



Dynamic Navigation for Dental Implant Surgery for Full Arch All-on-4 Fixed Implant-Supported Prostheses

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Clinical Image

Implantologists have several options when it comes to implant planning and placement. An All-on-4 prosthesis is a screw retained hybrid prosthesis supported by four dental implants for restoring a fully edentulous. Dynamic Navigation (DN) has been used to improve the accuracy of implant placement by providing surgeons a real-time navigation machine. This article reports the treatment procedure associated with full mouth rehabilitation using DN to improve the accuracy and safety.



Figure 1: A 65-year-old male with a history of aggressive periodontitis was referred for full mouth rehabilitation. The remaining teeth had to be removed due to excessive mobility. Despite unwillingness to undergo any major bone graft procedures, the patient demanded fixed prostheses.

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Figure 2: Radiographic view of the considerable amount of bone loss.

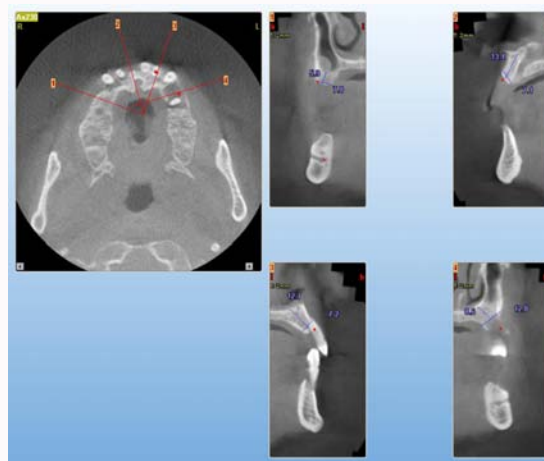


Figure 3: CBCT examination found that the bone in the posterior maxillary region was severely insufficient, and the bone mass in the anterior teeth was acceptable.

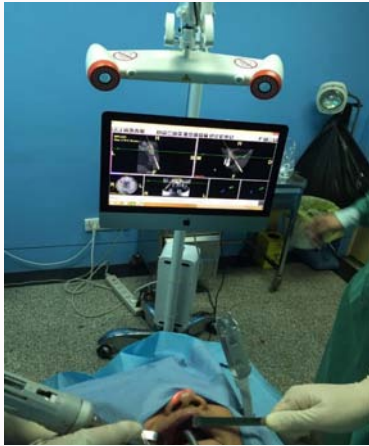


Figure 4: The patient and drill must be over the line of sight of the tracking camera. (Implant Real-time Imaging System, Taiwan, China).

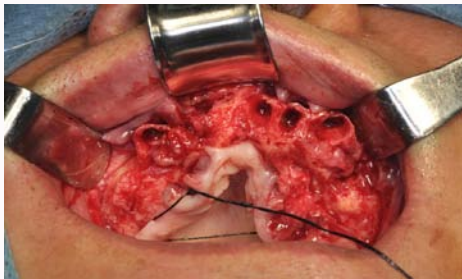


Figure 5: Tooth extraction and bone conditioning for implantation.

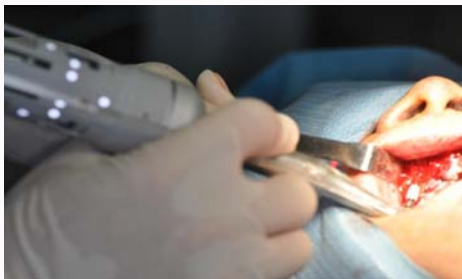


Figure 6: Implant placement (Nobel Biocare, Göteborg, Sweden) under the navigation of the Real-time Imaging System.



Figure 7: Radiographic views of the eight implants. The two implants in the posterior maxillary region got maximize use of existing bone.



Figure 8: Wax try-in.



Figure 9: Clinical view of the final delivery of prosthesis. Pink porcelain simulated the lost gingival tissue.



Figure 10: Clinical view of the final delivery of prosthesis after 47 months.



Figure 11: Radiographic views of porcelain-layered titanium prostheses after 47 months. No marginal bone loss was found around the eight implants.