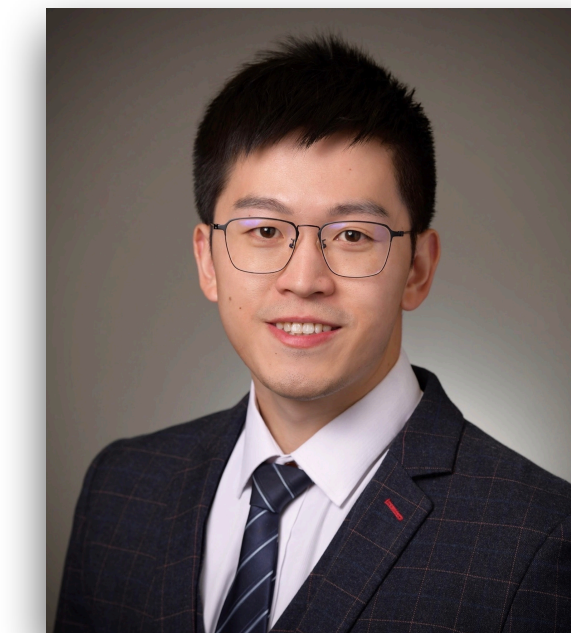
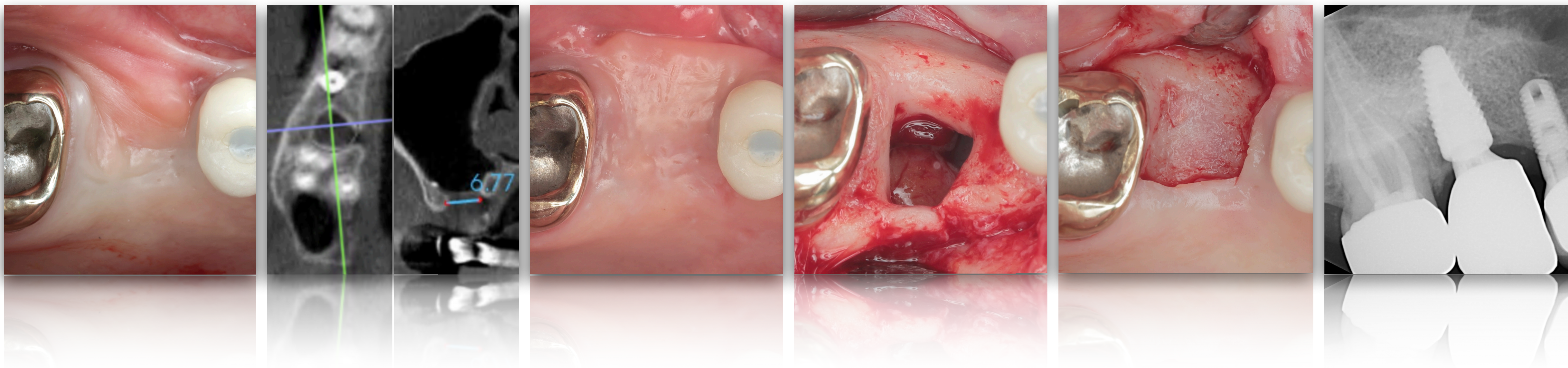


Successful Implant Treatment At An Oroantral Communication Repair Site: A Case Report



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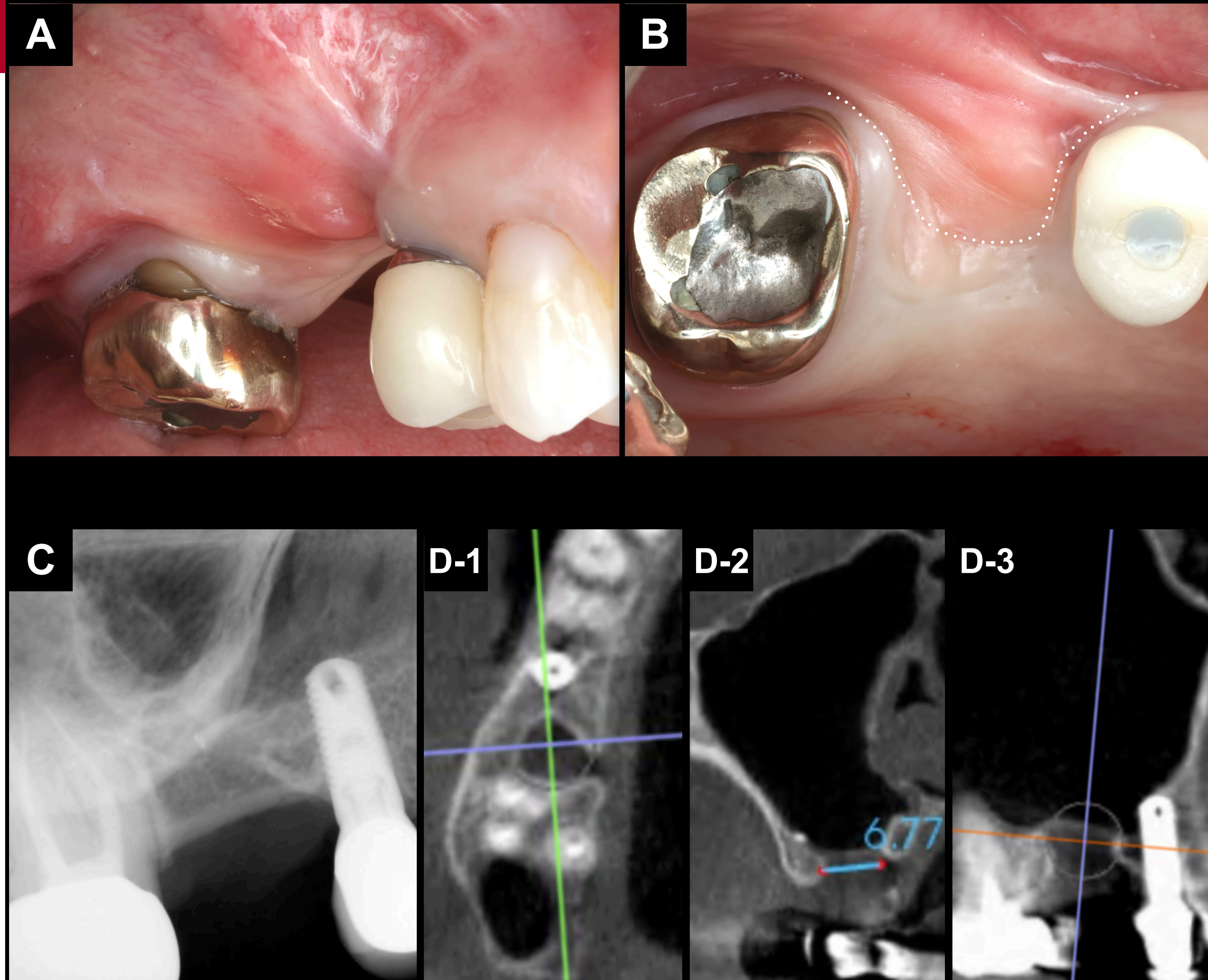
Case Presentation

1. Patient Information:

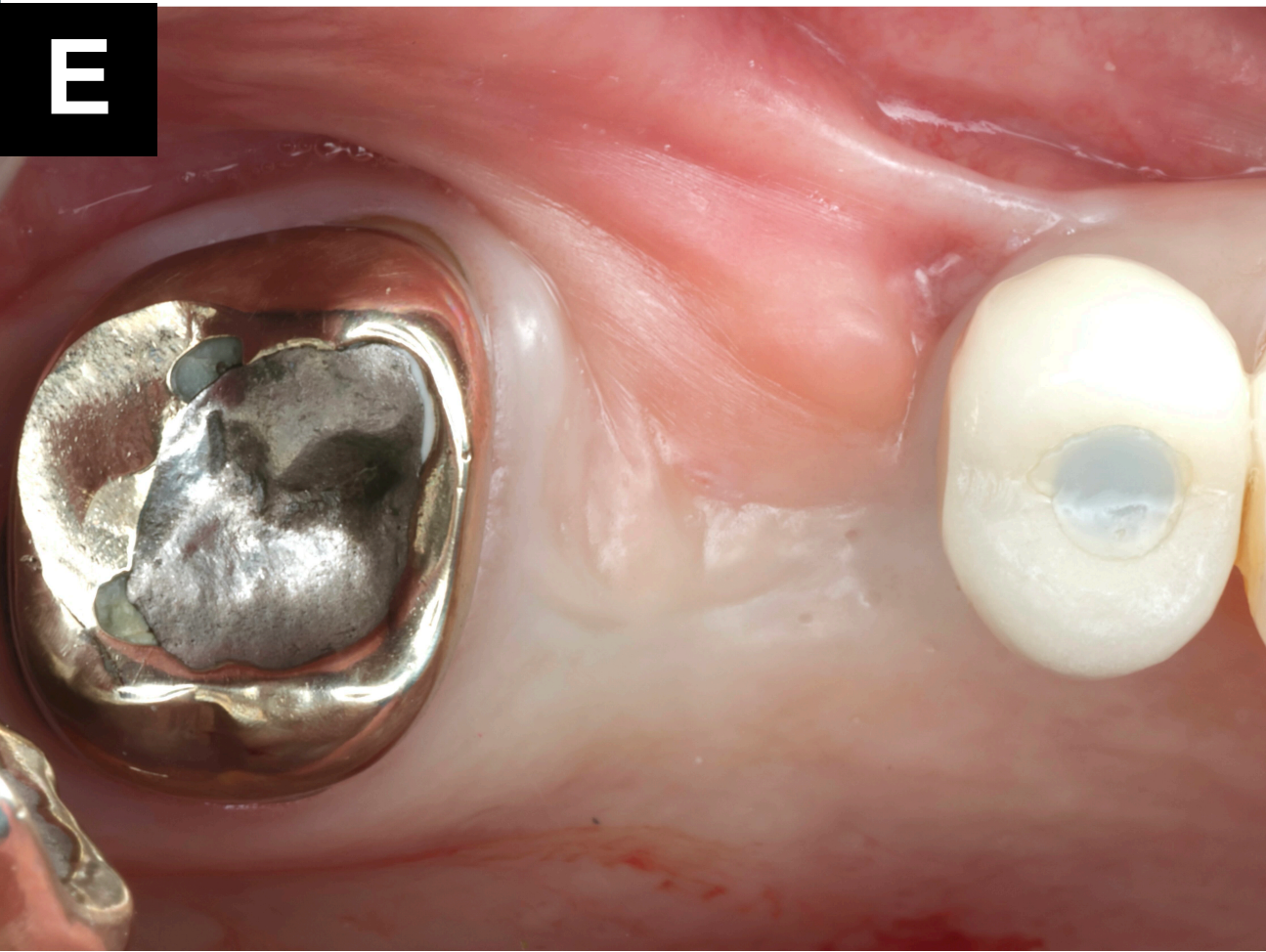
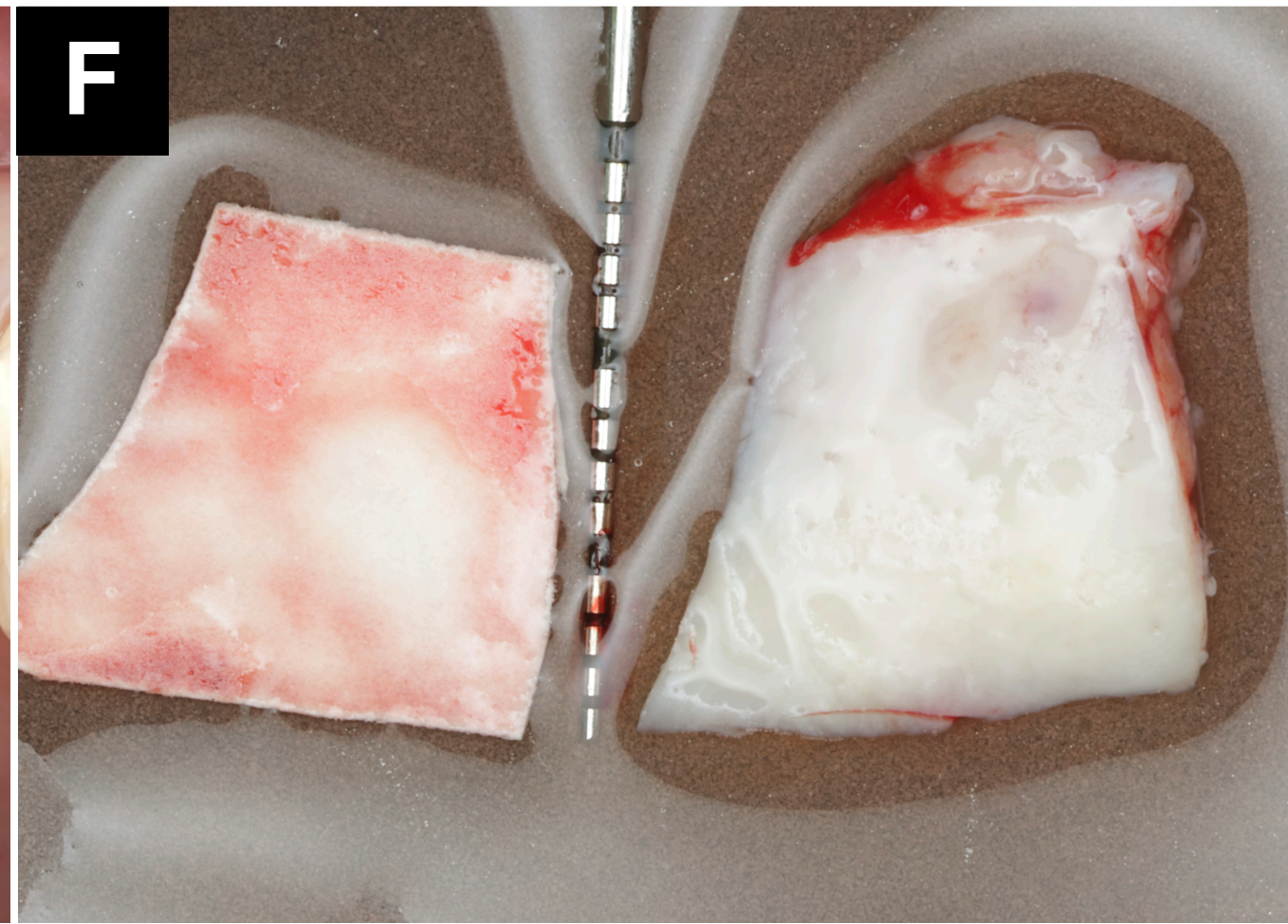
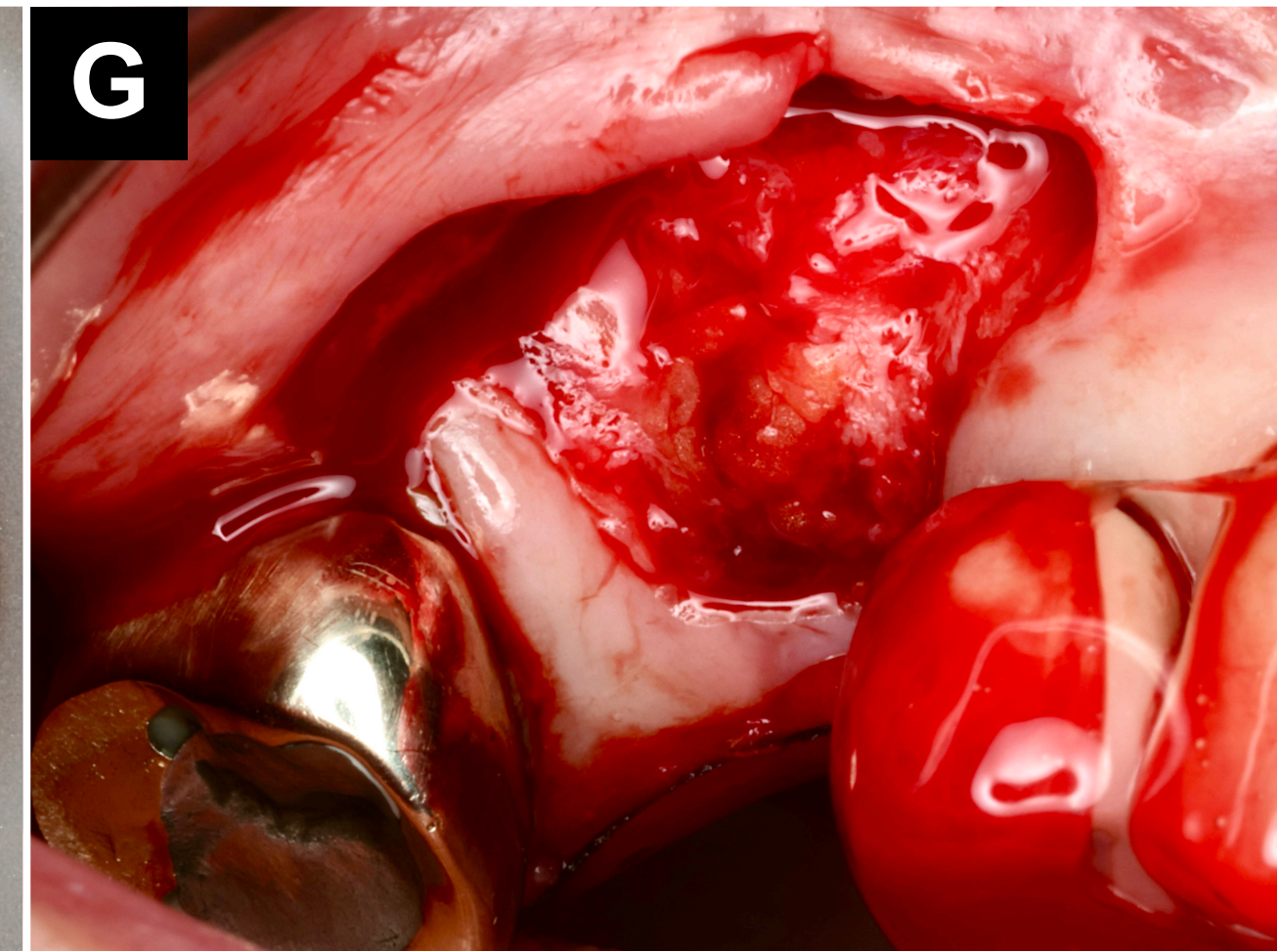
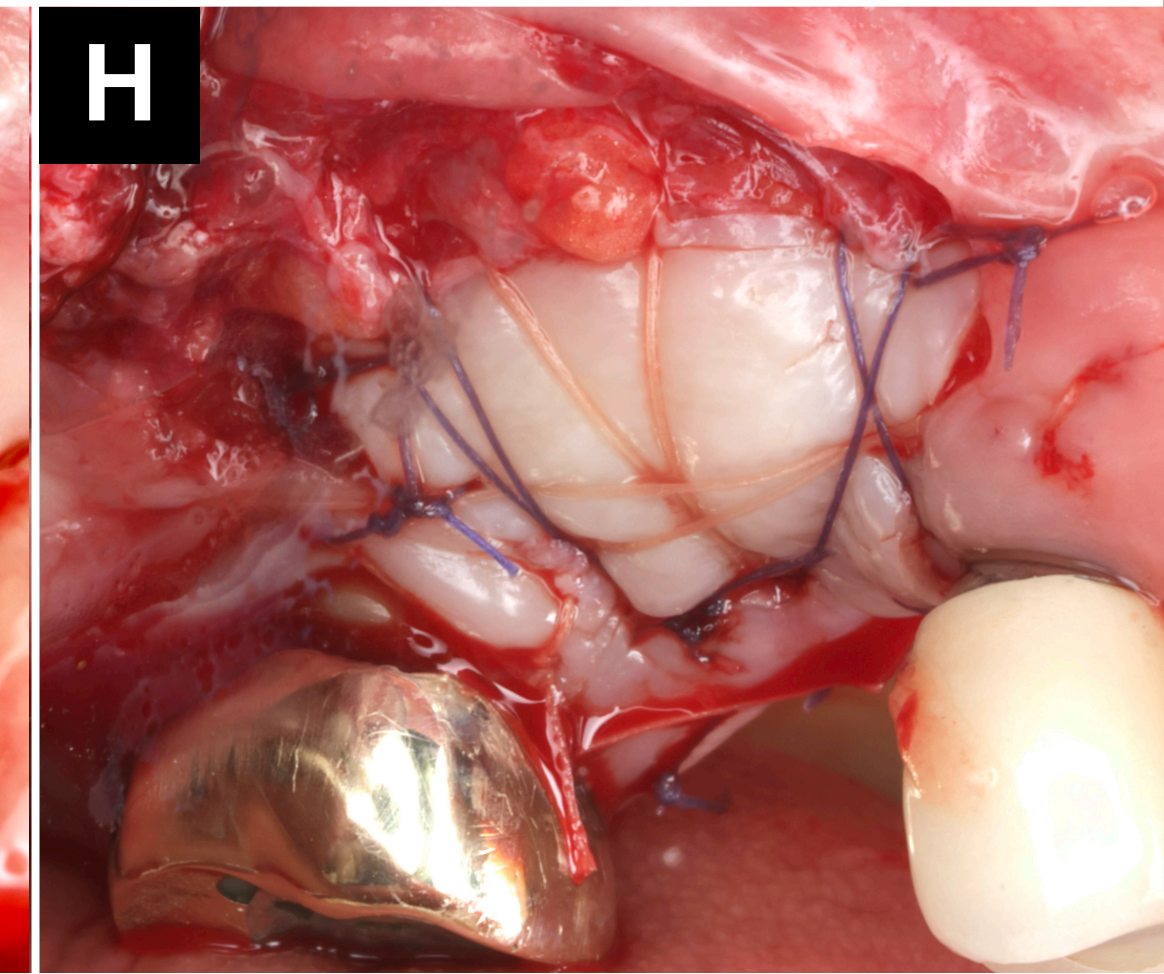
- 63-year-old female with osteoporosis and a history of IV bisphosphonate therapy.
- The OAC was repaired with an advanced buccal flap in another clinic.
- Developed an oroantral communication (OAC) and sinus infection after #3 extraction.

2. Initial Clinical Findings:

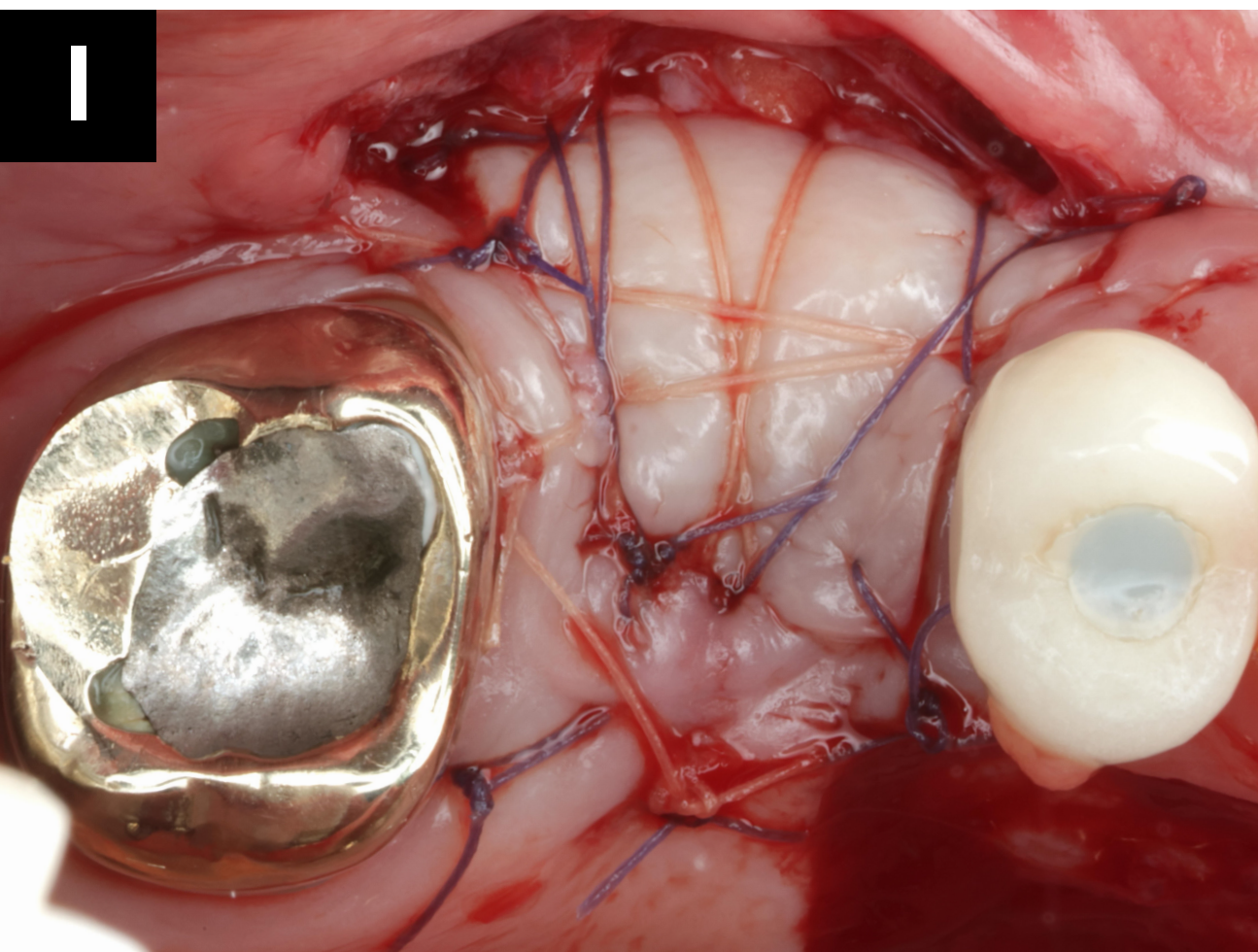
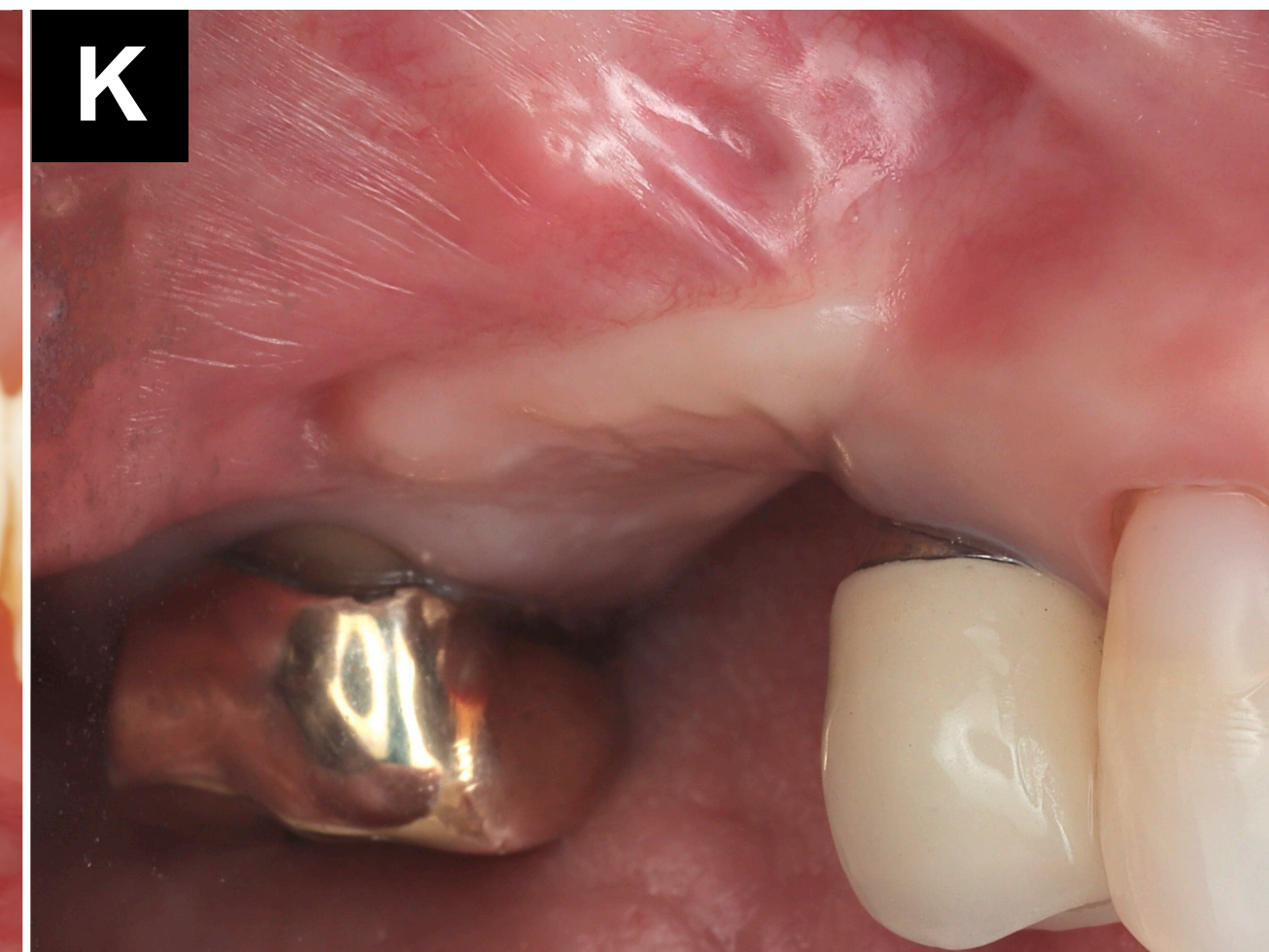
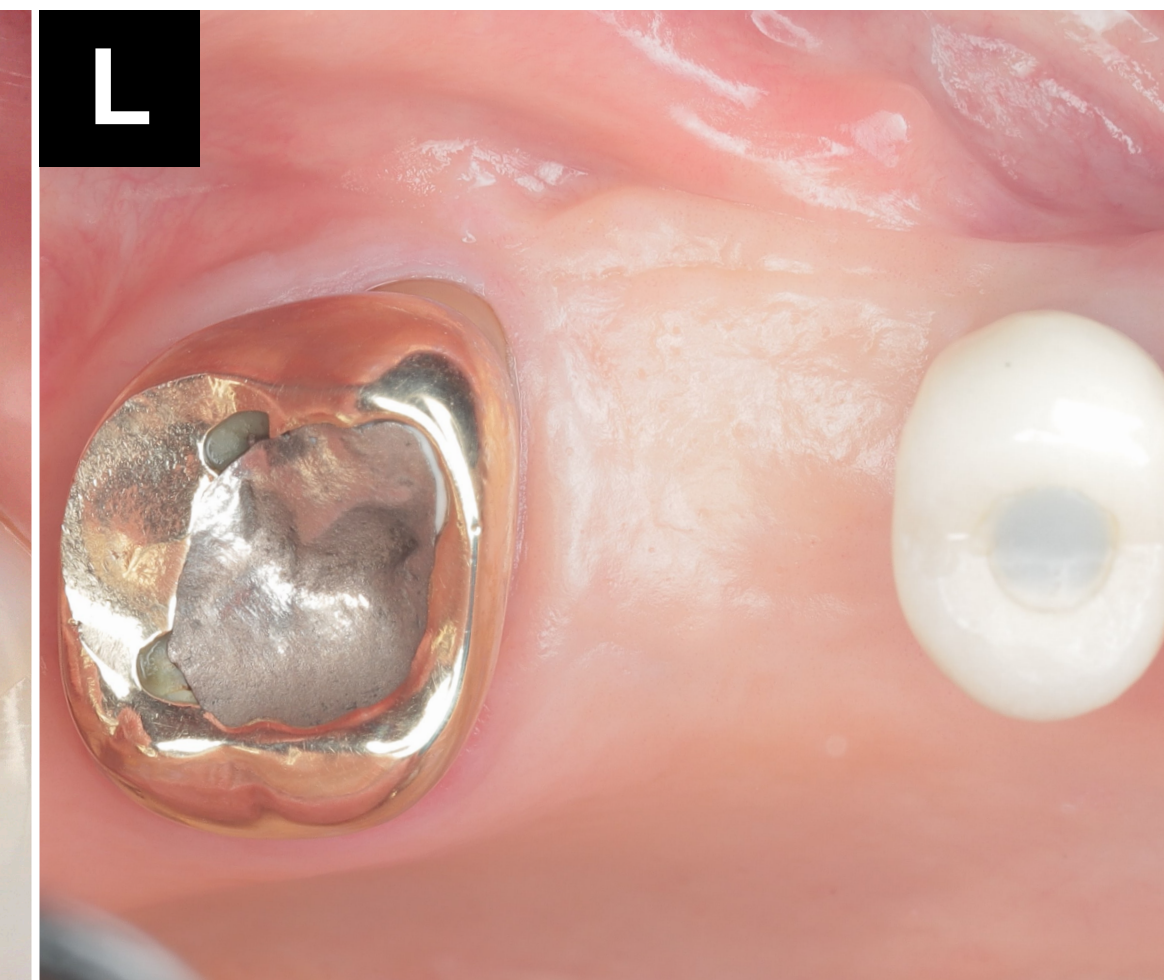
- Persistent mucogingival deformities: insufficient keratinized tissue and thin gingival phenotype. (Fig A and B)
- Radiographic findings: OAC with loss of sinus floor and a bony channel covered only by soft tissue. (Fig C and D)



First Stage: Free Gingival Graft

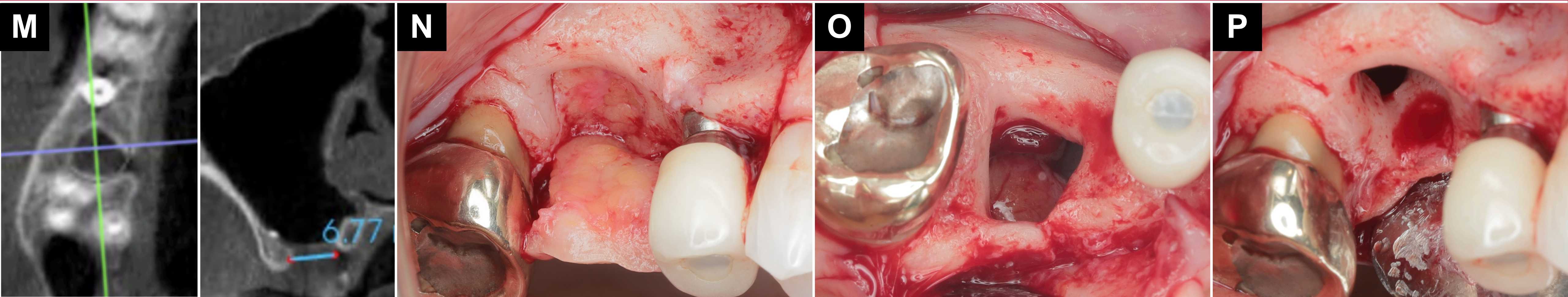


A free gingival graft procedure was first performed to augment keratinized tissue and increase the vestibular depth. The graft was stabilized on the periosteum and the adjacent tissue after a partial-thickness flap was raised along the mucogingival junction(MGJ).

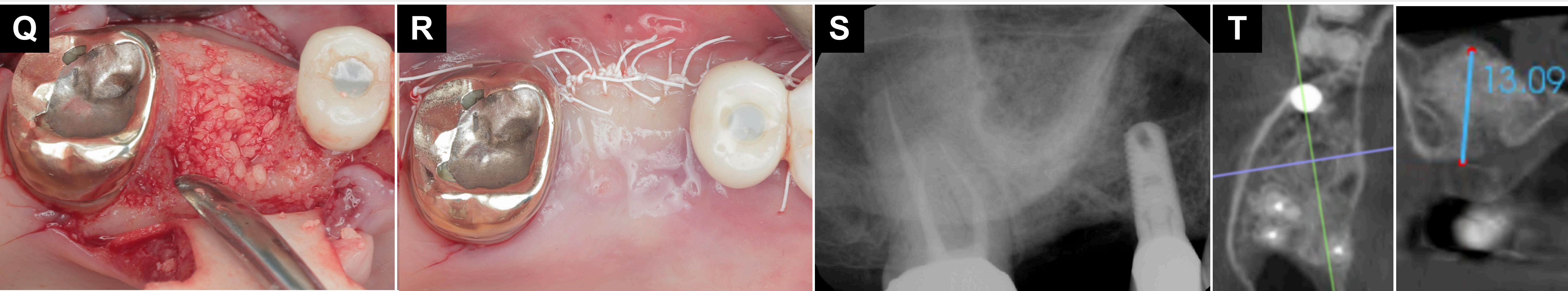


Healing was uneventful, with significant gains in keratinized tissue and vestibular depth post-operatively.

Second Stage: Sinus Augmentation

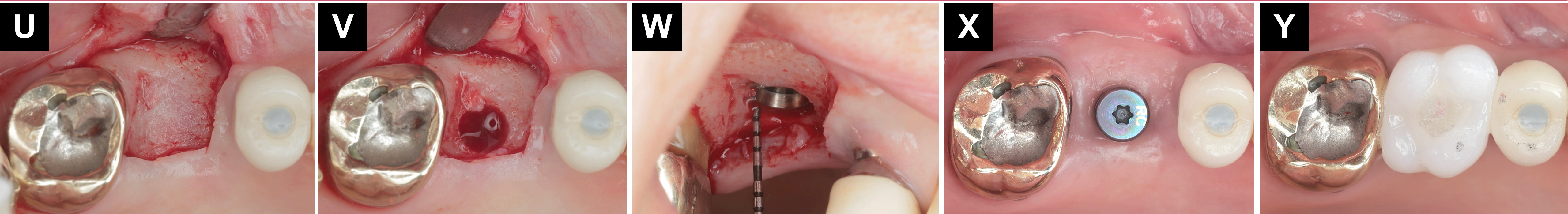


10 months later, sinus augmentation was performed via the OAC channel. A full-thickness flap was elevated from the MGJ to the OAC channel, and the flap was separated from the OAC channel tissue to avoid perforating the Schneiderian membrane.



A 1:1 mix of allograft and xenograft was placed in the sinus and allograft only in the OAC channel. The channel was covered with a cross-link collagen membrane followed by primary closure. An immediate post-operative radiograph showed significant bone fill. After 6 months of uneventful healing, 13 mm of sinus elevation was confirmed by CBCT.

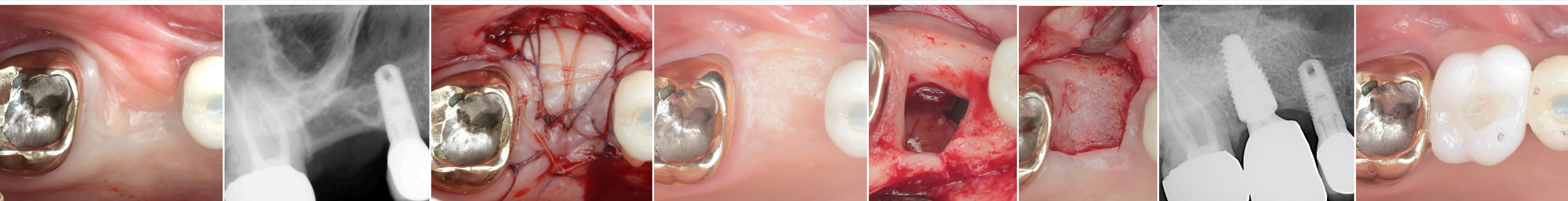
Implant Placement & Restoration



The OAC channel had completely resolved with sufficient marginal bone width. The quality of bone present provided primary implant stability for the Straumann® 4.8×10mm SLActive® implant, with an insertion torque value exceeding 45Ncm. The implant was restored and functional six months post-placement, with an uneventful healing period and without signs of radiographic bone loss or clinical symptoms.

Conclusion

This case report highlights the successful management of OAC-related soft and hard tissue deficiencies that remained following an advanced buccal flap repair. The combination of FGG and sinus augmentation addressed these challenges effectively. Initial treatment with FGG improved soft tissue quality, while subsequent sinus augmentation restored bone structure and quantity, enabling successful dental implant placement with excellent primary stability. These staged procedures, executed with meticulous planning, provided adequate soft and hard tissue support, resulting in successful implant restoration and function. No radiographic bone loss or clinical symptoms were observed over the 6-month follow-up period.



References

