



Complete Maxillary Rehabilitation with Immediate Loading of the Implants Inserted with Computer Guided Flapless Surgery: A Case Report

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INTRODUCTION

- The aim of the poster is to illustrate the steps for rehabilitation of completely edentulous maxilla with a fully-guided computer aided flapless implant placement and immediate loading of prosthesis.
- Recent advances in CAD/CAM technology in addition to CT imaging and rapid prototyping have enabled increased accuracy and less invasive flapless surgical implant placement.
- Benefits of flapless implant placement include reduced healing times, fewer changes in crestal bone levels, less bleeding, minimal post operative discomfort, reduced swelling, and immediate function with fixed prosthesis.

METHODS & MATERIAL

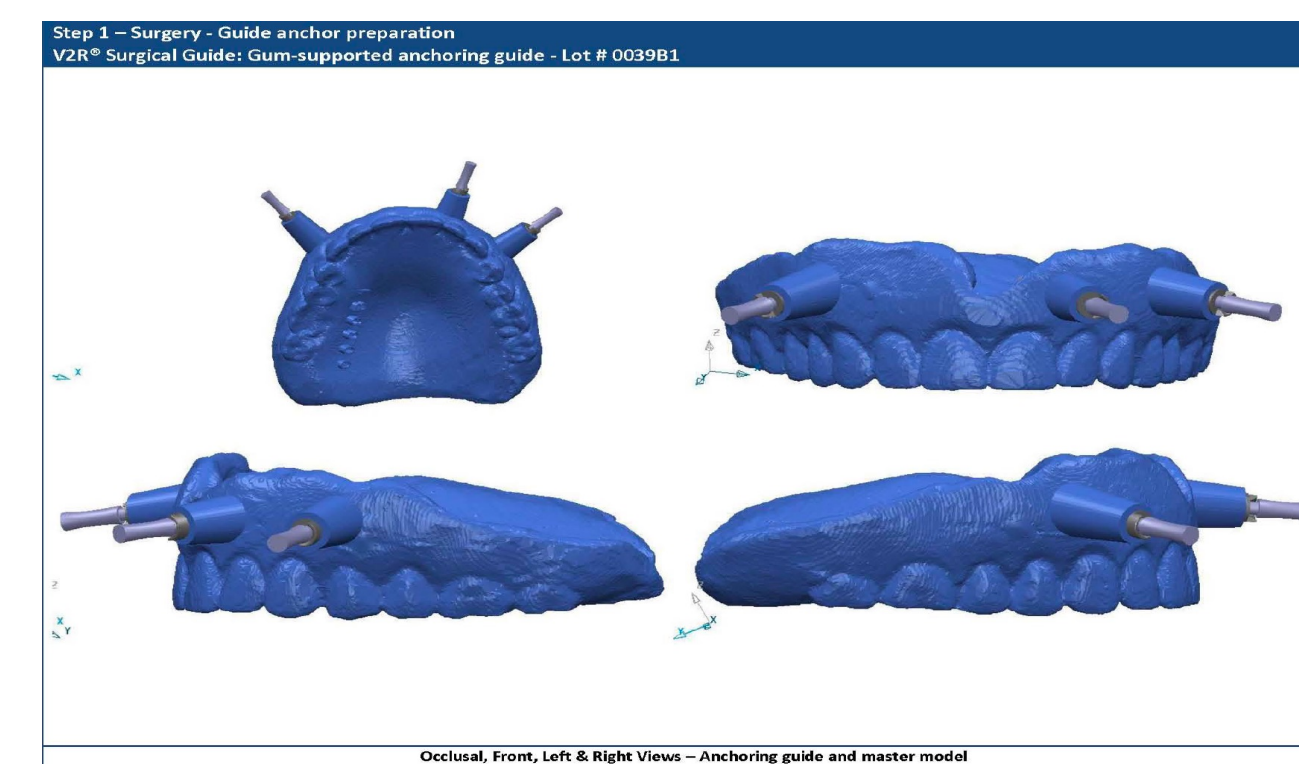
Guide Preparation



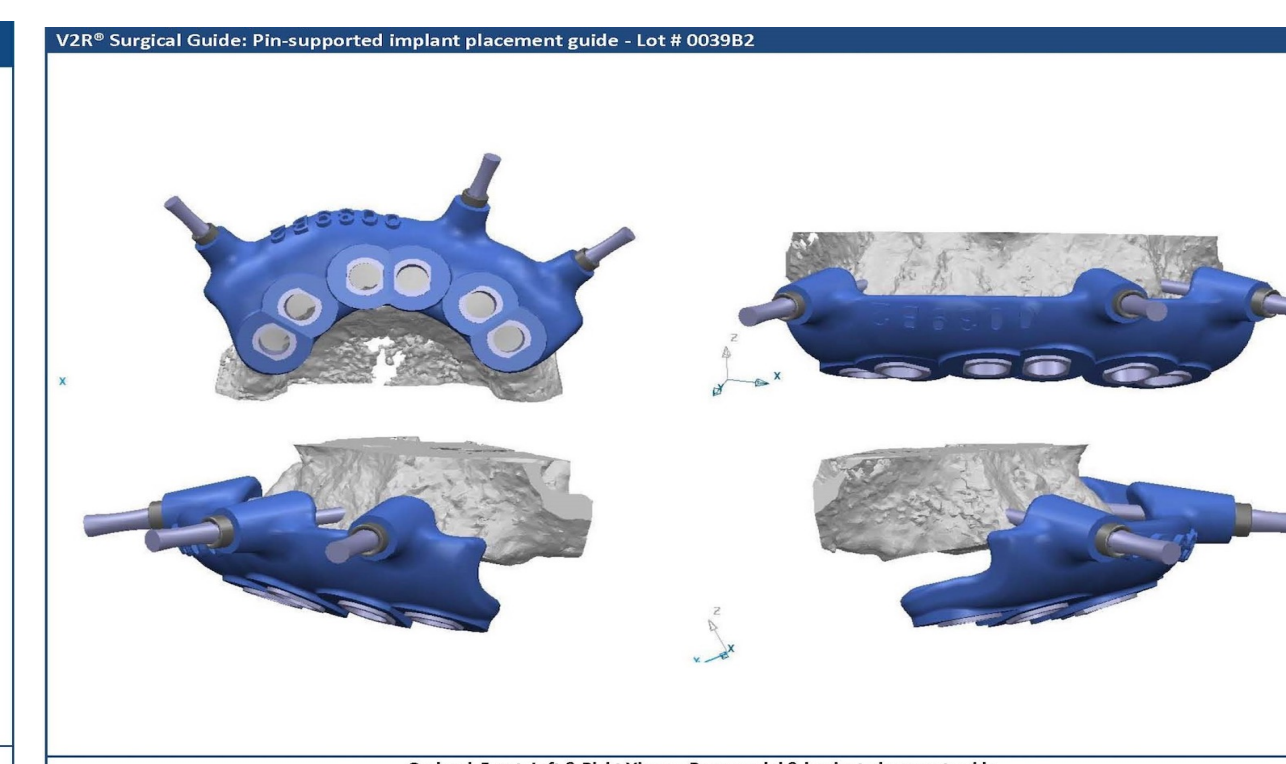
64-Year-old female patient with completely edentulous maxilla seeking implant treatment as she was not comfortable with her maxillary dentures during mastication and speech



Her existing maxillary complete denture with fiducial markers was scanned with CBCT to serve as a radiographic template



Denture was duplicated and printed to make anchoring guide for placement of guide pins



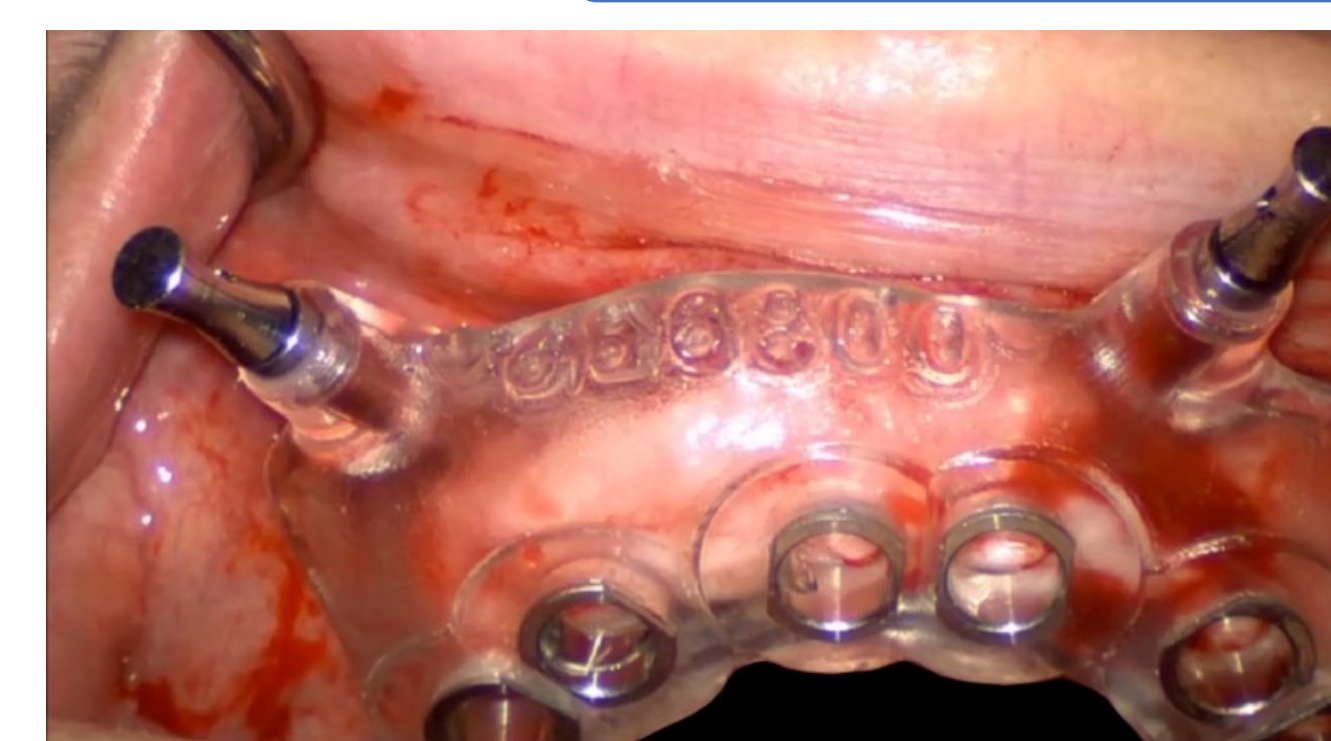
The raw DICOM files were imported to make Straumann's pin-supported surgical guide, maxilla presented with adequate bone to accommodate 6 endosteal implants.

Anchor Guide Placement



On the day of the surgery, anchoring guide was installed to place the guide pins while the patient was in occlusion.

Implant Placement



Pin-supported implant placement guide was secured with the anchoring pins

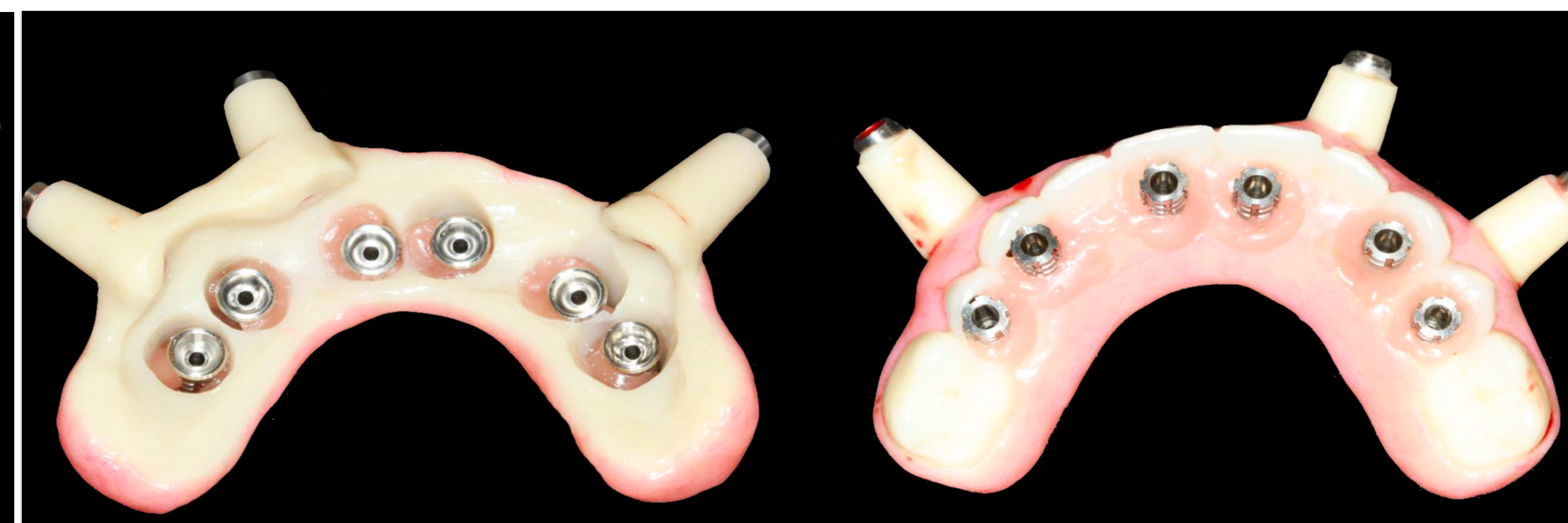


Six Straumann BLT SL Active G endosteal implants were placed

Abutment and Provisional Prosthesis Installation



The final prosthesis was then secured with anchoring pins and checked for occlusion



Multi-unit abutments were placed, temporary cylinders inserted and anchored to the immediate provisional prosthesis with Vocco resin-base cement.

Results



The patient was discharged with post op instructions after occlusal verification and polishing of provisional prosthesis

Conclusions

- Immediate loading of dental implants eliminates the need for interim removable prosthesis, increases patient comfort and masticatory function throughout the healing period.
- Computer guided, flapless implant placement with stereolithographic templates increases procedural precision with less surgical and treatment times, minimally invasive surgical technique with reduced pain, swelling and immediate use of prefabricated fixed prosthesis.

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