

Introduction

Traditional pick-up impression for immediate implant-supported interim restoration can be challenging; however, by creating a digital pick-up guide, the process becomes significantly more efficient and precise.

Initial Examination

A 48-year-old man presented to our clinic for implant and fixed restoration for tooth #7. A CBCT and intraoral digital scan were obtained for treatment planning.



Digital Planning

A digital wax-up of #7 was used to plan the provisional crown shell, two implant surgical guides, positional guide, and a #7 hollowed-out maxillary working model. Two surgical guides were designed with pilot (for surgery) and fully guided (for pick-up) sleeve at the same position.



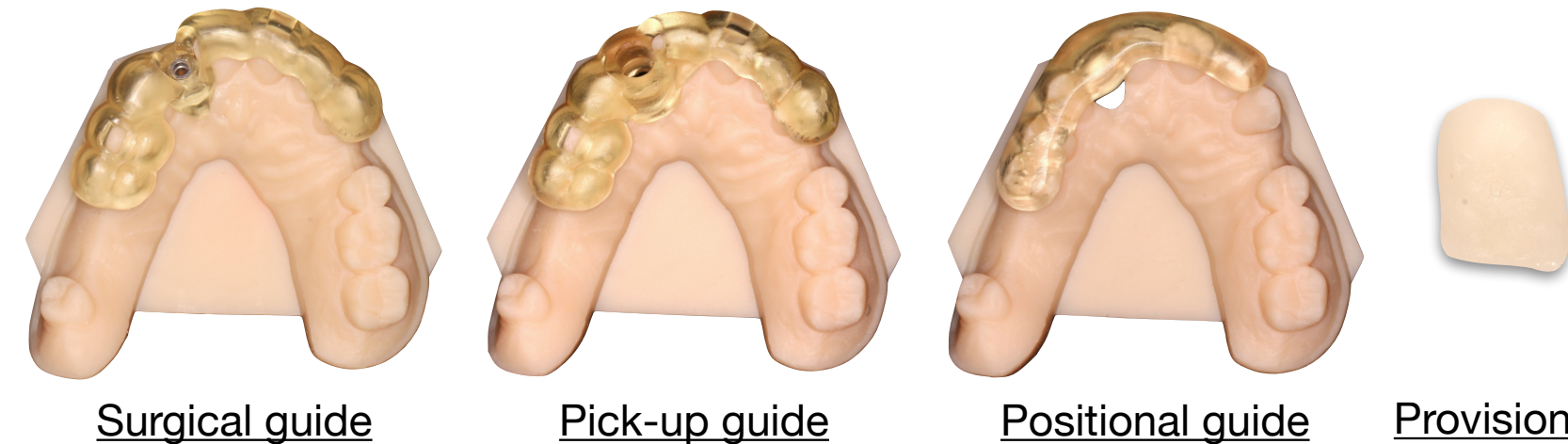
#7 Wax-Up

Surgical Guide

Pick-up Guide

Positional Guide

Computer-aided Manufacturing



Surgical guide

Pick-up guide

Positional guide

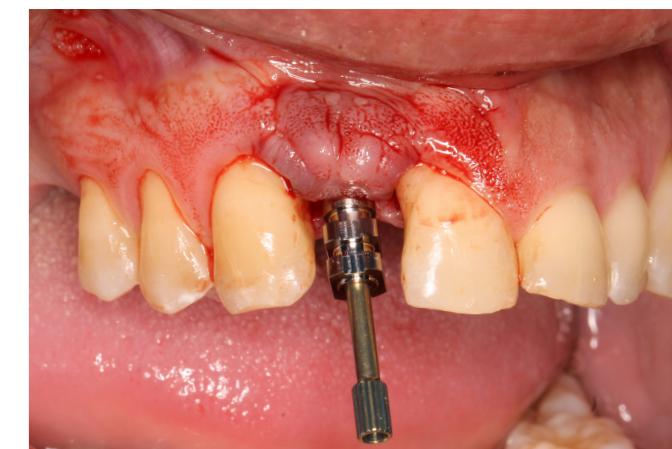
Provisional

Clinical Procedures

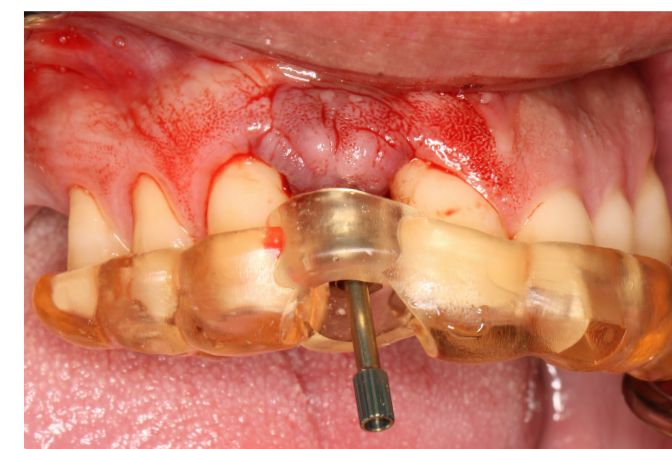
Implant placement was performed with the pilot sleeve surgical guide. The primary stability was achieved with an insertion torque of 45 Ncm. After implant placement, the pick-up guide was used to transfer the implant position onto the maxillary working model.



Implant placement



Impression coping placement



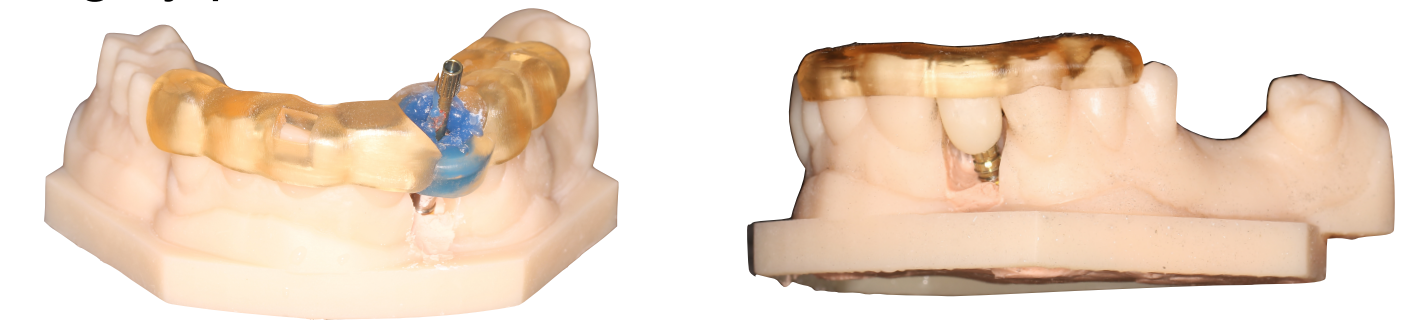
Pick-up guide placement



Implant transfer

Laboratory Procedures

A positional guide was used to stabilize the 3D-printed crown shell in place. The provisional shell was relined with the precisely positioned interim abutment. The screw-retained interim restoration was trimmed, adjusted and thoroughly polished.



Immediate Interim Crown Insertion

Adjustments were made to ensure optimal fit and function.



Conclusion

This technique provides an accurate and efficient method for fabricating immediate implant-supported interim restorations. It minimizes direct contact with surgically exposed hard and soft tissues, thereby reducing the risk of complications and shortening clinical chair time.

Reference

Xie, Chenyang, et al. "A digital workflow for the fabrication of an immediate implant-supported interim restoration." The Journal of Prosthetic Dentistry 131.2 (2024): 180-186.
Hamilton, Adam, et al. "Selection criteria for immediate implant placement and immediate loading for single tooth replacement in the maxillary esthetic zone: A systematic review and meta-analysis." Clinical oral implants research 34 (2023): 304-348.