

Bony Press-Fit Closure in Managing Sinus Implant Displacement

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Introduction:

Implant displacement into the maxillary sinus is a rare but challenging complication that can occur during second-stage surgery.

This case demonstrates the use of a bony press-fit closure technique to preserve the crestal portion of the implant site, facilitating future sinus graft re-entry and simultaneous implant placement.

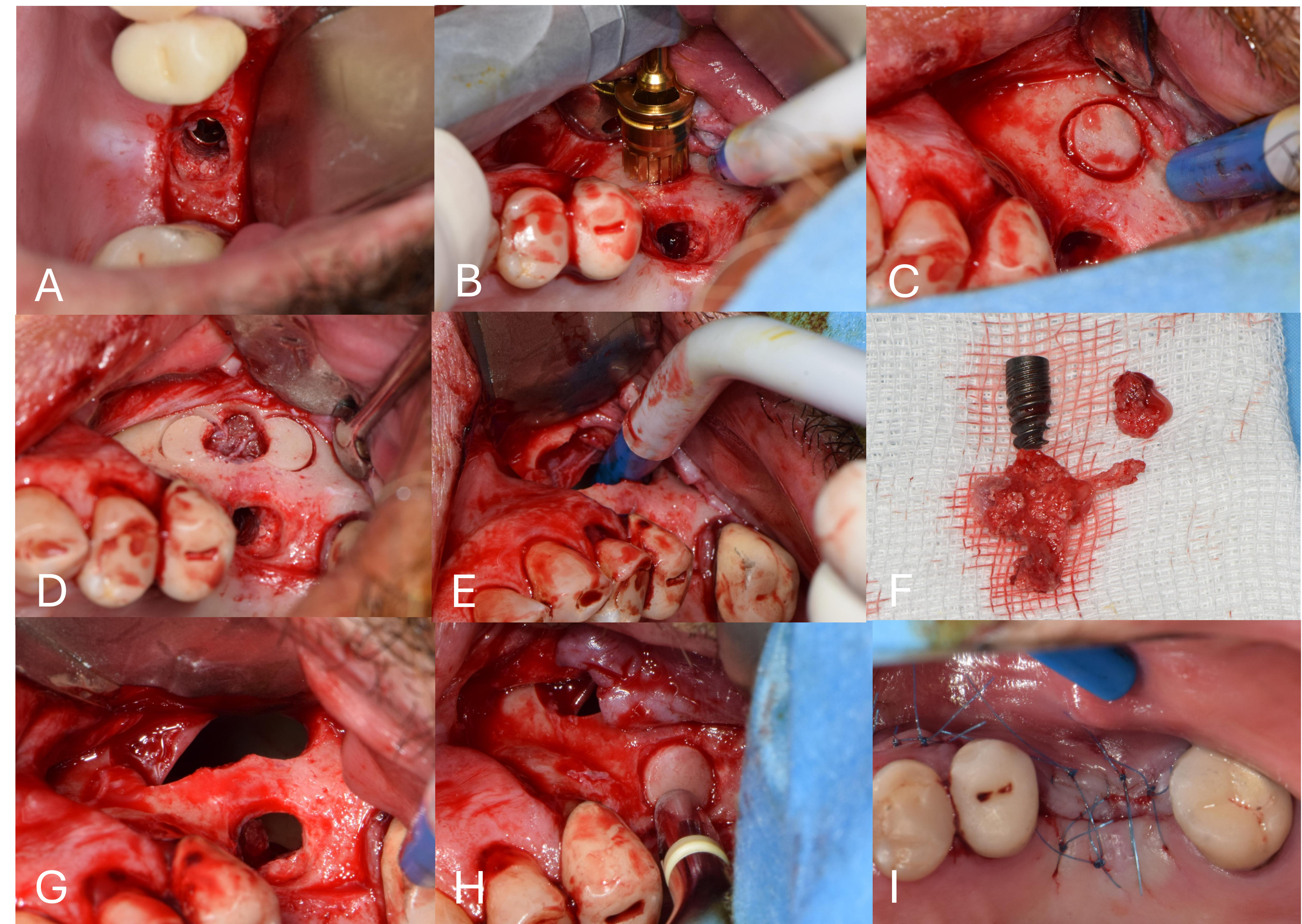
Method:

45-year-old healthy, non-smoking male

Reason for Consultation: Implant rehabilitation in the posterior maxilla.

At 6-Month Re-entry: Implant found to be unstable during second-stage surgery.

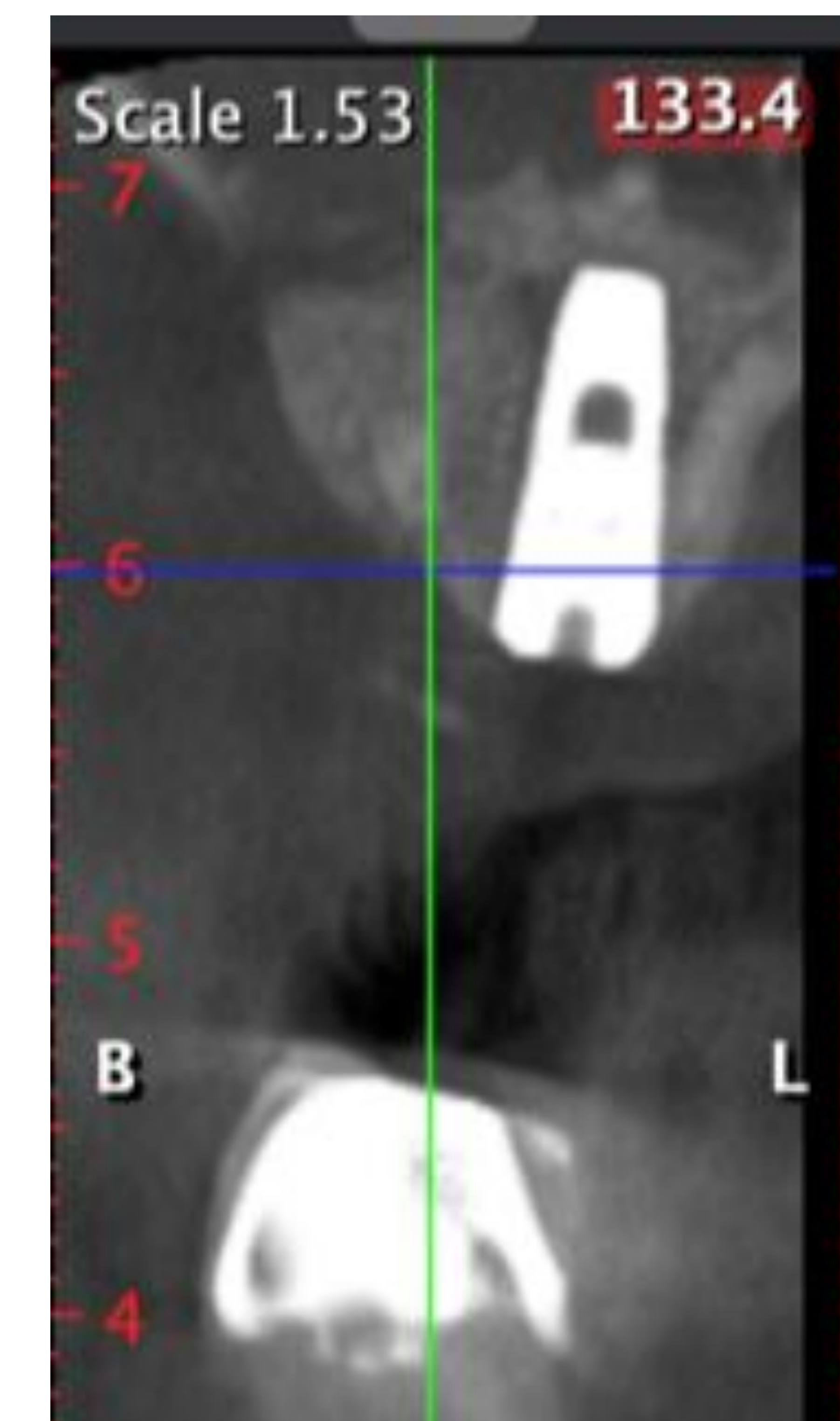
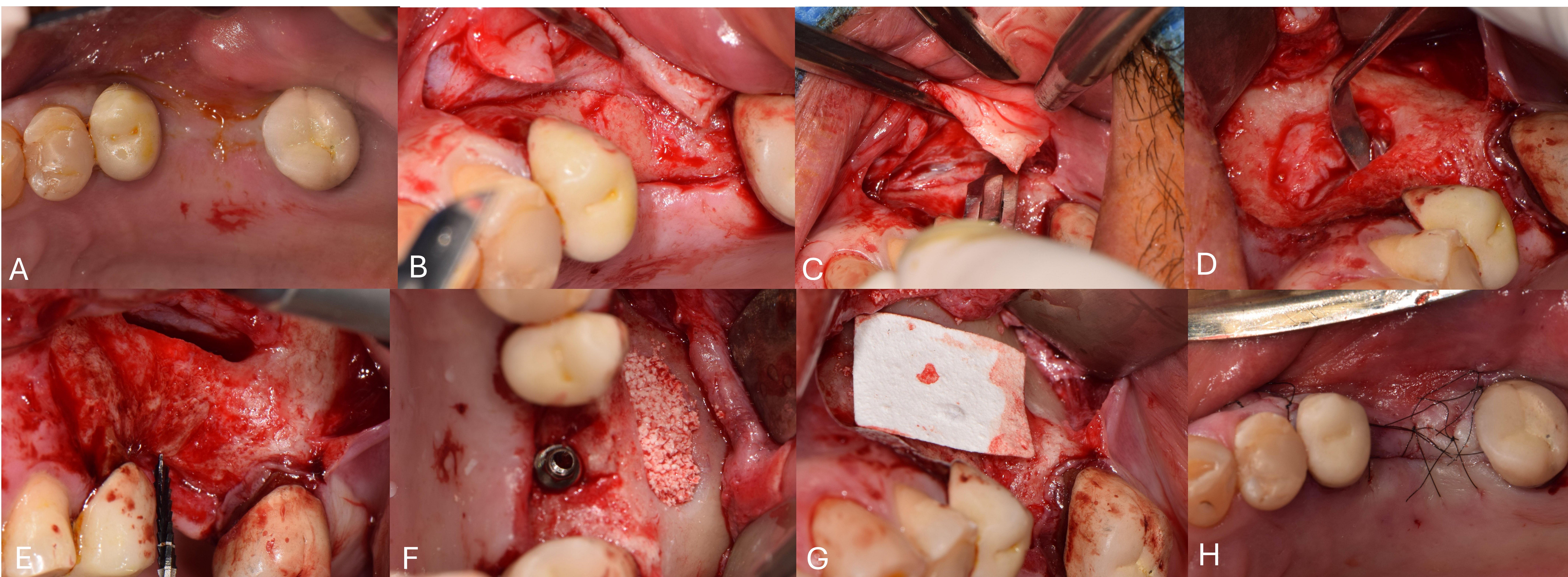
Implant became fully mobile and was inadvertently displaced into the maxillary sinus during attempted removal.



(A).Occlusal view of non-osseointegrated implant; (B-C).Lateral Sinus Window; (D). Expanded window for retrieval; (E). Schneiderian membrane torn; (F). Implant removed; (G-H). Crestal reconstruction performed with press-fit technique; (I).Sutures

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(A). Occlusal view; (B). Flap elevation; (C). Split-thickness flap over previous window location; (D). Schneiderian membrane elevation; (E). drilling; (F). Implant placed with 30 N.cm primary stability ; (G). Collagen membrane over the graft ; (H). Sutures.

CBCT after sinus graft and implant placement

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Results:

The displaced implant was successfully retrieved without sinus complications.

The bony press-fit closure maintained the crestal portion of the implant site, facilitating flap elevation during re-entry and implant placement.

Re-entry for sinus graft and implant placement was uneventful.

The final implant achieved excellent primary stability.

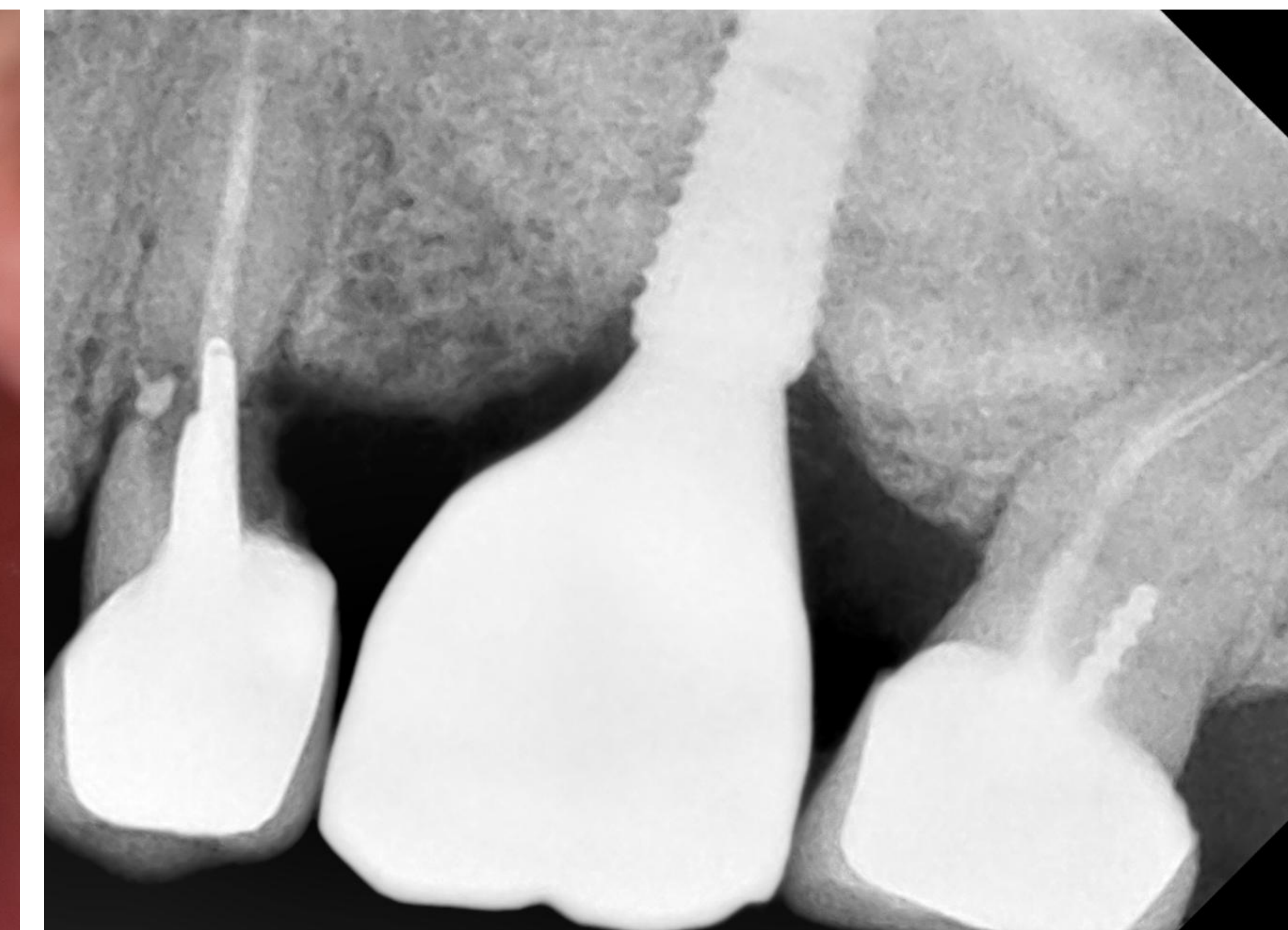
Conclusion:

The bony press-fit (bony island) closure technique provides an effective and predictable approach for managing implant displacement into the sinus.

It preserves the crestal bone at the implant site, simplifies re-entry, and allows successful sinus grafting and implant placement.



Final restoration



Periapical radiograph after 1 year