Digital Dual-Arch Rehabilitation Using Straumann EXACT for a Mandibular Fixed Prosthesis Opposing a Maxillary Complete Denture: A Case Report

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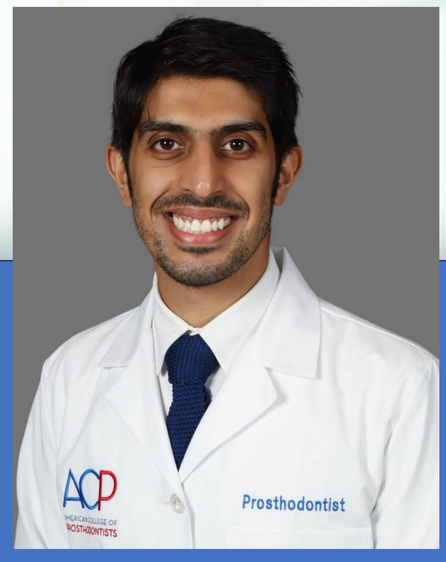


Purpose

To demonstrate the use of a fully digital, model-free workflow for the rehabilitation of an edentulous patient with a mandibular implant-supported fixed prosthesis opposing a maxillary complete denture, and to evaluate its efficiency, accuracy, and clinical outcomes.

Methods

A 77-year-old edentulous male presented with ill-fitting prostheses and reduced masticatory efficiency. Four Straumann BLT, RC, SLActive implants were placed in the mandible using a guided protocol. Following the Straumann EXACT™ workflow, initial 360° scans of the temporary prosthesis, opposing arch, and occlusion were captured. BASE scan bodies were attached to screw-retained abutments with LINK components and scanned intraorally. A definitive CAD-designed titanium bar was milled, verified intraorally for passive fit (Sheffield test, radiographs), and followed by a 3D-printed try-in to confirm esthetics, occlusion, and phonetics. The final prosthesis was completed with a zirconia overlay.

Results

The digital workflow eliminated the need for verification jigs, photogrammetry, and physical casts. The titanium bar seated passively intraorally, while the 3D-printed try-in ensured esthetic and functional evaluation without conventional wax setups. Treatment time was reduced, efficiency improved, and the patient reported enhanced comfort, mastication, and esthetics. Peri-implant tissues remained healthy at follow-up.

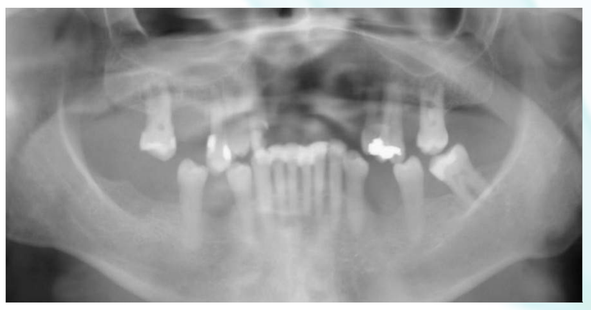
Conclusion

A fully digital, model-free workflow can provide efficient, accurate, and predictable full-arch rehabilitation. This approach streamlines treatment while ensuring passive fit and favorable clinical outcomes, offering significant advantages over conventional protocols.

REFERENCES

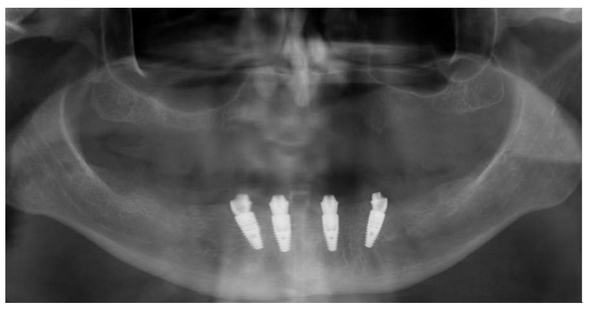
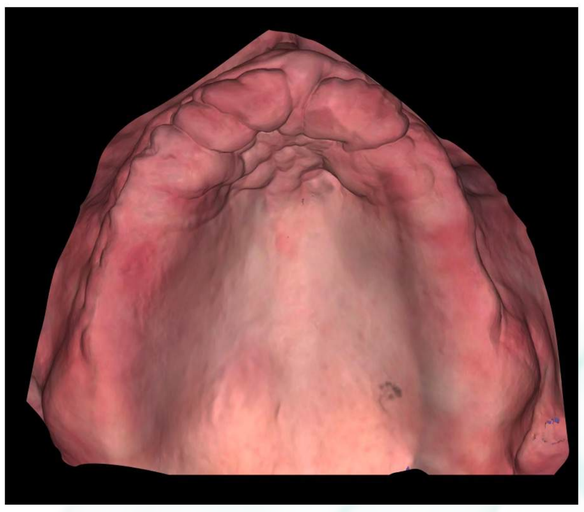
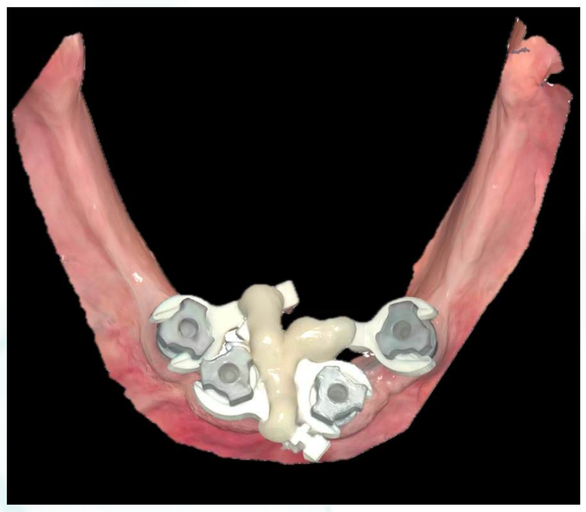
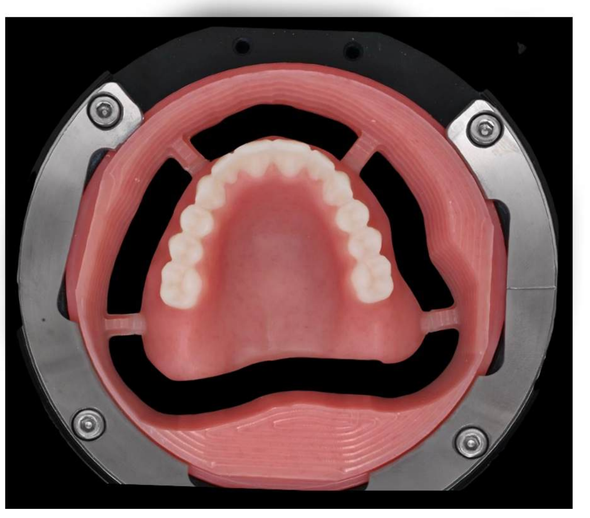
PRE-TREATMENT





TREATMENT







POST-TREATMENT