

Long-term Success Over 7 Years After Full Arch Rehabilitation Using Neo NaviGuide



Case Summary 🔍

Patient Information

- Age/Sex: 51-year-old Male
- Systemic Condition: History of Hypertension and under medication

Clinical Findings

- Tooth Site: Mandible
- Oral examination: #43 with Grade 3 mobility
- Diagnosis: Chronic periodontitis

Clinical Summary

The patient presents with a fully edentulous mandibular arch, except for the mandibular right canine (#43), which exhibits Grade 3 mobility. In the maxilla, a six-unit anterior bridge prosthesis is in place, and implant placement has been performed in both right and left posterior region. A full arch prosthetic rehabilitation is planned for the edentulous mandible.

Treatment Plan

- Extraction of #43
- Placement of 8 implants in the mandible using Neo NaviGuide for guided surgery
- Final restoration with Zirconia crowns

Conclusion

In this case, a fully edentulous mandible was rehabilitated using the **Neo NaviGuide** system for the placement of 8 implants, followed by guided bone regeneration (GBR). Definitive prosthetic rehabilitation was successfully completed 8 months post-surgery. The patient demonstrated a stable outcome with good function and prognosis over an 7 year follow up.

Case Presentation

1 Pre-Op

- The pre-operative panoramic radiograph and intraoral photograph show a fully edentulous mandibular arch, except for #43.
- #43 exhibits severe mobility (Grade 3) and significant bone loss. Generalized alveolar ridge resorption is evident, indicating the treatment for full-arch implant-supported rehabilitation for function and esthetic restoration.



2 Treatment Plan

- #43 extraction and Implant placement using CMI implant on #34, #35, #36, #37, #44, #45, #46, #47

Implant position (to)	34	35	36	37				
Diameter (mm)	4.0	4.5	5.0	5.0				
Length (mm)	10	7.5	7.5	7.5				
Order number	BIS4010A	BIS4507A	BIS5007A	BIS5007A				
Cross View								
Panorama								

Implant position (to)	43	45	46	47				
Diameter (mm)	4.0	4.0	5.0	5.0				
Length (mm)	11.5	8.5	8.5	10				
Order number	BIS4011A	BIS4008A	BIS5008A	BIS5010A				
Cross View								
Panorama								

- Neo NaviGuide fabrication

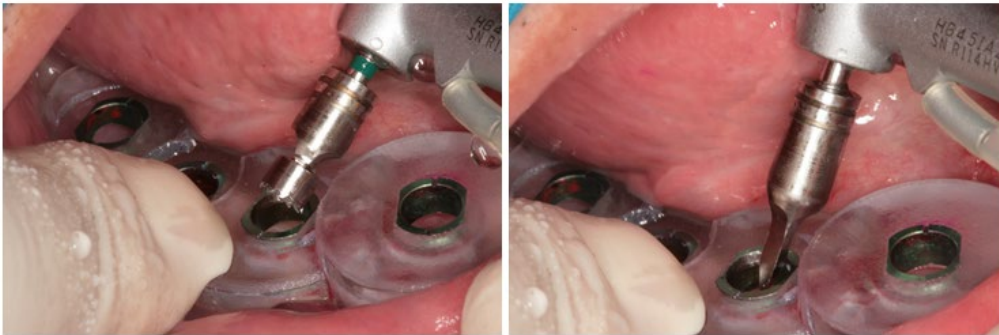


- Neo NaviGuide drilling

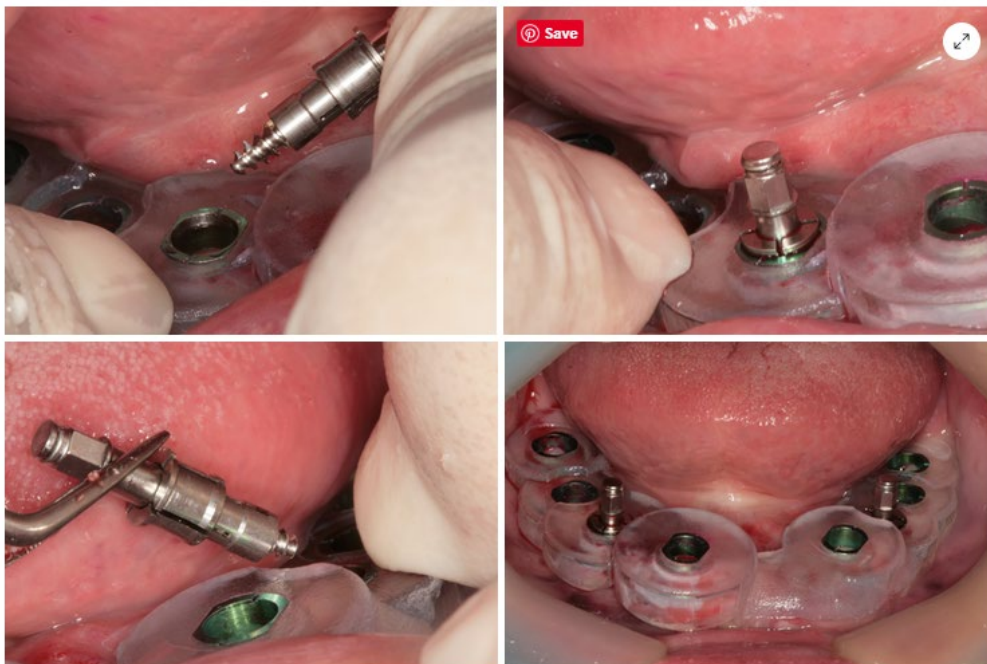


3 Surgery - Full Arch Rehabilitation

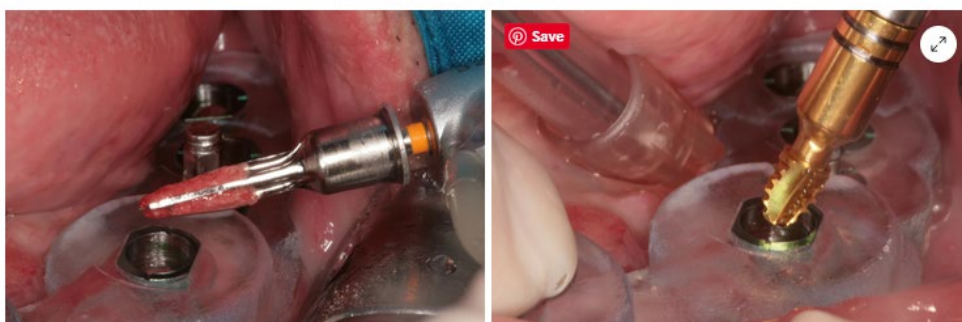
- The **Neo NaviGuide** was placed in the mouth. The gingiva at the surgical site is removed using Tissue punch for flapless surgery.
- Initial drilling is performed to assess bone density and ensure accurate positioning for implant placement.



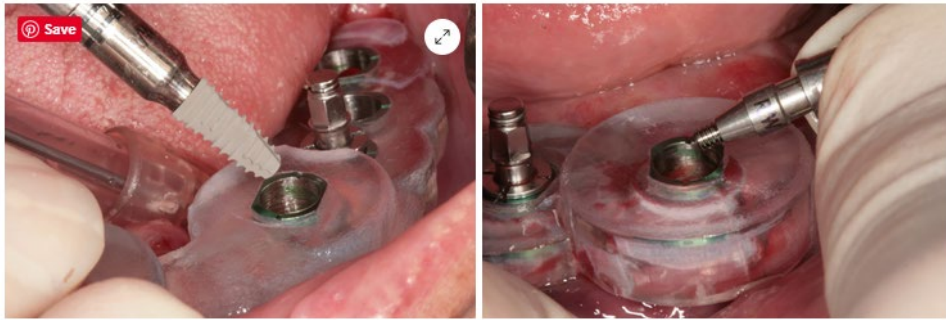
- To ensure a safe and precise surgery, the guide is stabilized using vertical anchors. The vertical anchors are placed in the bone at positions #35 and #45 are fixed to the appropriate depth and path using a torque ratchet.



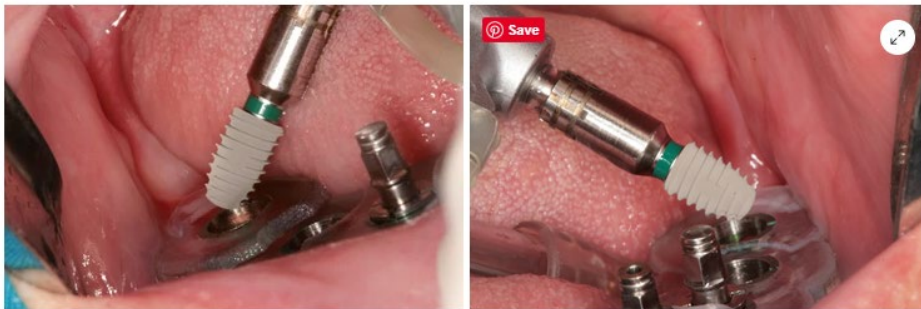
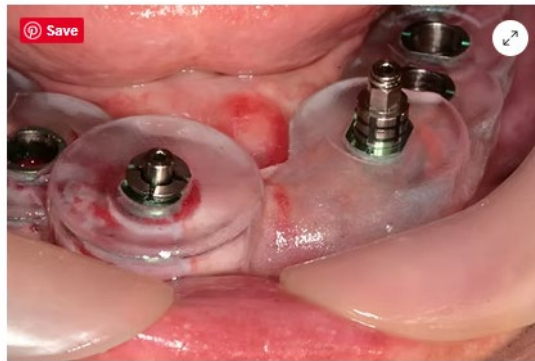
- Step by step drilling is performed while assessing bone density. Bone particles collected during drilling can be used to autogenous bone.
- Based on the bone density, cortical tapping is performed in dense cortical bone to achieve maximum BIC and optimal fixation.



- **CMI IS-III Active 4.0*10mm implant** was placed in the area of #34.
- Connecting in fixture type vertical anchors to the implants at #34 and #44 to stabilize the Neo NaviGuide.



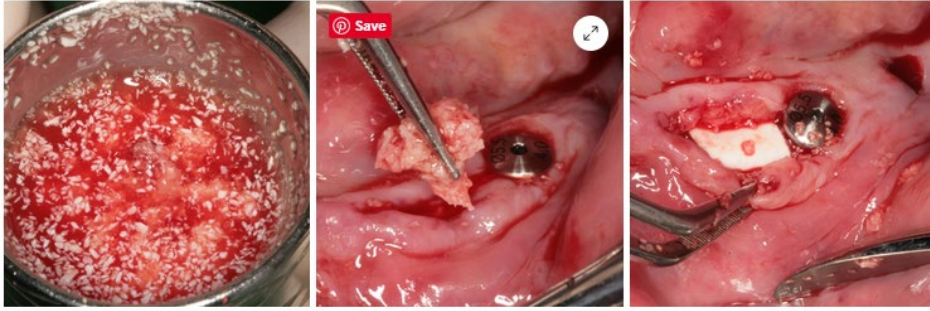
- Step by step drilling is possible through the stabilized guide fixed with vertical anchors. **CMI IS-III Active 5.5*8.5mm implant** was placed in the area of #47. **CMI IS-III Active 5.0*6.0mm implant** was placed in the area of #37.



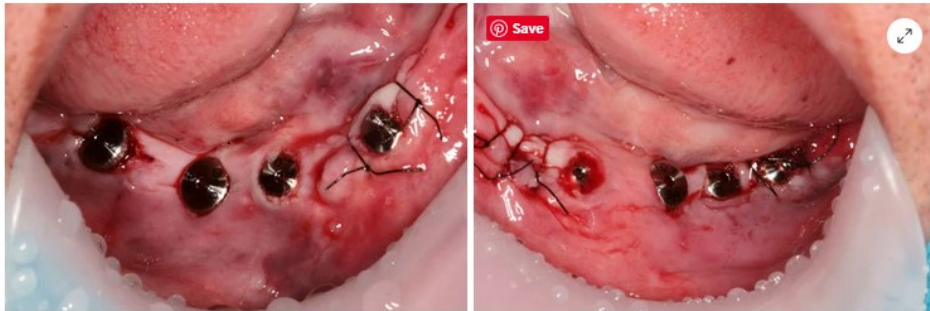
- A total of 8 implants were placed at #34, #35, #36, #37, #44, #45, #46 and #47.
- An incision is made at the surgical site where the ridge is narrow and requires bone grafting.



- Bone graft is performed using PRF, Regenoss (Allograft) and autogenous bone which collected during drilling. And resorbable collagen membrane was placed over the graft.



- Healing abutments were connected to the fixtures.



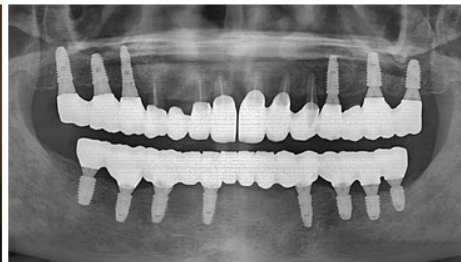
4 Post-Op

- Clinical and radiographic examination after surgery.



5 Final Restoration

- The final prosthetic restoration was delivered 8 months after surgery.



6 Follow-Up

[1-Year Follow-Up]



[3-Year Follow-Up]



[7-Year Follow-Up]

- The 7-year follow-up periapical radiograph shows no significant bone loss, indicating long-term success and a favorable prognosis.

