Chiyewon

NEWSLETTER | EDITION 35

HORIZONTAL & VERTICAL AUGMENTATION: MAXILLARY RIGHT, FIRST MOLAR

47 MONTHS FOLLOW-UP

CLINICAL CASE

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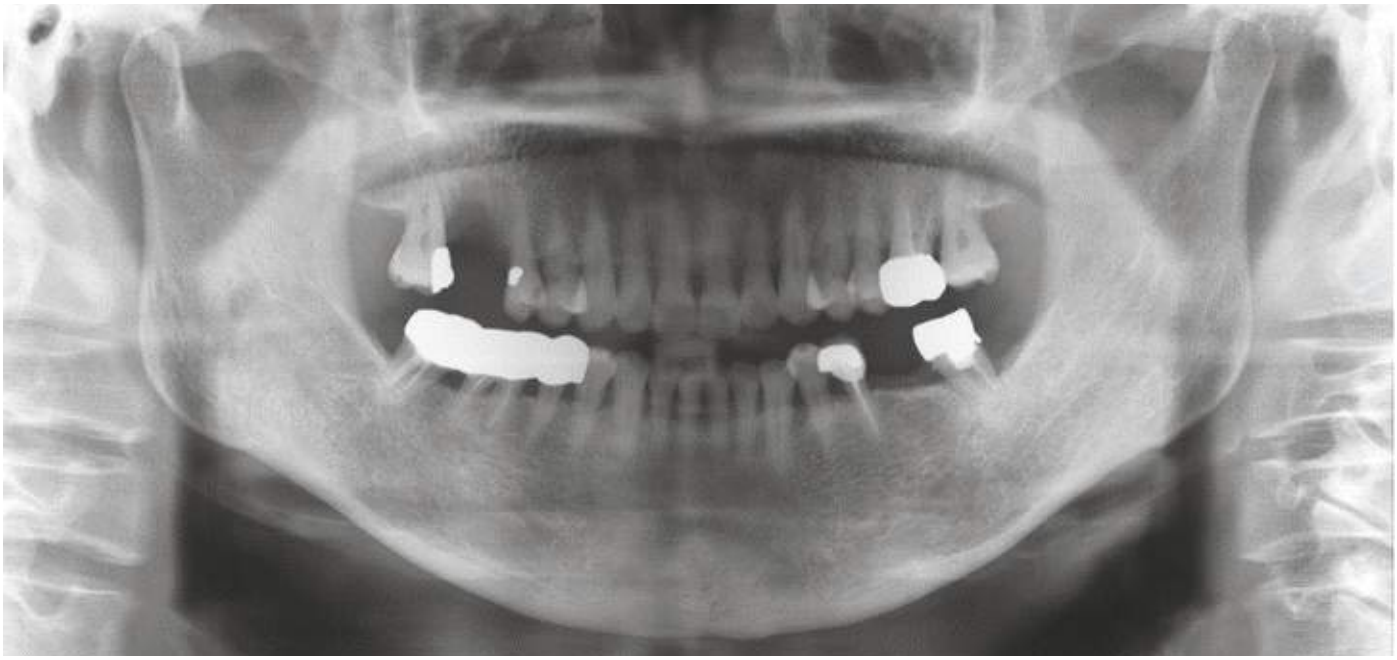


Figure 1. The radiograph shows a presurgical panoramic view of a 61-year-old female patient. The operation site is tooth #16 (maxillary right first molar), requiring both horizontal and vertical augmentation. The maxillary right first molar area shows a radiolucent image on the crestal area.

Figure 2. Intraoral soft tissue images shows relatively within normal range.

Figure 3. Linear and vertical incisions were performed in the region of teeth #15 and #17 to access the surgical site.

Figure 4. Flap elevation was performed. Buccal and palatal walls all destroyed. In order to match the level of adjacent teeth, vertical and horizontal buildup was required.

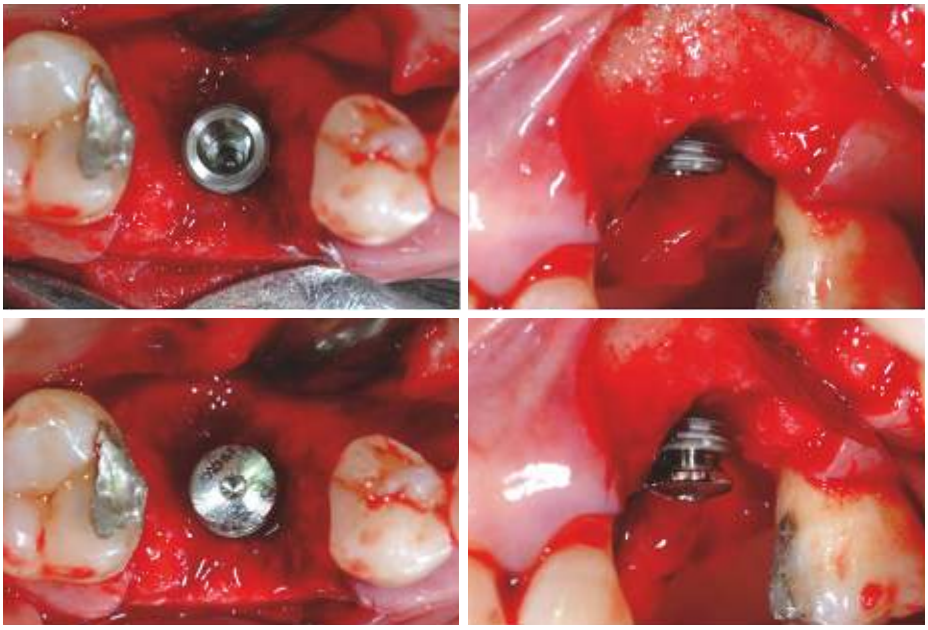


Figure 5. The implant was placed supracrestally to match the cervical level of adjacente teeth.

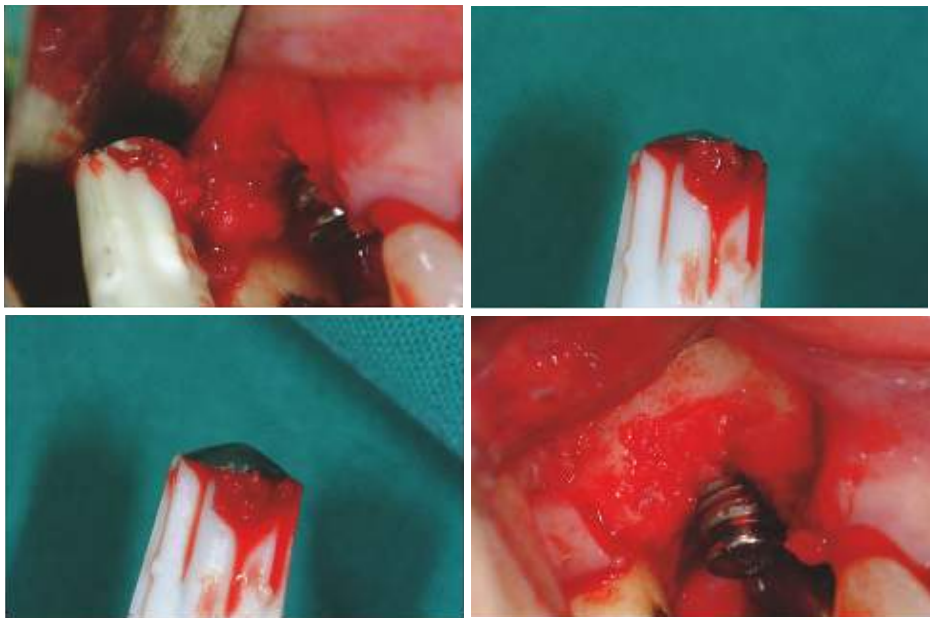


Figure 6. Autogenous particles were collected to enhance the biological potential of the graft and promote predictable bone regeneration.

Figure 7. A mixture of advanced bone graft from Chiyewon and PRP was used.

Figure 8. The advanced bone graft from Chiyewon & PRP mass picked up and shaped around the implant to fill up the defect.

Figure 9. PRF was placed over and used to cover the bone graft.

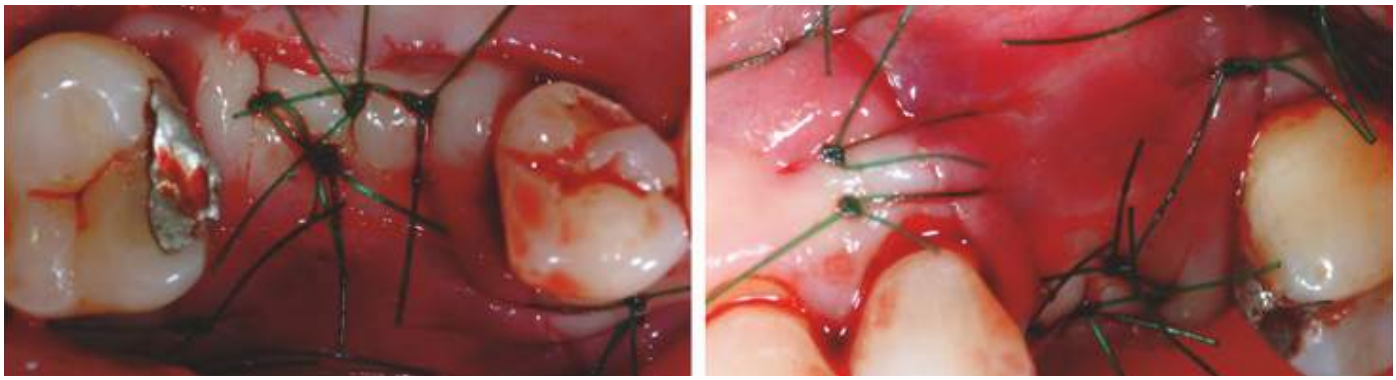


Figure 10. Sutures were performed delicately to prevent accidental wound opening.

Figure 11. **Before surgery:** The preoperative periapical radiographic image shows a bone defect at the #16 site.

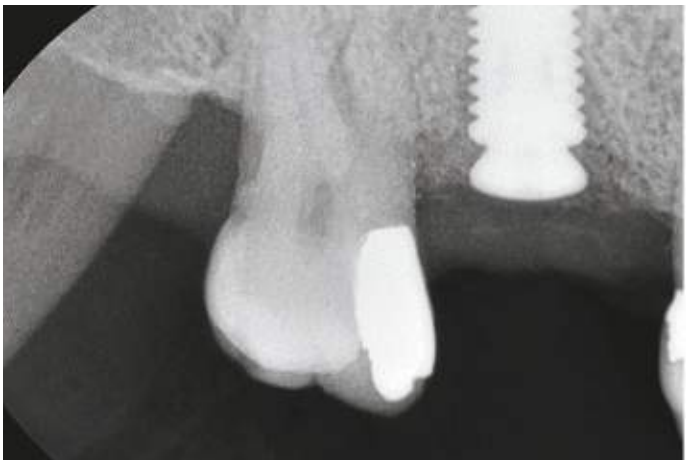


Figure 12. **Right after surgery:** The periapical radiographic image after surgery shows correctly oriented implant placement with bone graft material filling the defect.

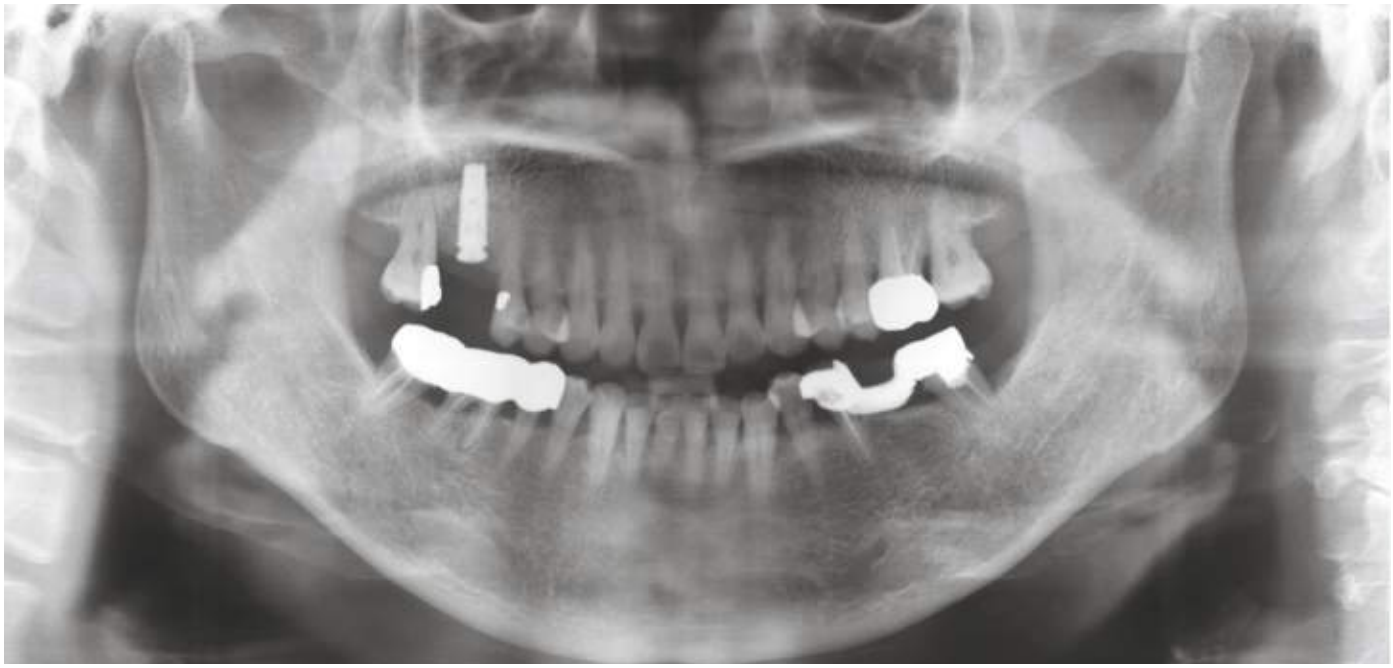


Figure 13. Right after surgery: Panoramic view of the surgical site.

Figure 14. 1 month after surgery: The periapical image of Chiyewon's bone graft began to exhibit an opaqueness.

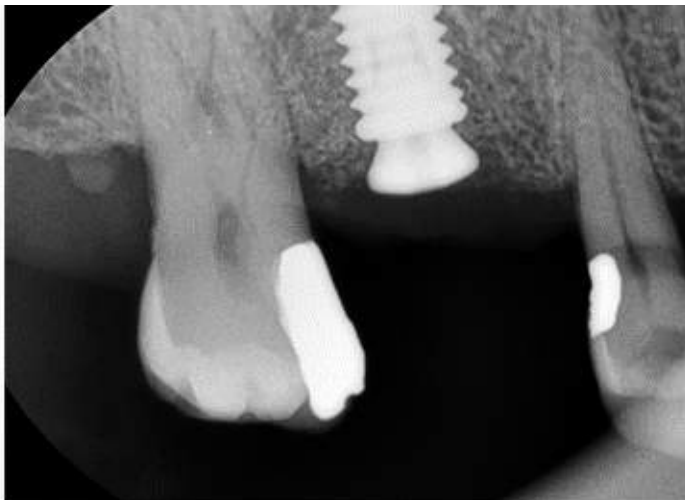


Figure 15. 2 months after surgery: The periapical image shows well settled and organized appearance of the Chiyewon's bone graft mass.

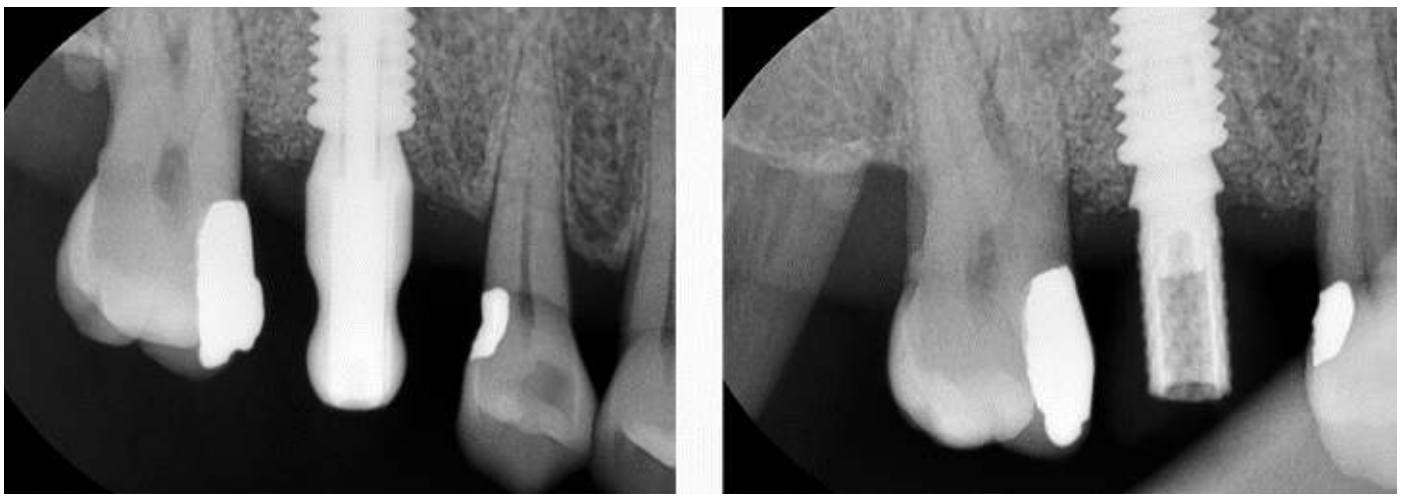


Figure 16. 6 months after surgery

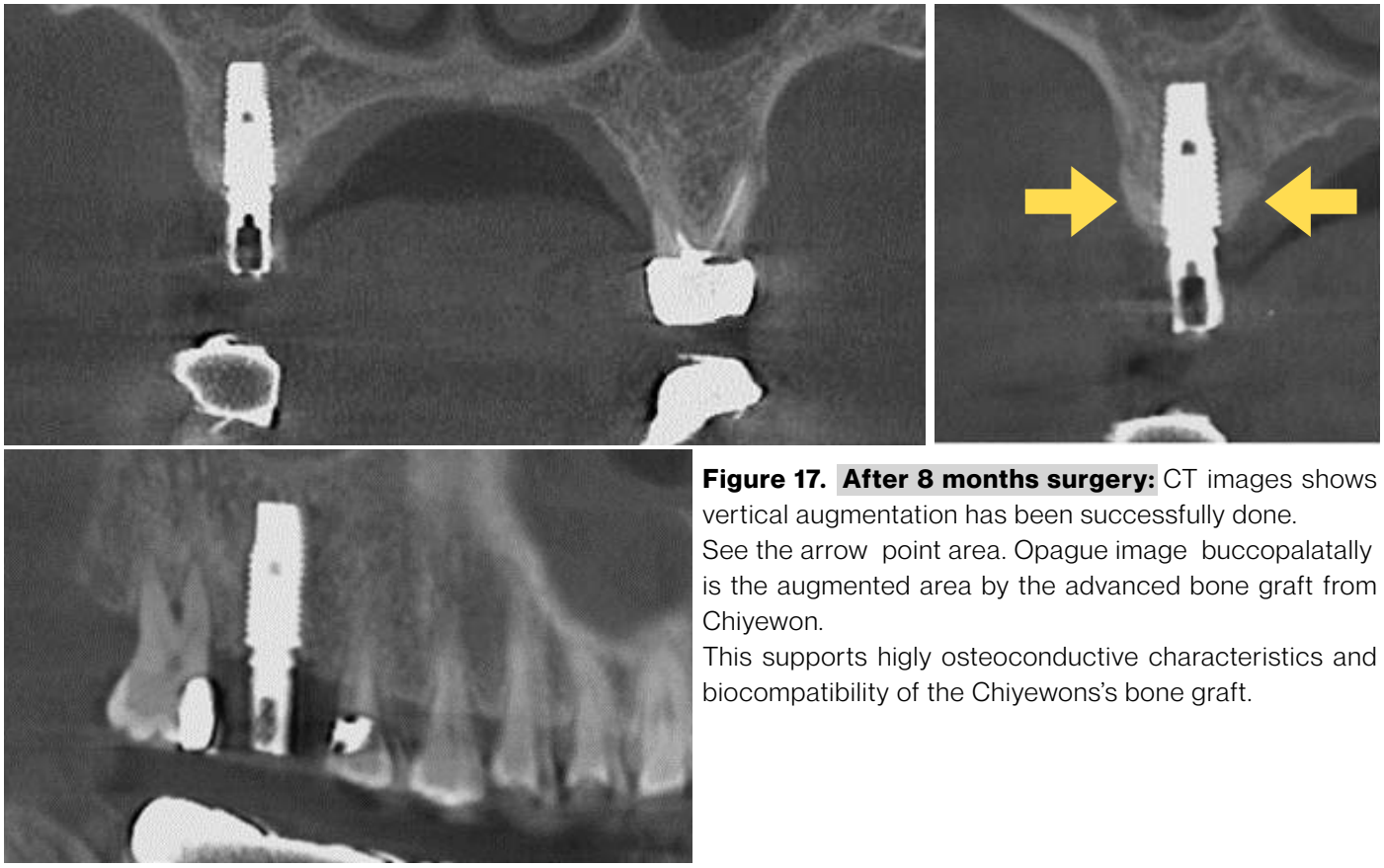
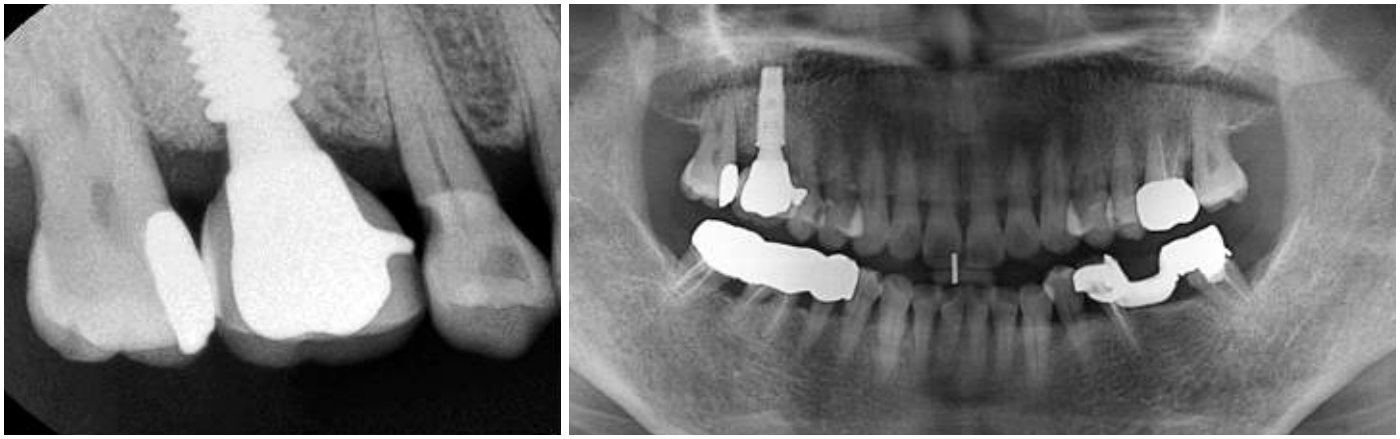
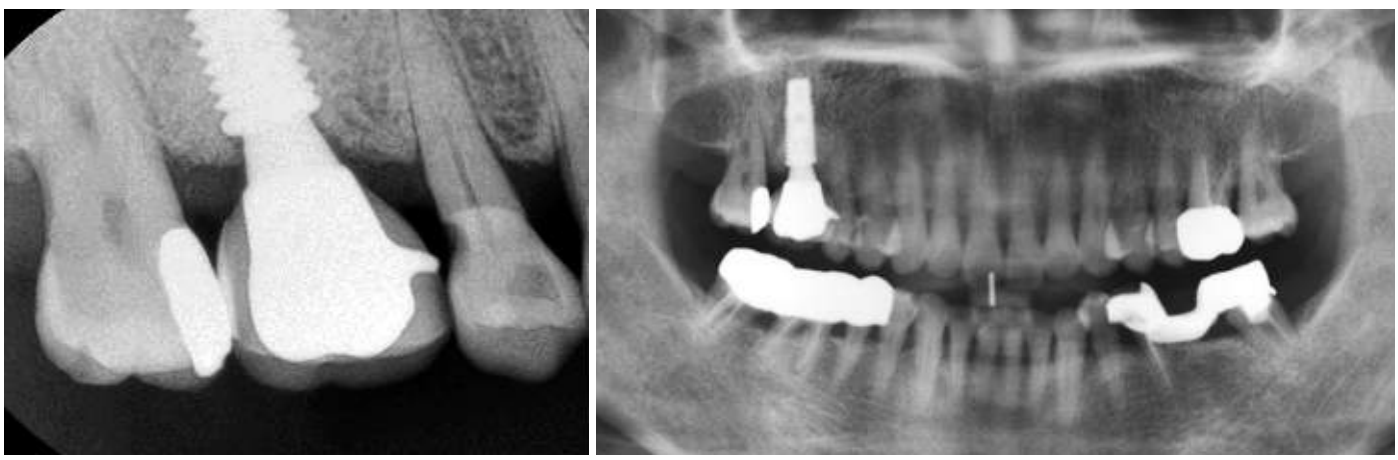


Figure 17. After 8 months surgery: CT images shows vertical augmentation has been successfully done.
See the arrow point area. Opague image buccopalatally is the augmented area by the advanced bone graft from Chiyewon.
This supports higly osteoconductive characteristics and biocompatibility of the Chiyewons's bone graft.

Figure 18. Radiopaque and periapical radiographic images show a follow-up of over 3 years. Bone levels remained consistent over 3 years, confirming long-term regenerative success.



10 months after surgery



16 months after surgery

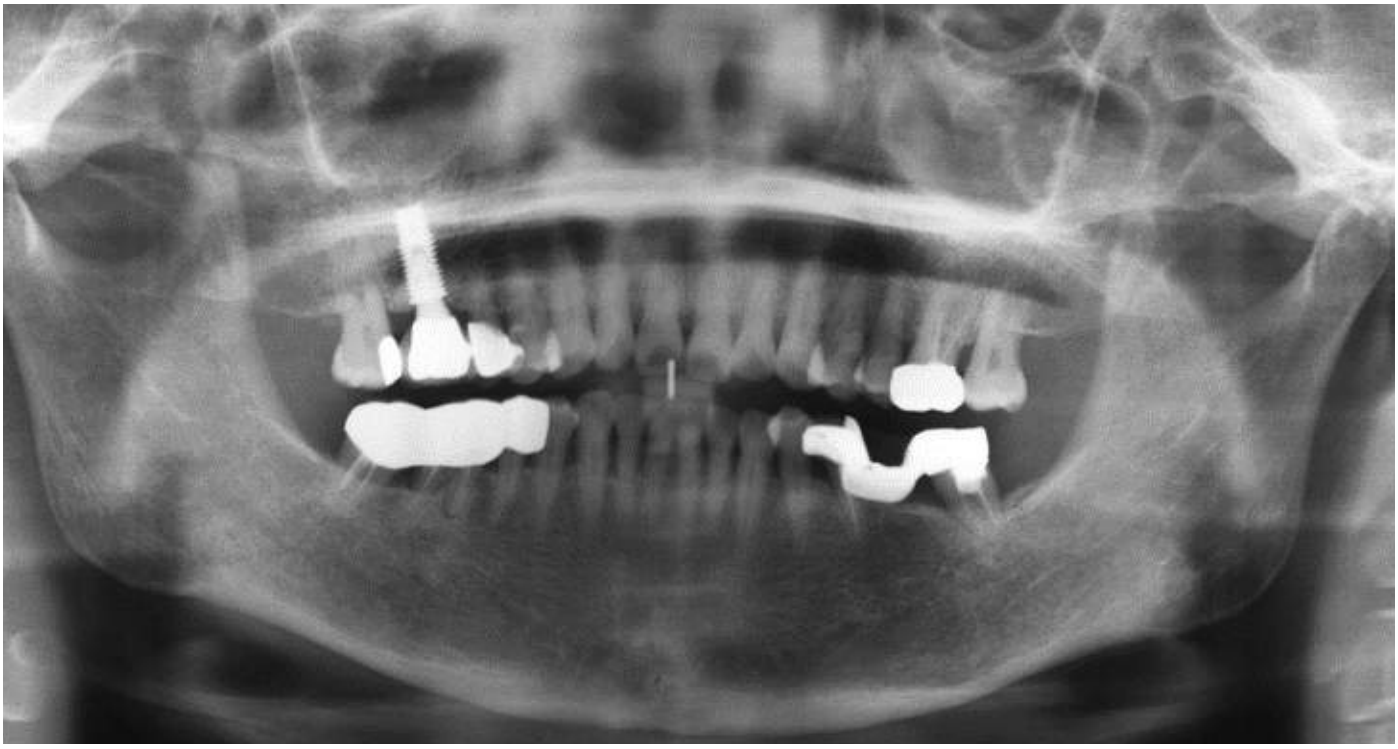


Figure 19. 47 months after surgery: Bone around the implants appears stable, with no signs of complications.

DISCUSSION:

Radiographic and CBCT evaluations at 8 months post-surgery confirmed successful vertical and horizontal bone regeneration despite the complete destruction of both buccal and palatal walls (Figure 17). The graft material (Chiyewon advanced bone graft with PRP/PRF) showed progressive integration from 1 month post-surgery (Figure 14), with stable bone levels maintained up to 47 months after surgery (Figure 19).

This clinical case demonstrates the **reliability**, **biocompatibility**, **osteoconductivity**, and **long-term predictability** of Chiyewon's advanced bone graft for **complex ridge augmentation procedures** involving both vertical and horizontal bone loss.

Thank You