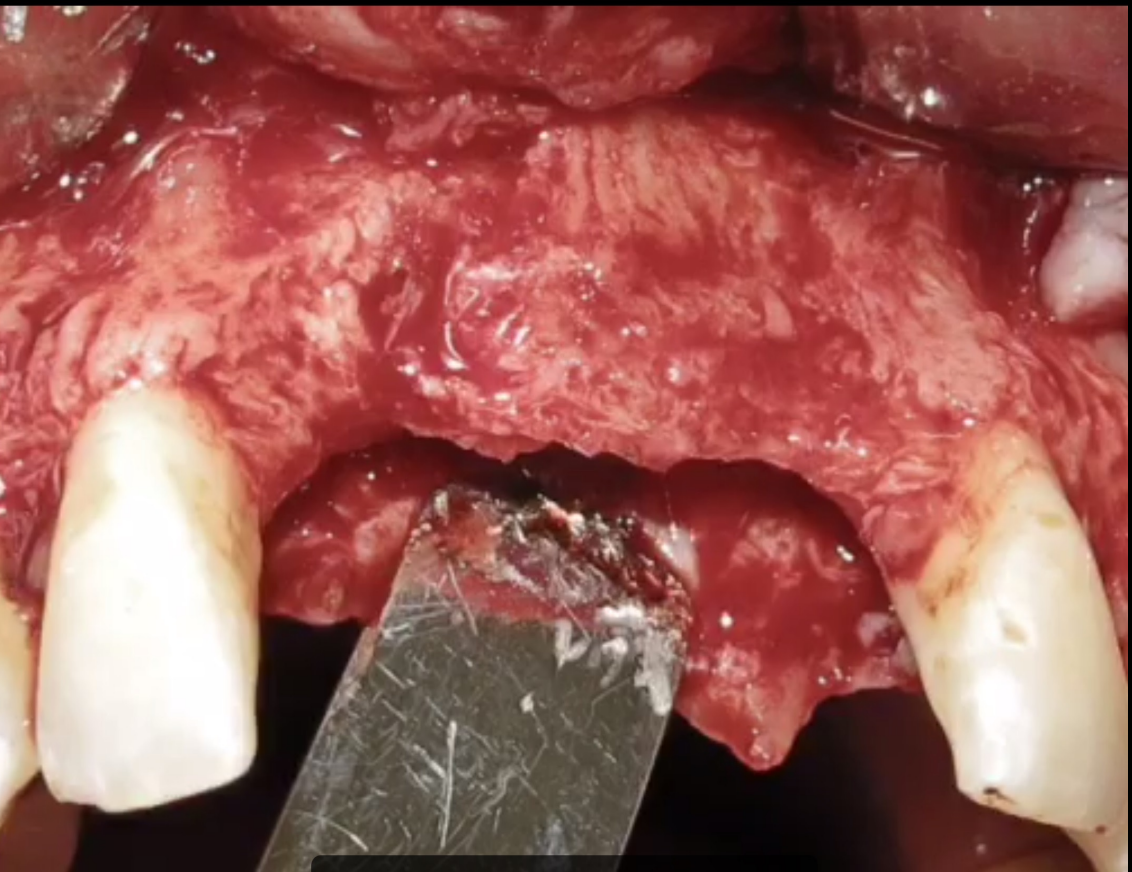
Implant Insertion



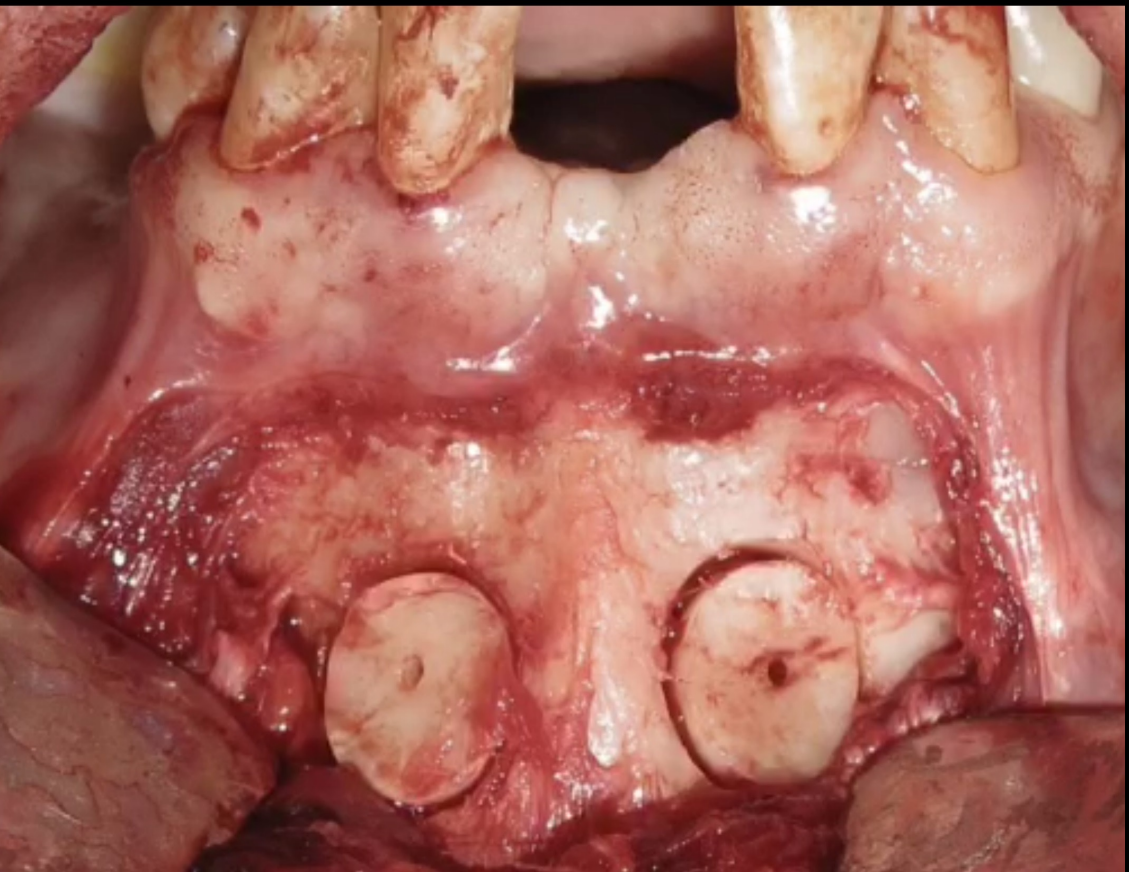
FGG for soft tissue enhancement



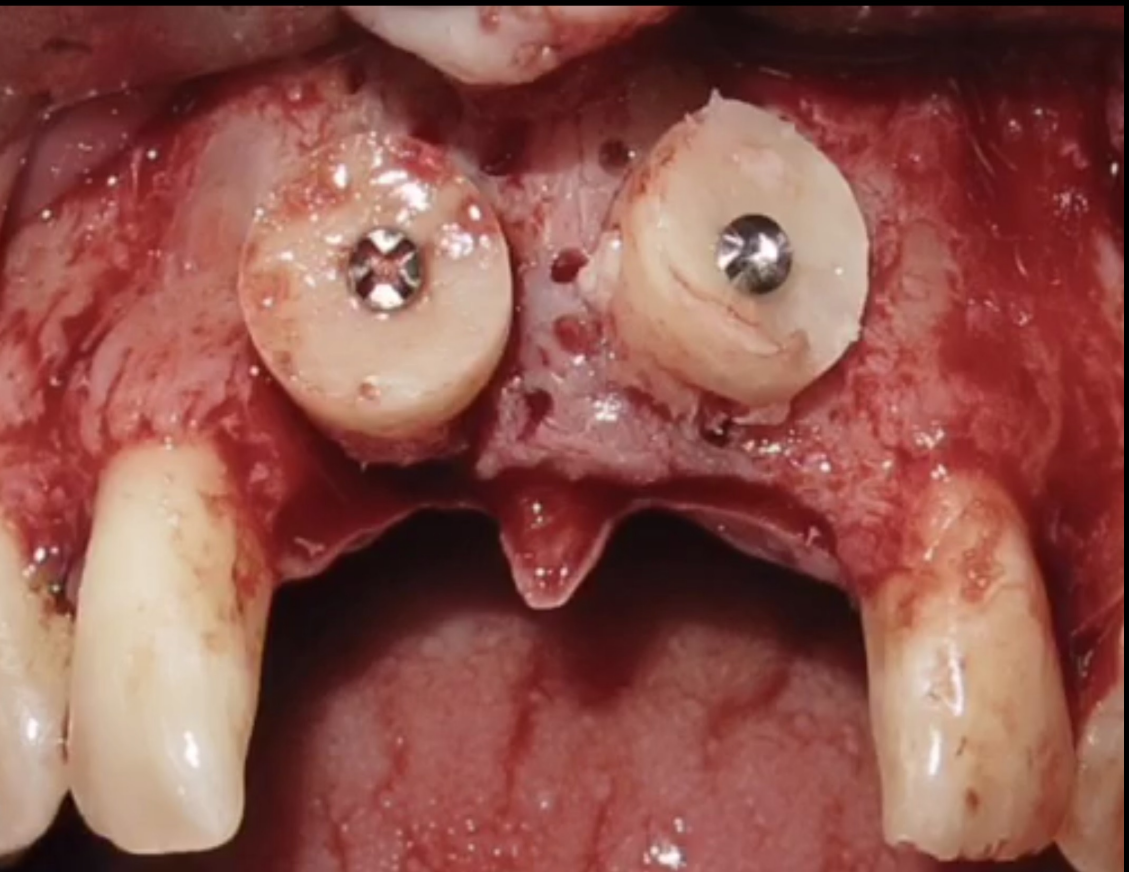
Severe Bone Defect



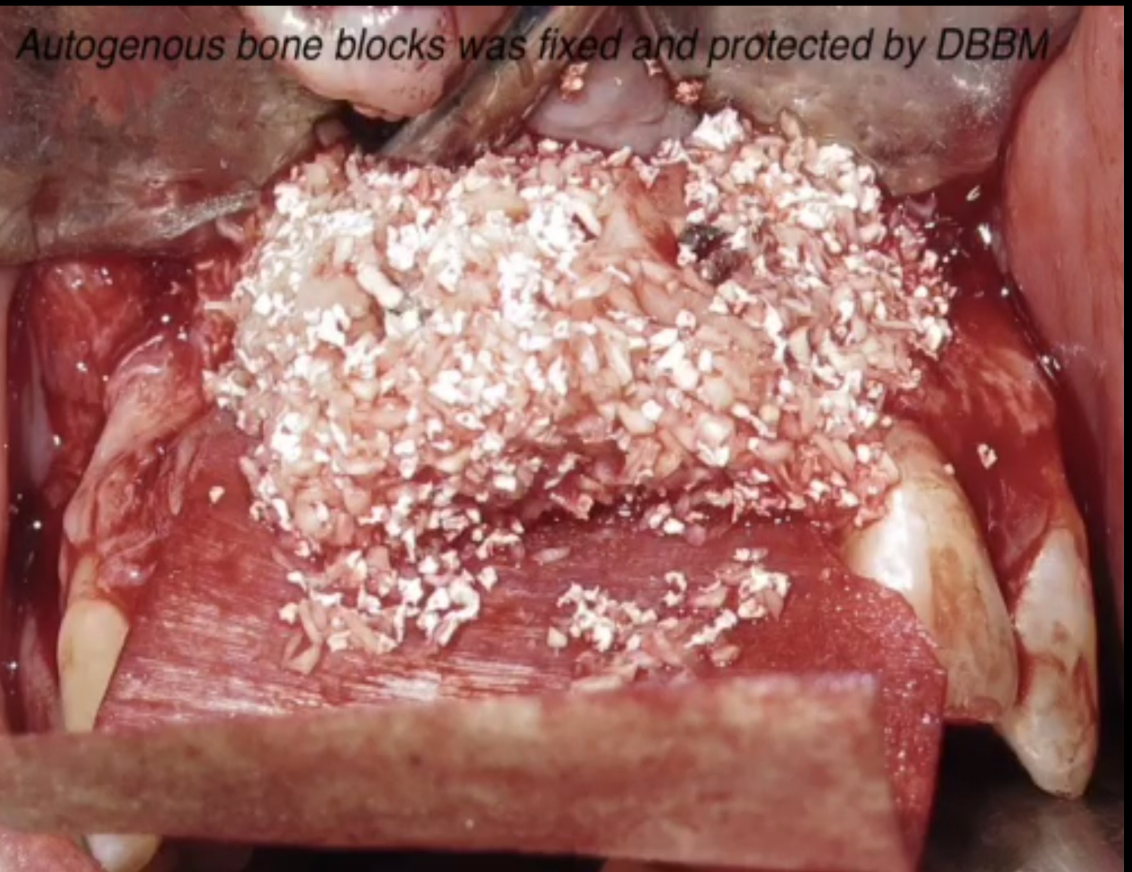
Flap Reflection



Chin Harvesting



Graft Fixation



Allograft Reinforcement



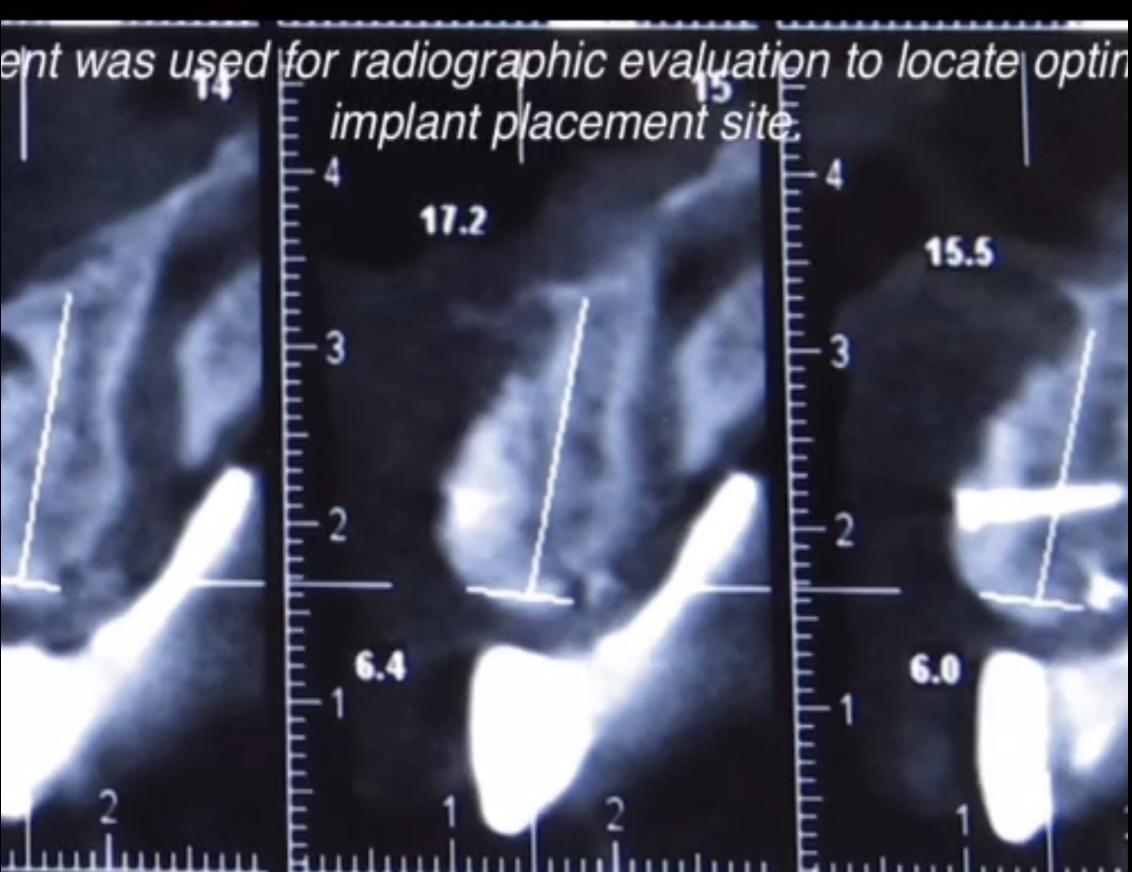
Clinical View After 5 Months



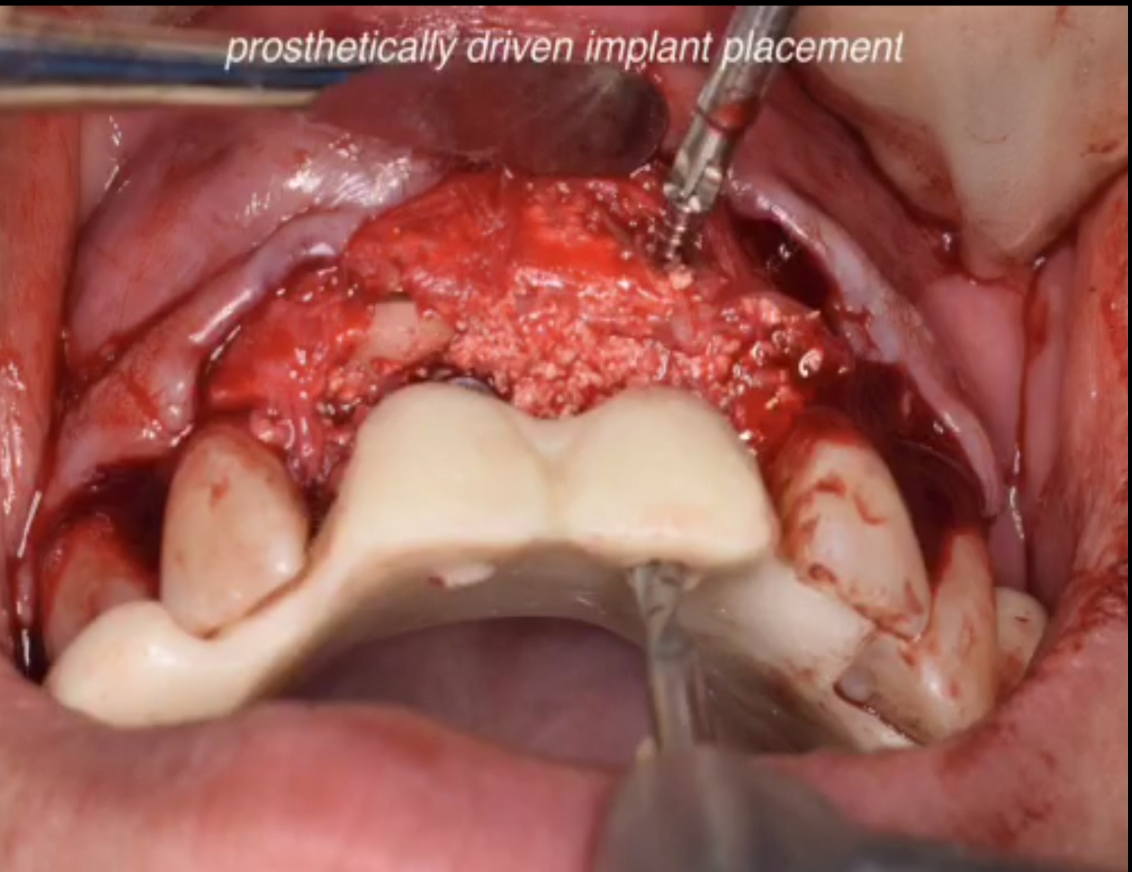
Buccal Contour Augmentation



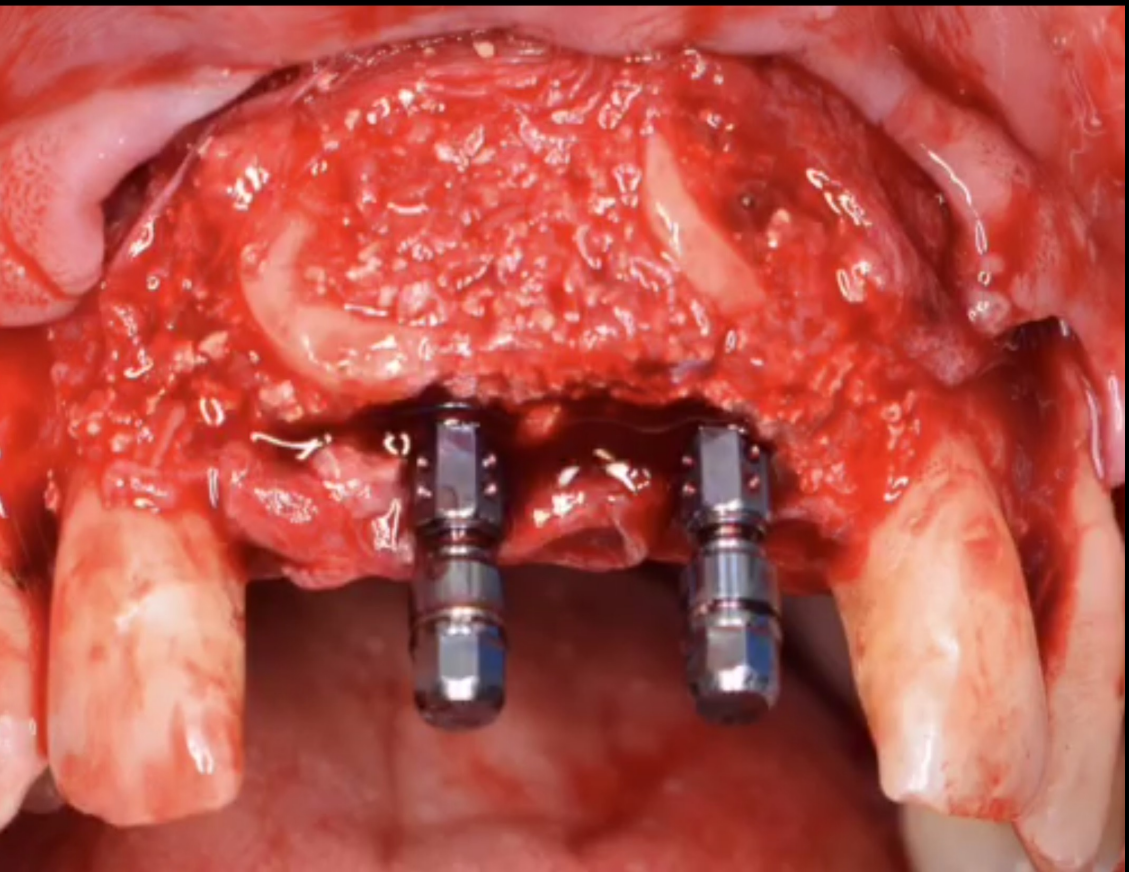
Guide Prosthesis



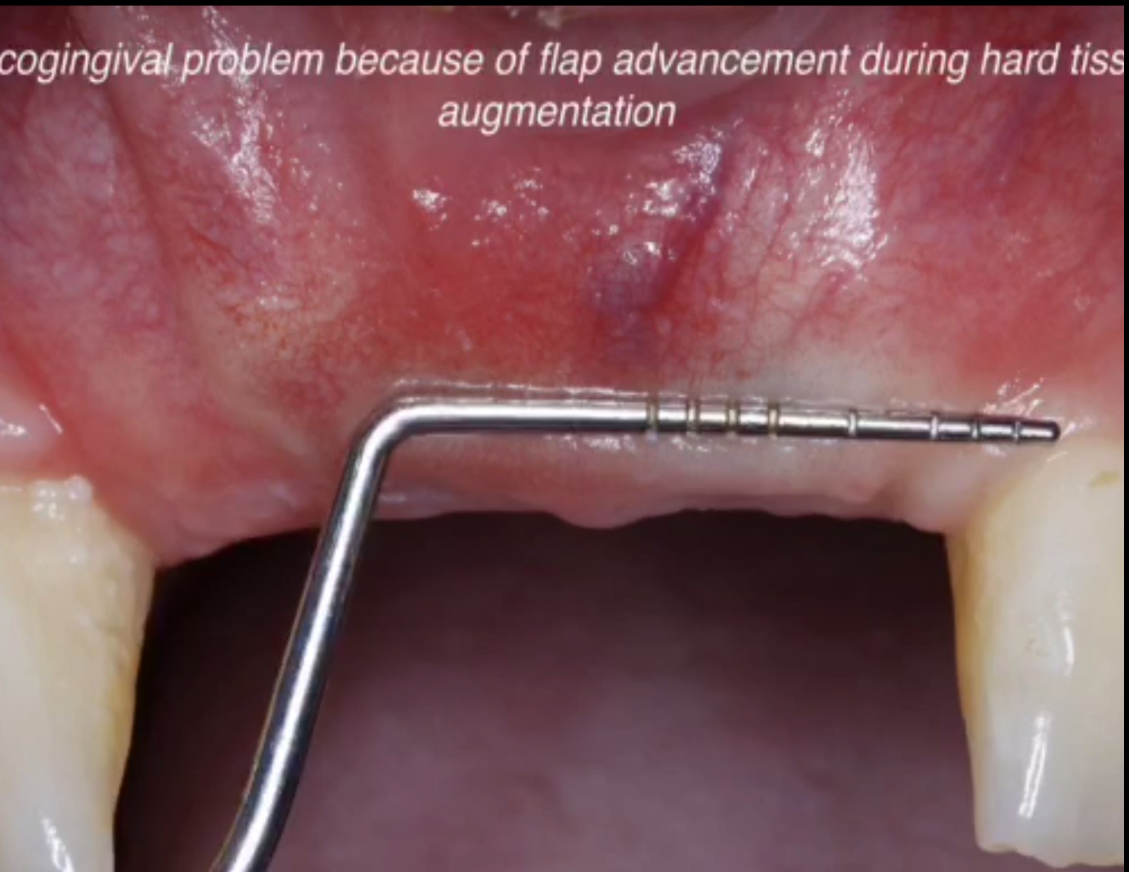
CBCT after surgery



Contour Augmentation



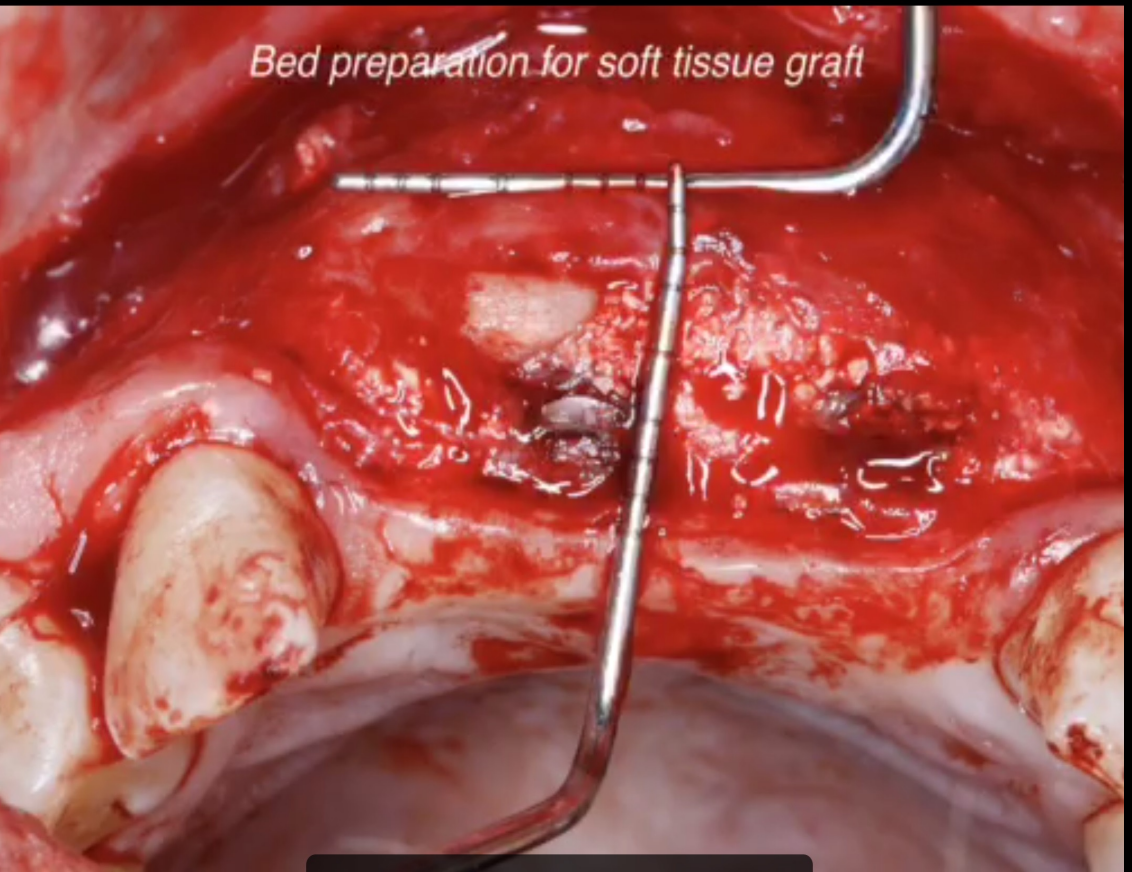
Implant insertion



Mucogingival problem



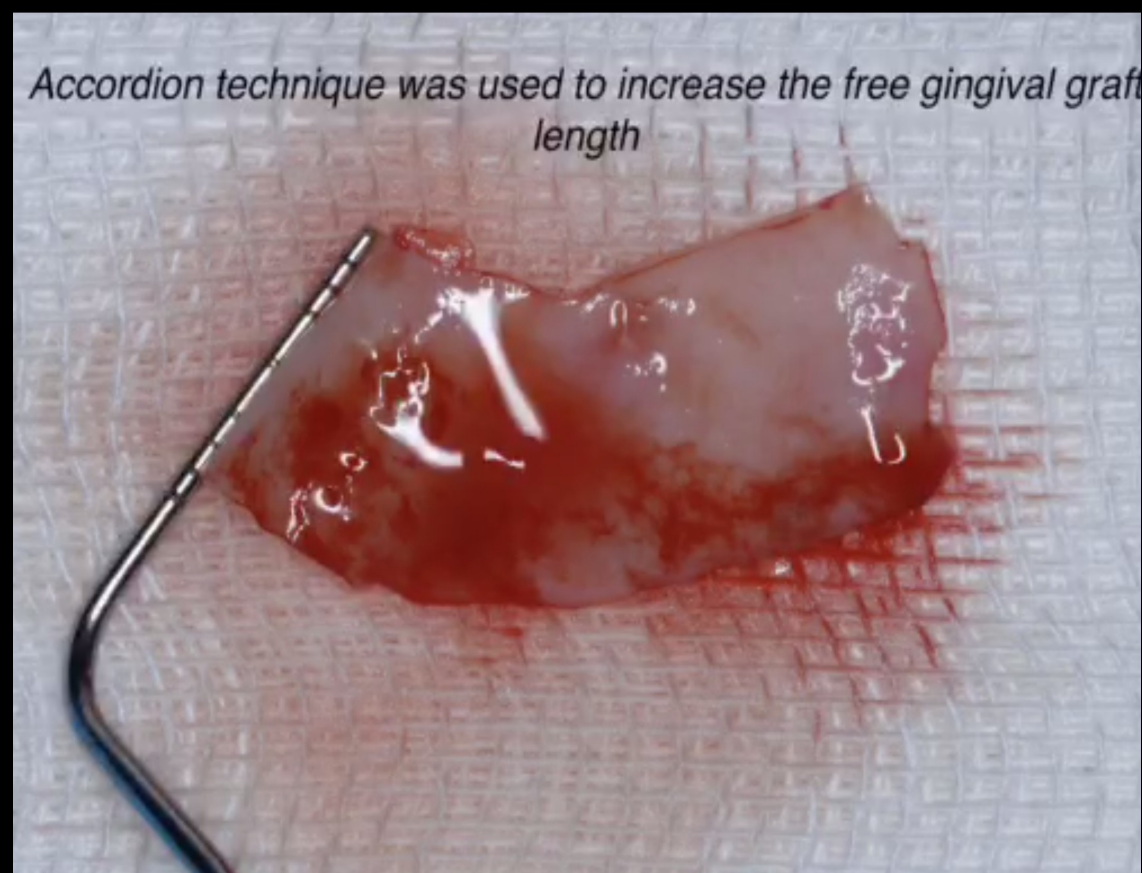
Lack of keratinized tissue



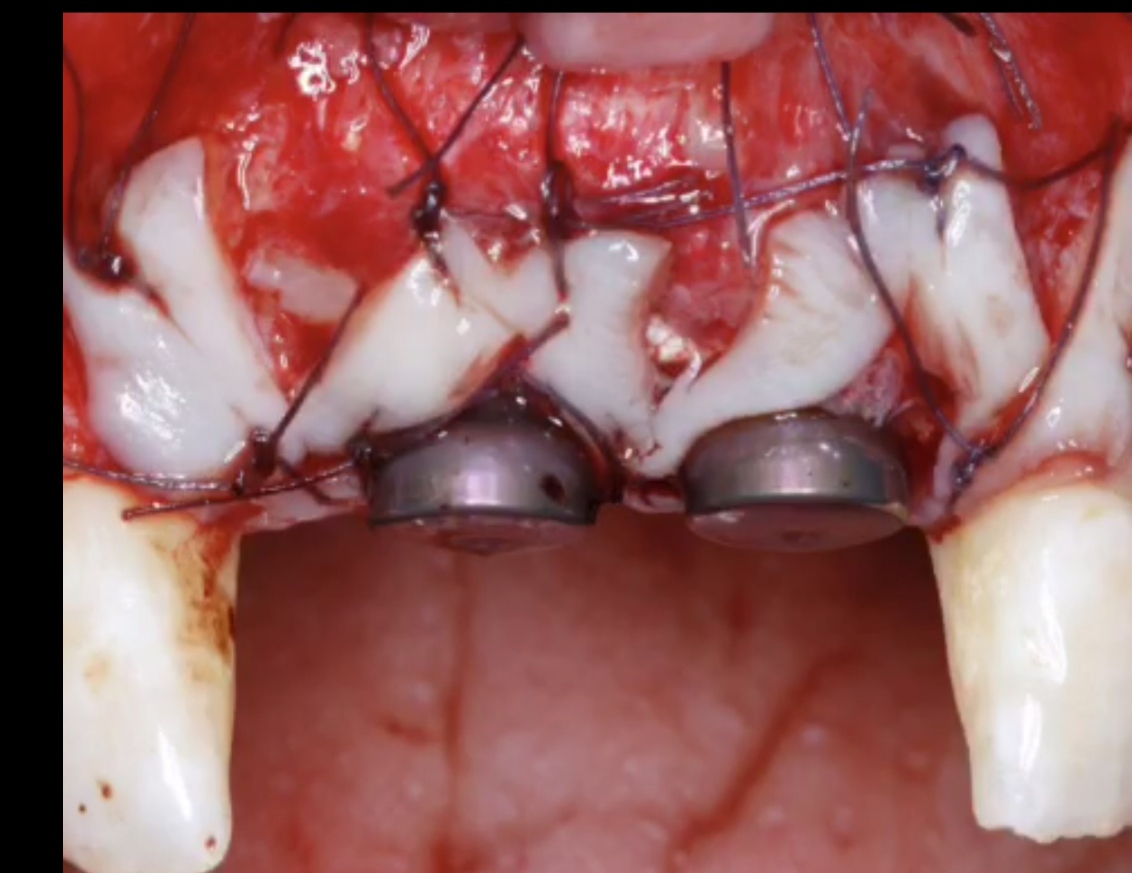
Implant uncover



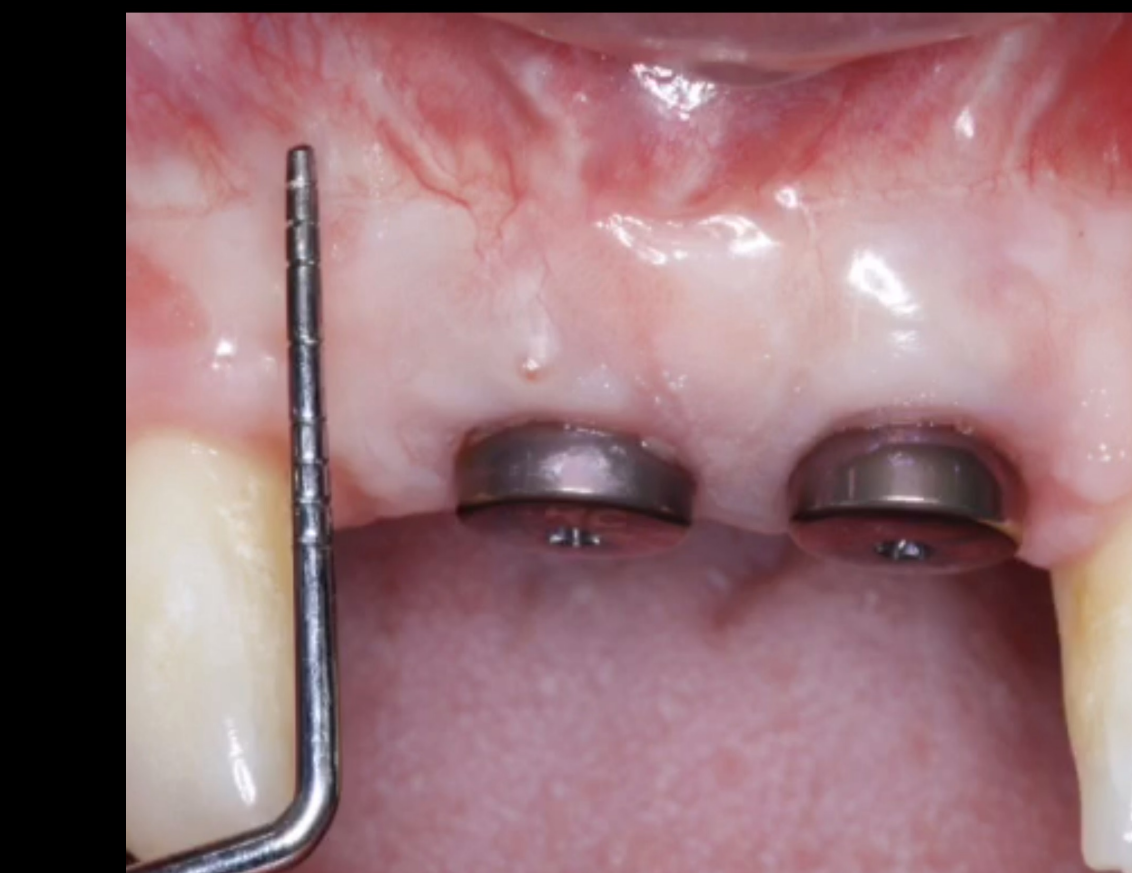
FGG harvesting



Free gingival graft



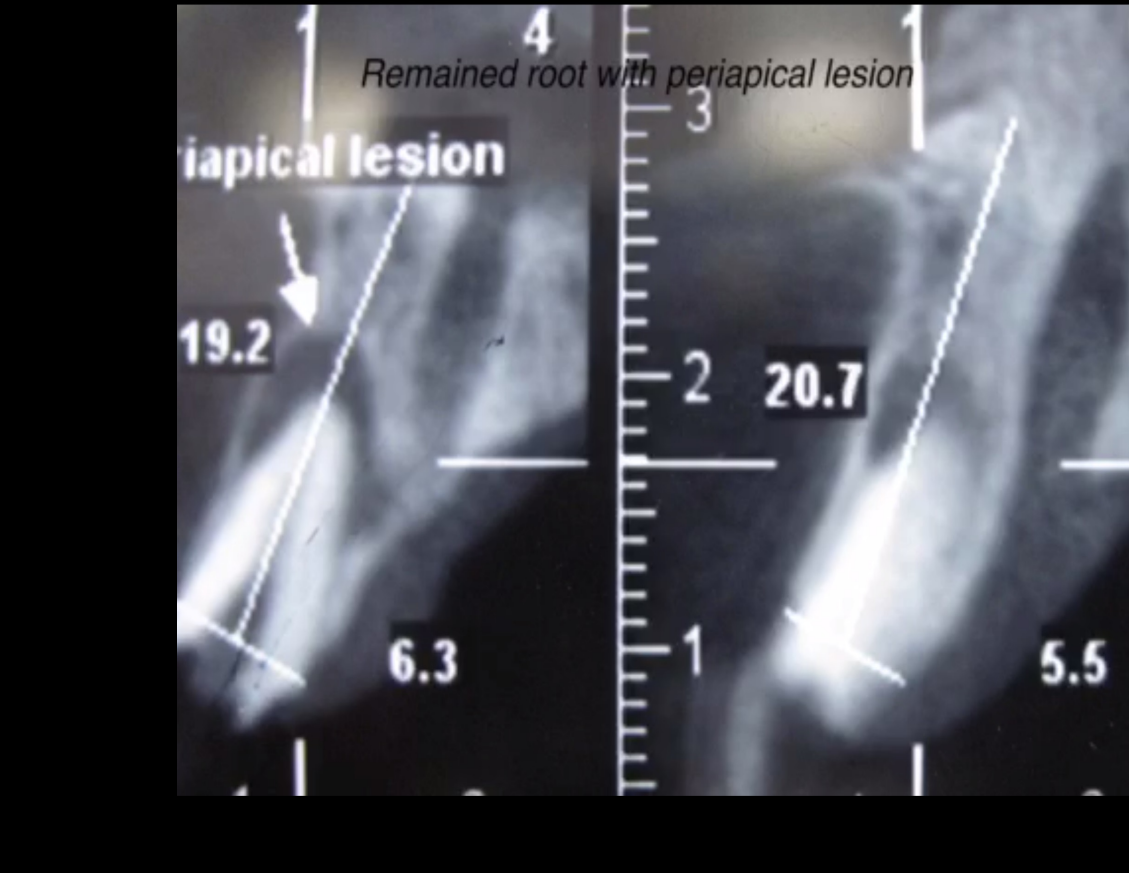
Accordion technique



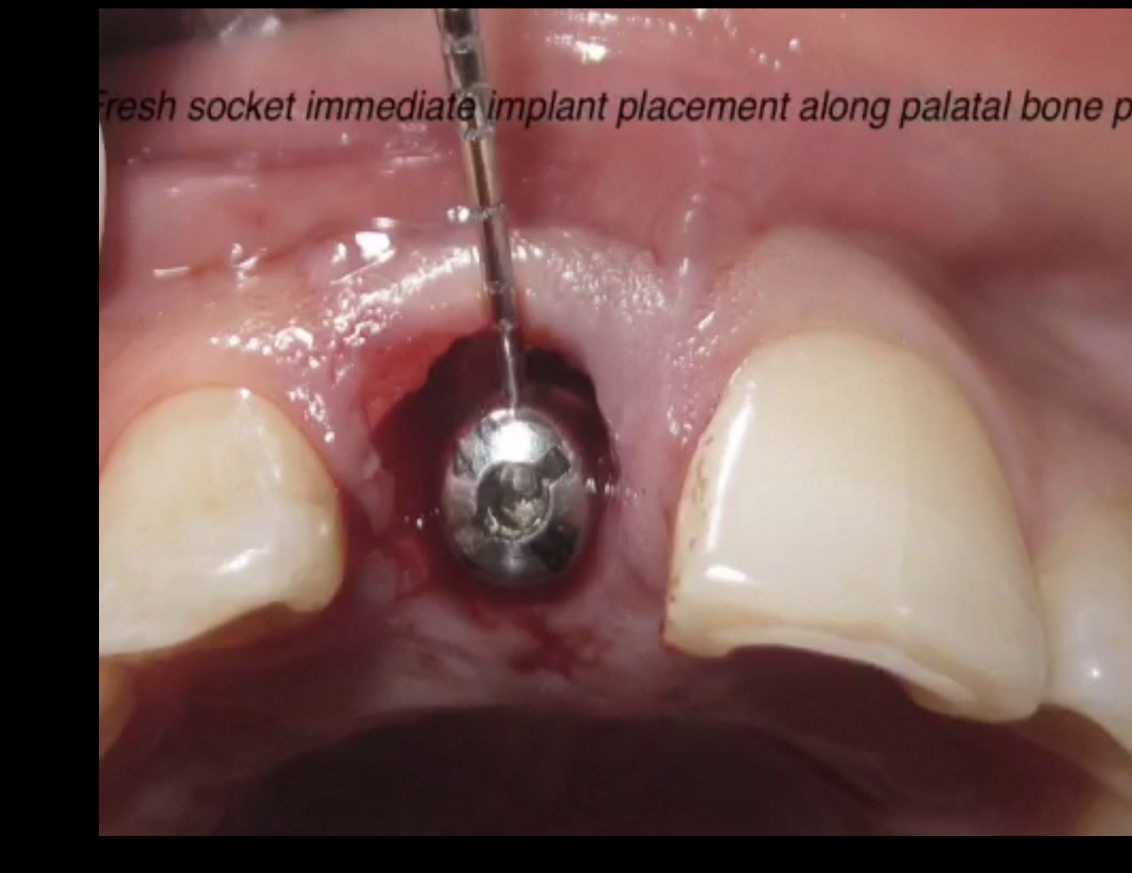
3 Months later



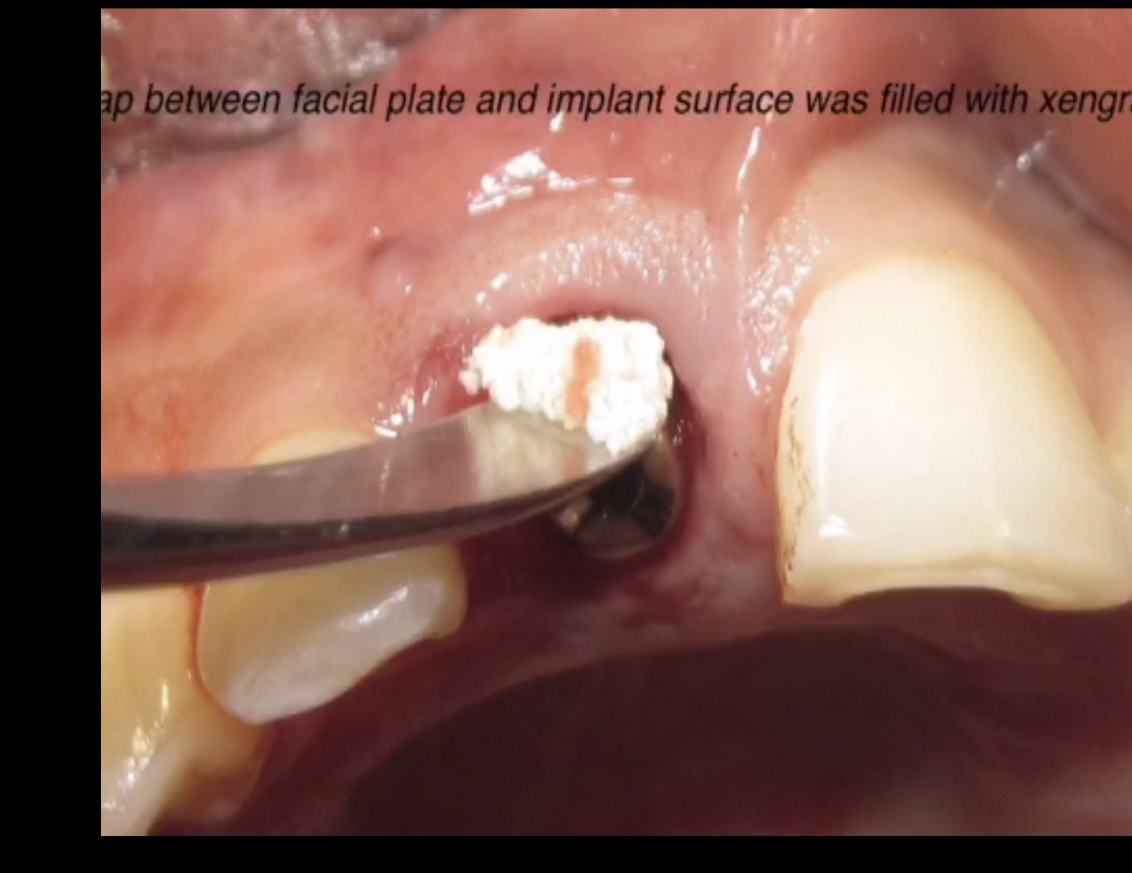
Hopeless Maxillary Right Central Incisor



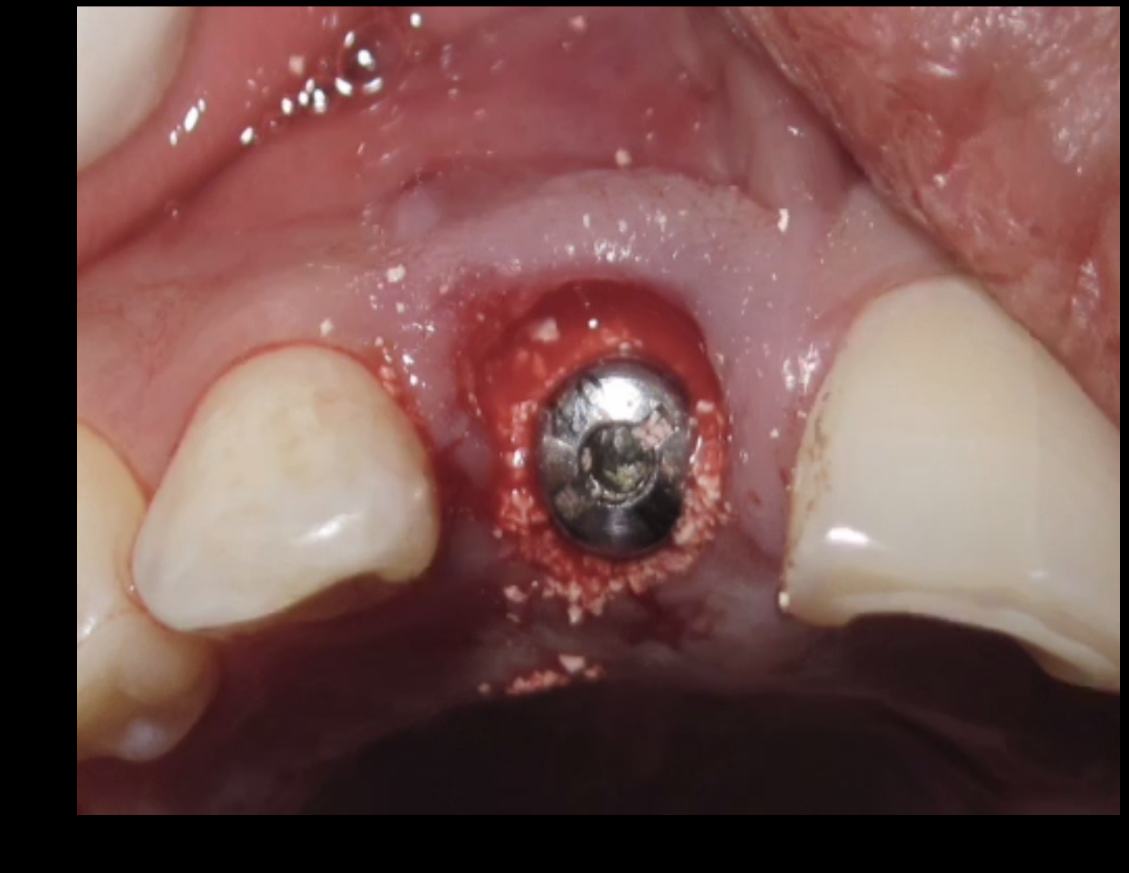
Baseline CBCT



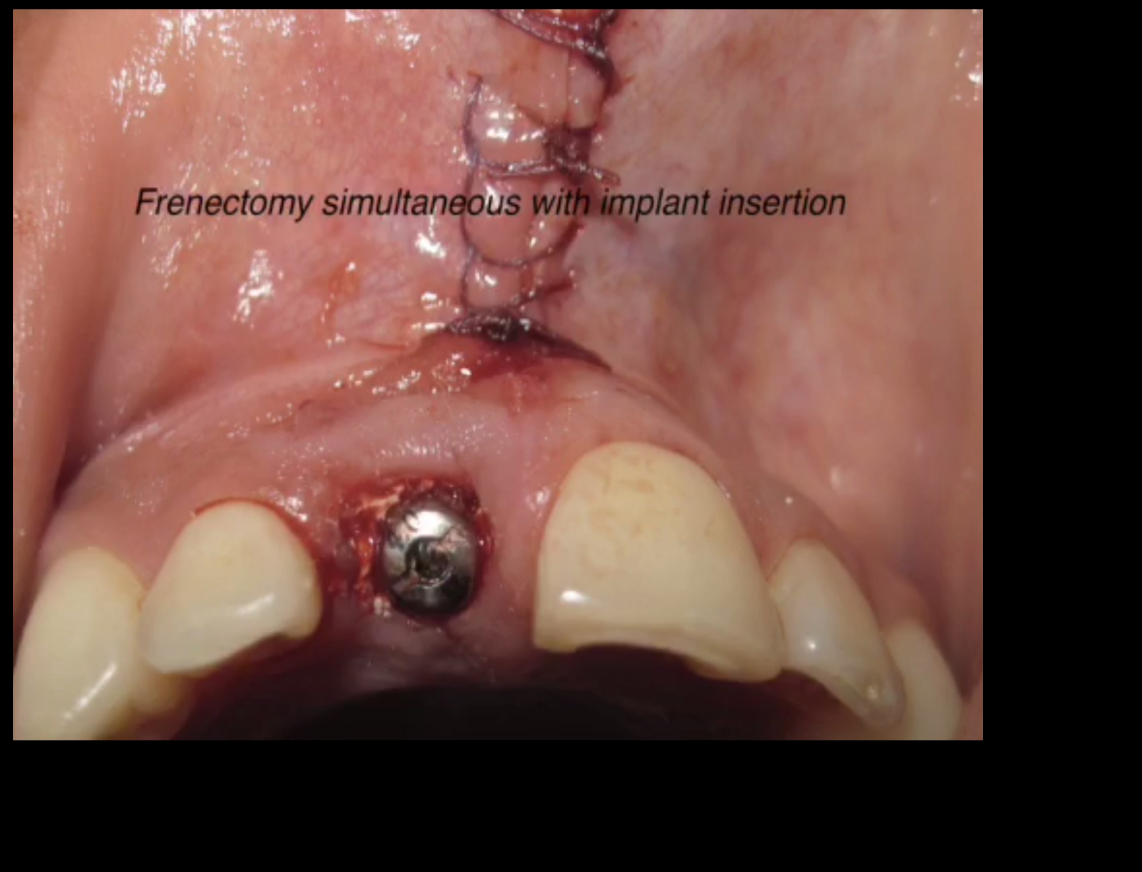
Fresh socket immediate implant



Jumping gap filling



Augmented site



Simultaneous Frenectomy



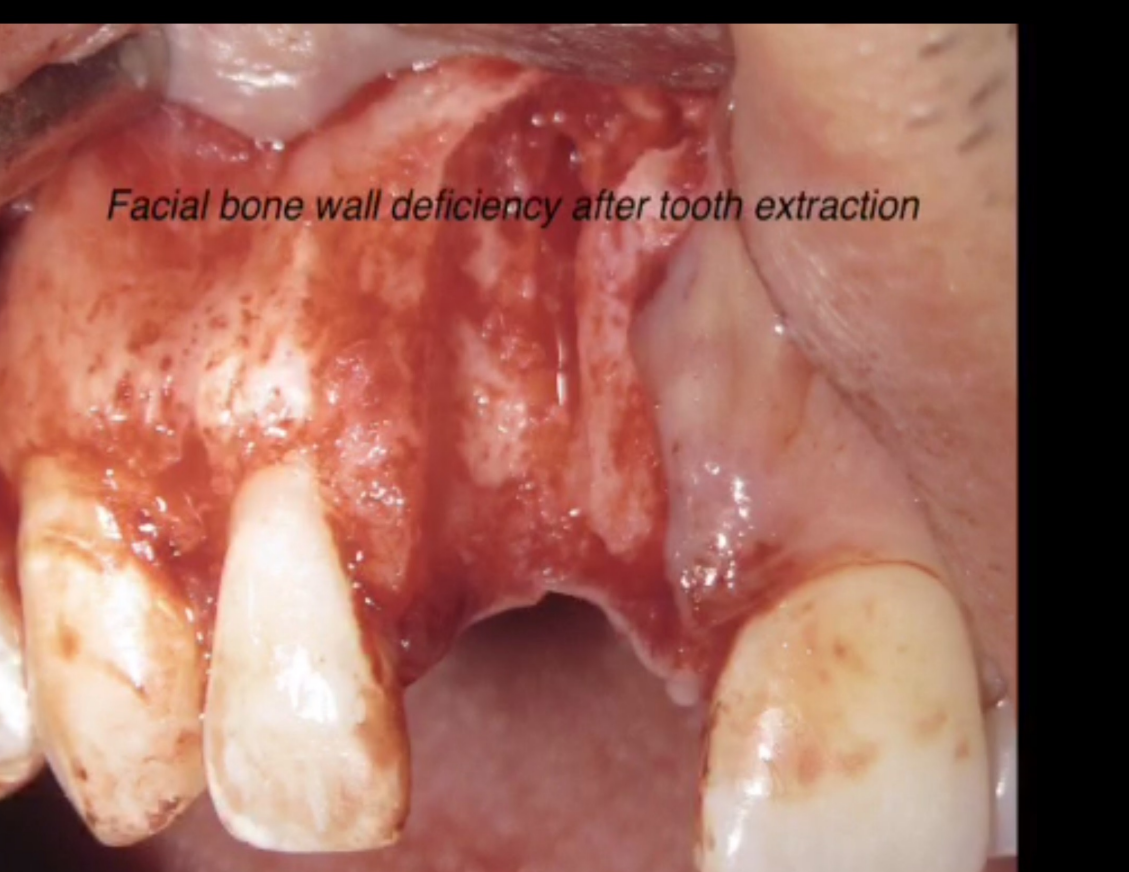
Final Clinical View



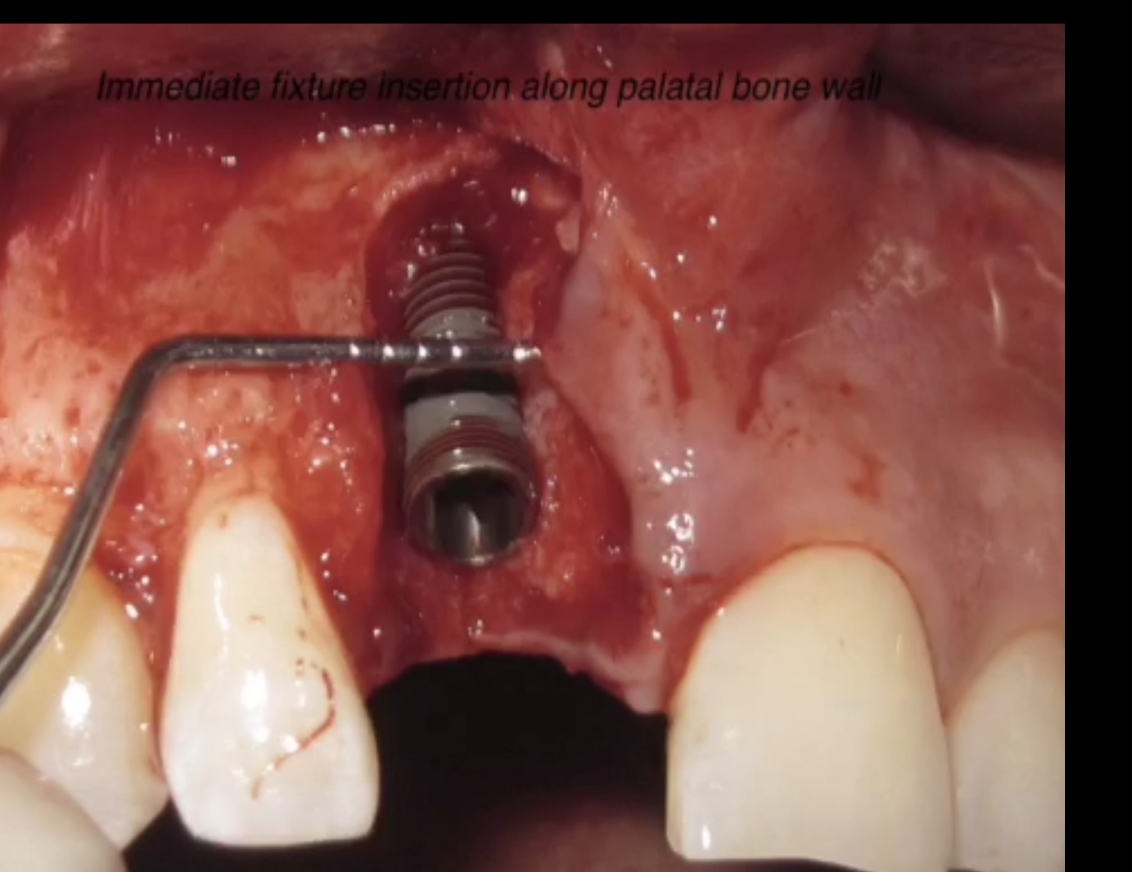
Hopeless Maxillary Right Central Incisor



Baseline CBCT



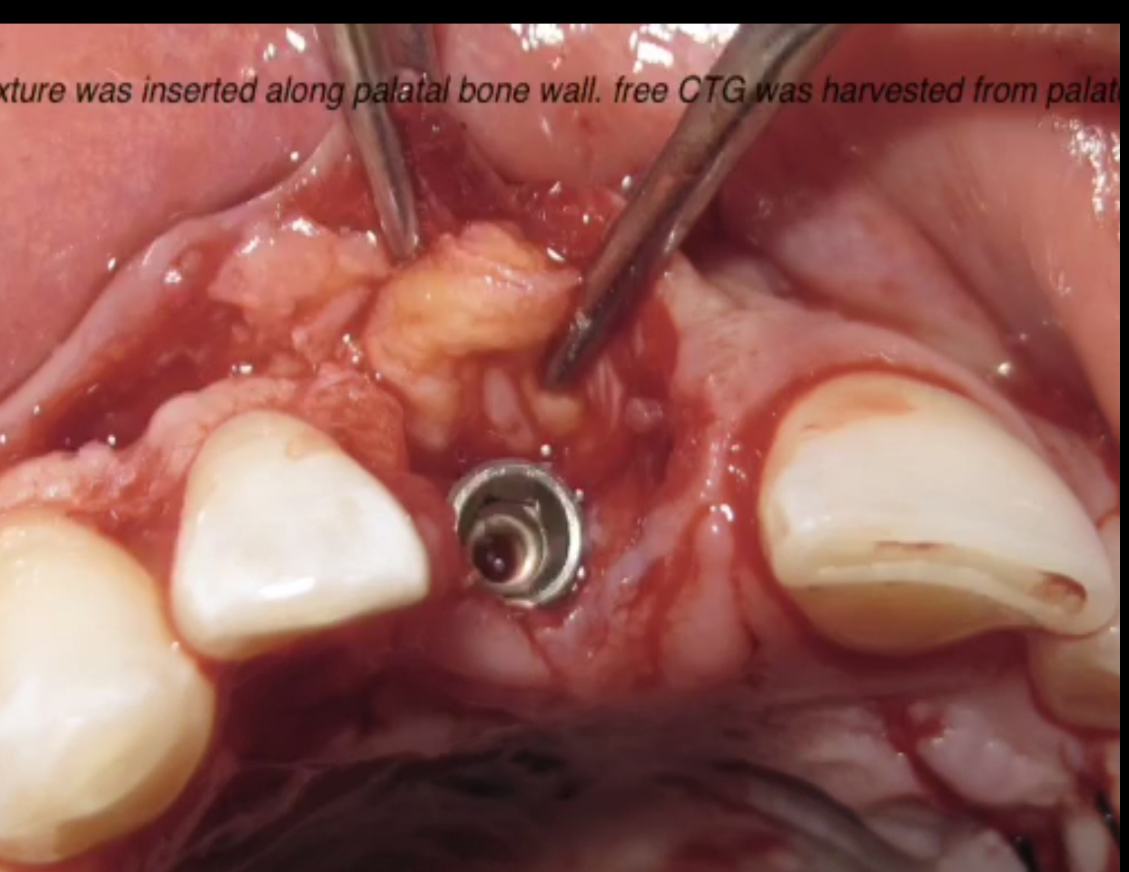
Facial Bone Defect



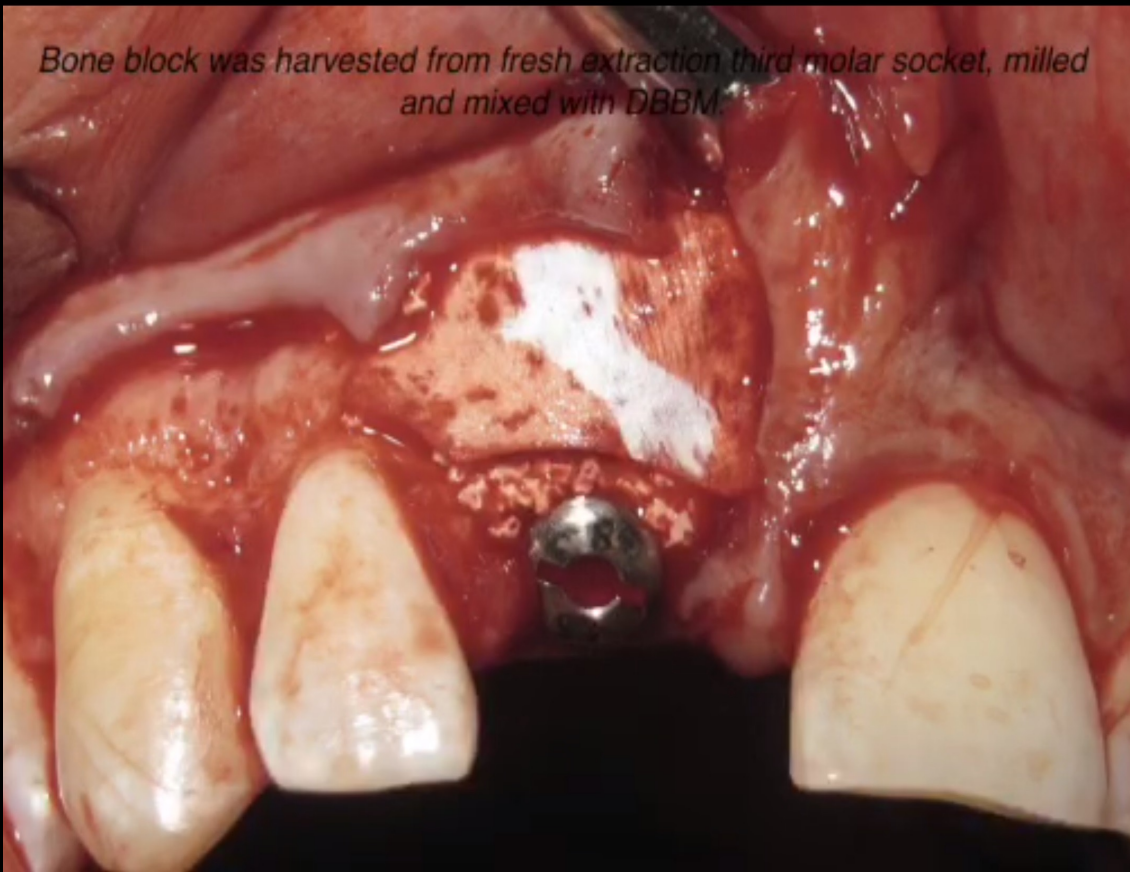
Implant insertion



Free CTG



Soft Tissue Augmentation



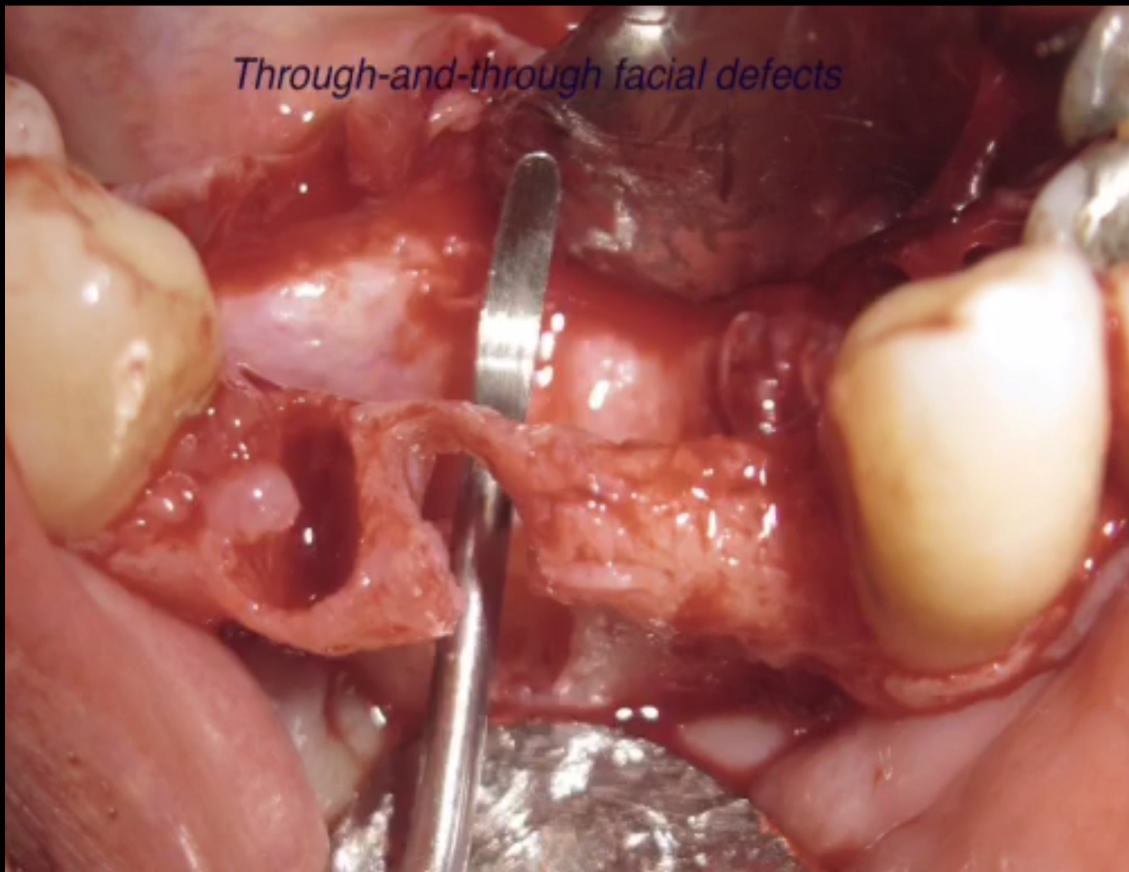
Autogenous Bone Augmentation



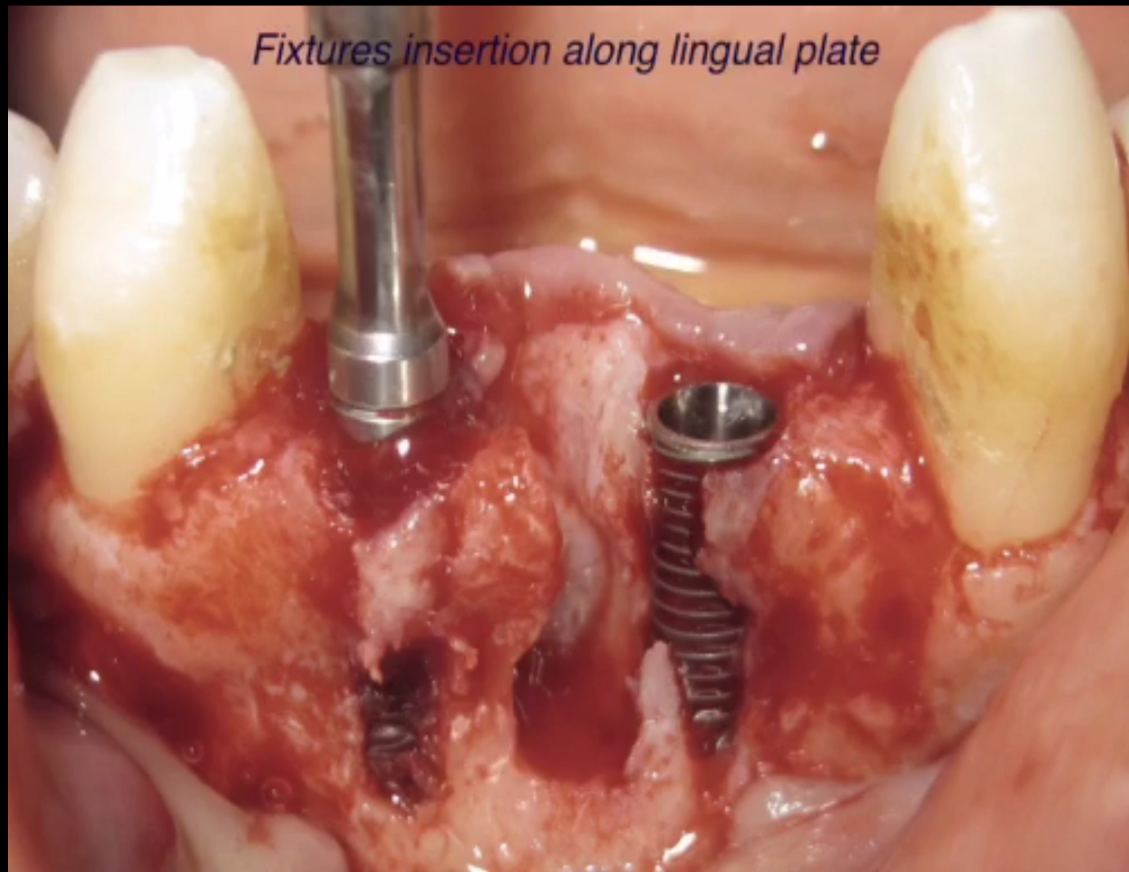
Facial Clinical View



Frontal Clinical View



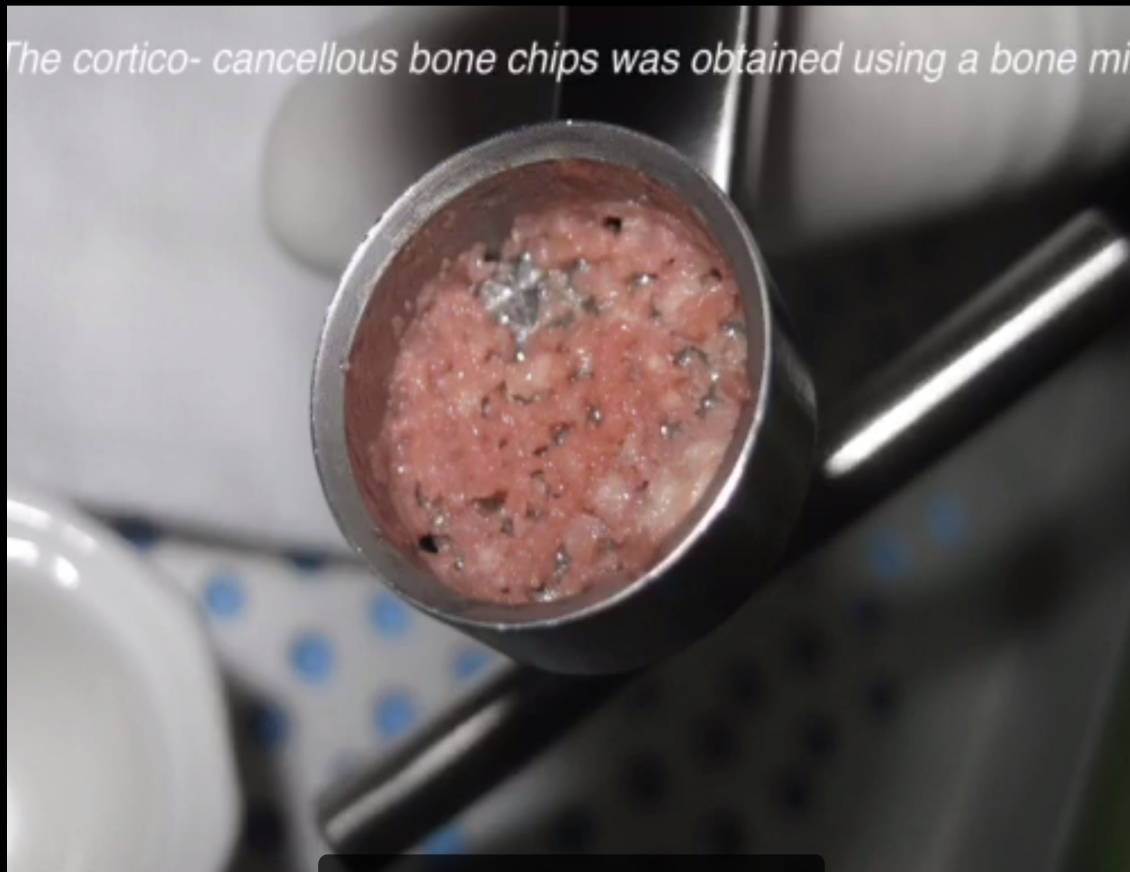
Through and Through Bone Defect



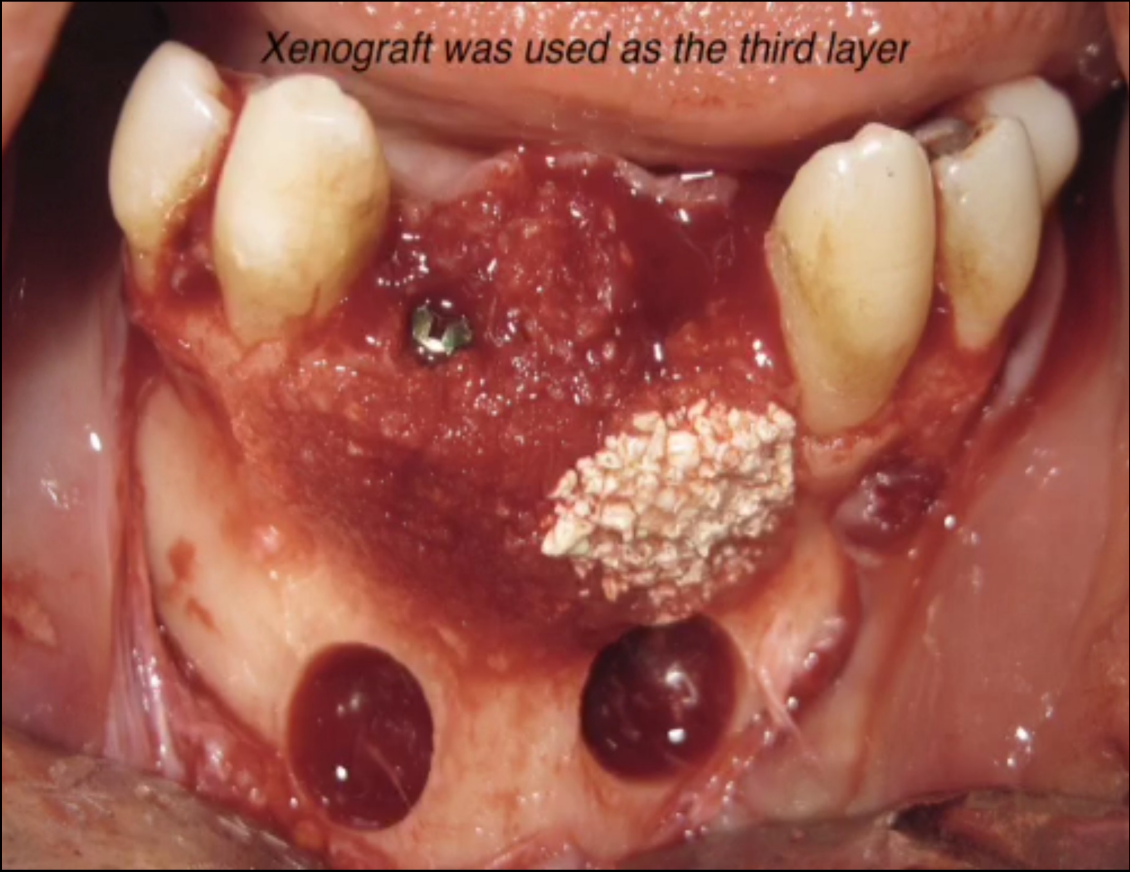
Implant Insertion



Chin Block bone Harvesting



Milled autogenous bone graft



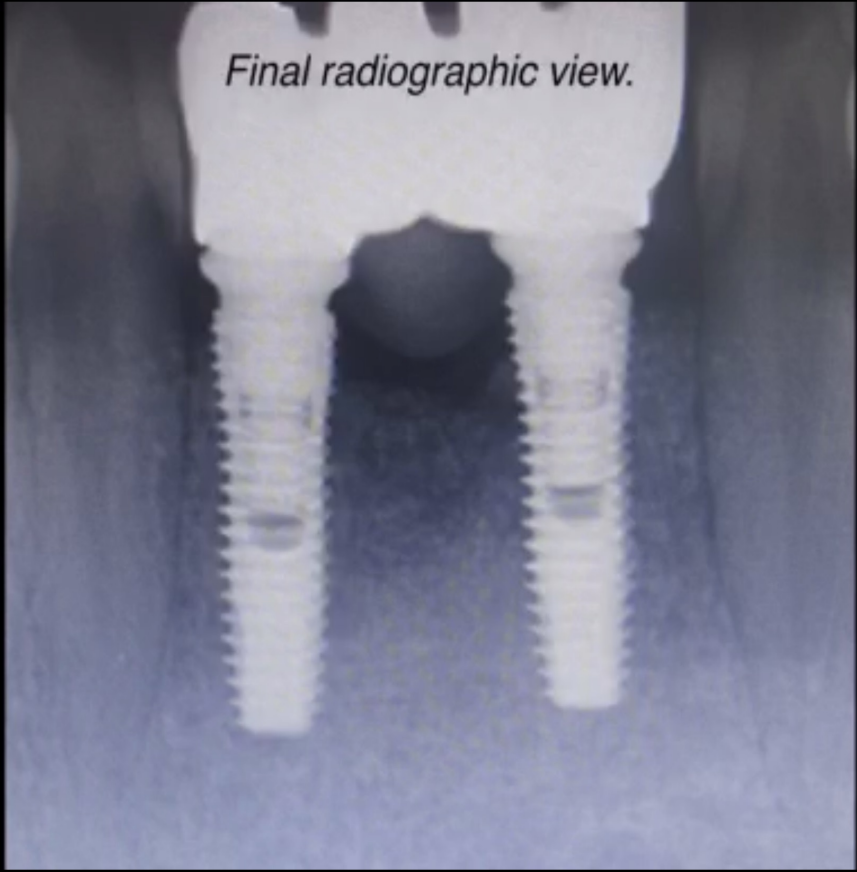
Xenograft in place



Collagen membrane covering



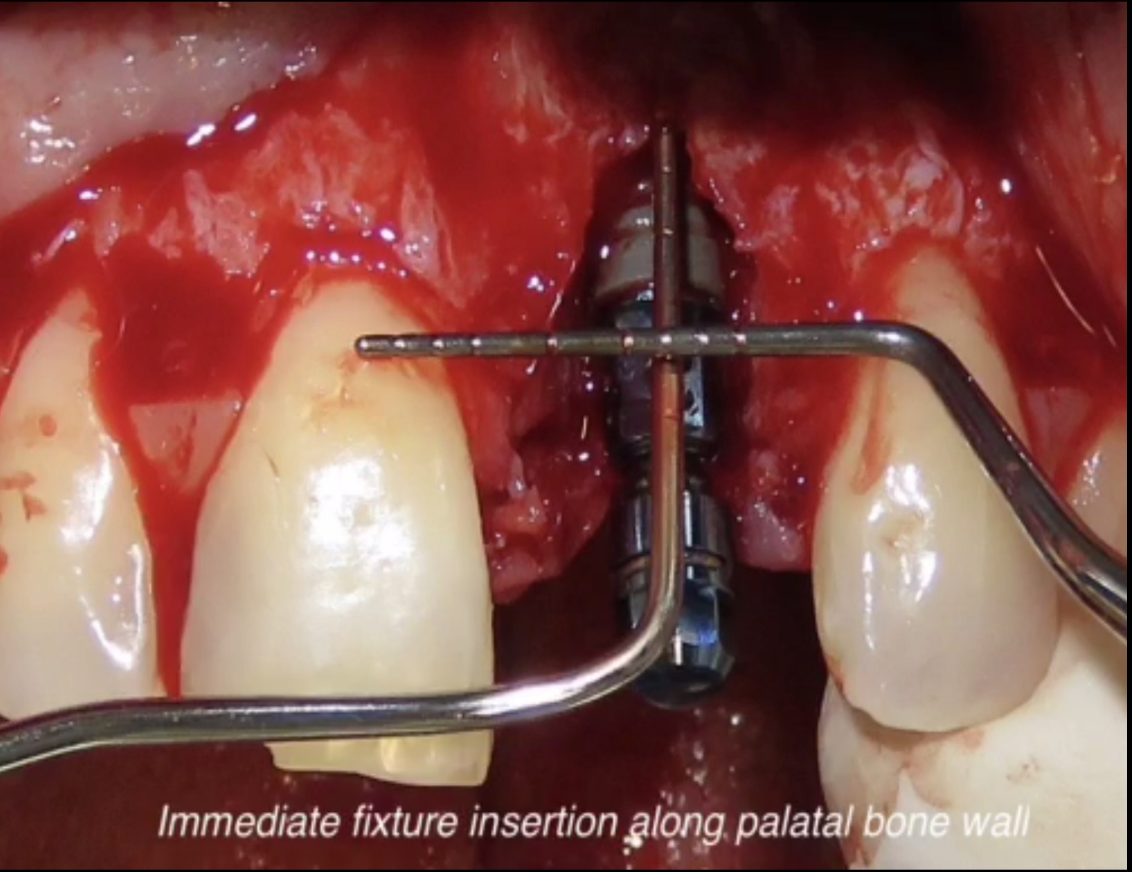
Hard and Soft tissue reconstruction



Final Radiography



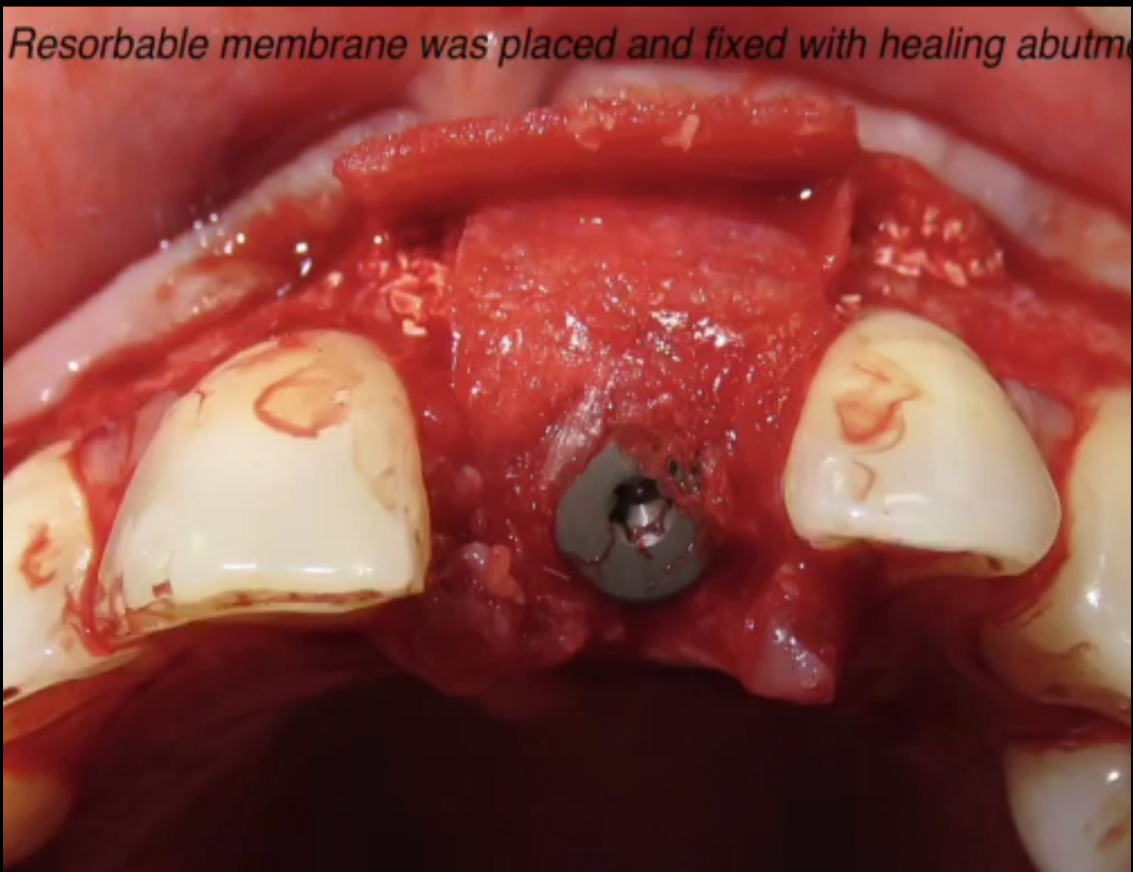
Hopeless teeth



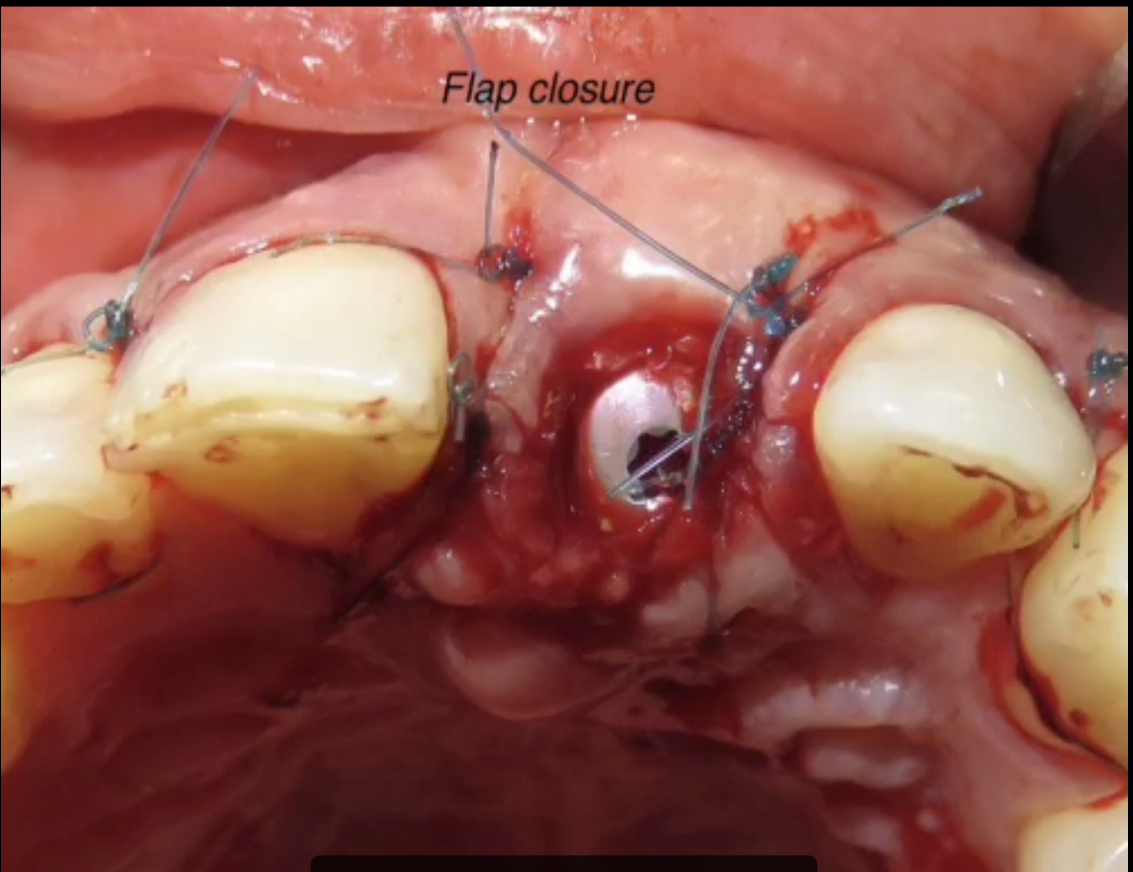
Implant Insertion



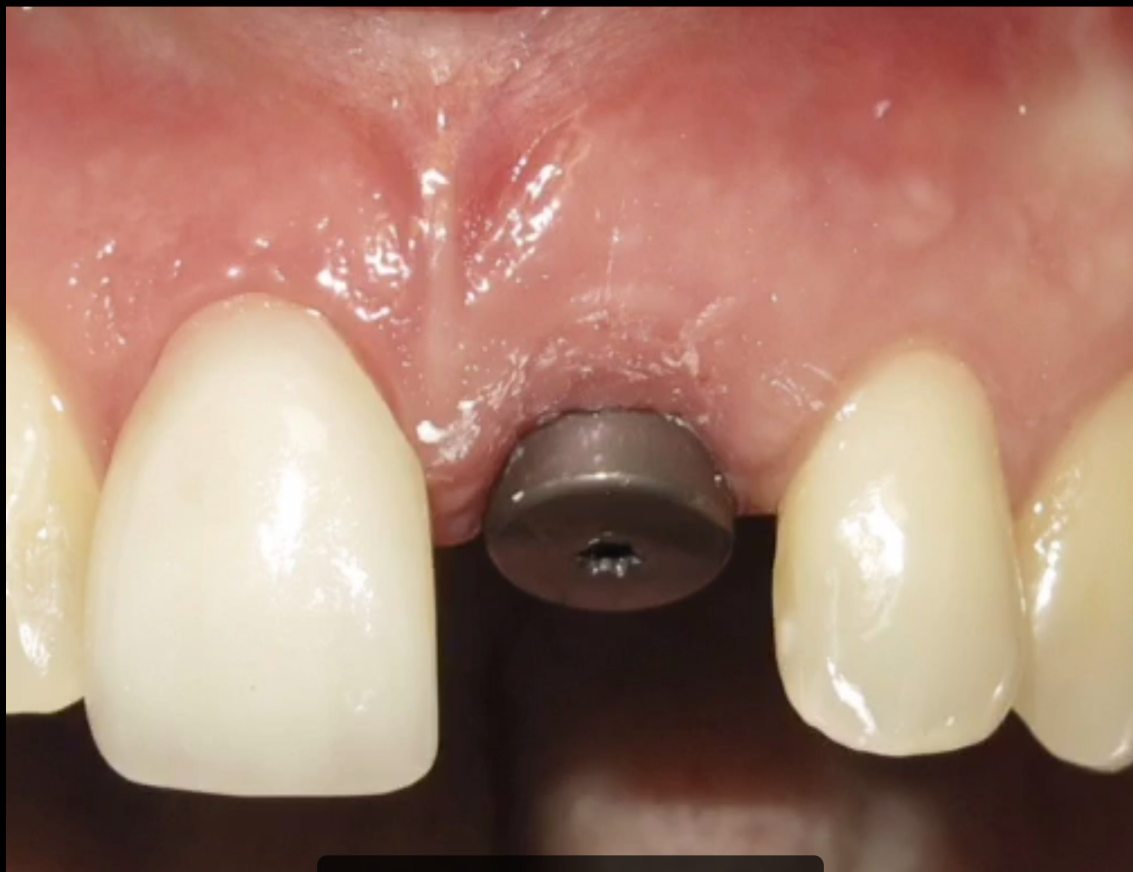
Xenograft in Place



Contour Augmentation



Flap closure



Healing abutment



Provisional Crown



Final Clinical view

RESULTS

implant placement in esthetic zone with soft and hard tissue intervention provide suitable condition for rehabilitation of esthetic outcome.

REFERENCES

1. Atieh MA, Alsabeeha NH, Payne AG, Ali S, Clovis Jr M, Esposito M. Interventions for replacing missing teeth: alveolar ridge preservation techniques for dental implant site development. Cochrane Database of Systematic Reviews. 2021(4).
2. Buser D, Sennerby L, De Bruyn H. Modern implant dentistry based on osseointegration: 50 years of progress, current trends and open questions. Periodontology 2000. 2017;73(1):7-21.

CONCLUSION

Soft and hard tissue augmentation are approaches to re-establish the buccal convexity of implant, especially in severe bone deficiency in the esthetic zone.