



Immediate Implant Placement and Immediate Temporary Crown Fixation in the Anterior Maxilla: A Clinical Case Report



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Introduction

Immediate implant placement in the anterior maxilla represents a highly demanding procedure due to functional and aesthetic requirements. Preservation of hard and soft tissue architecture is essential for achieving predictable clinical outcomes. Advances in implant macrodesign and minimally invasive surgical techniques allow immediate rehabilitation while maintaining tissue stability in the aesthetic zone.



Case Description

A 40-year-old female patient presented with a fractured maxillary right central incisor (#11), associated with functional discomfort and aesthetic concerns. Clinical examination revealed a non-restorable tooth. Radiographic evaluation confirmed sufficient bone volume for immediate implant placement. The treatment plan included atraumatic extraction of tooth #11, immediate implant placement, bone augmentation using a SigmaGraft material, and fixation of a single temporary crown on the following day.

Surgical Procedure

Tooth #11 was extracted atraumatically using minimally invasive techniques in order to preserve the alveolar socket and surrounding soft tissues. Immediately after extraction, a dental implant was placed into the fresh extraction socket, achieving adequate primary stability.

Bone augmentation was performed using a SigmaGraft material to fill minor peri-implant gaps and support long-term bone stability. No autogenous bone was harvested. The surgical site was managed carefully to maintain optimal soft tissue contours.





Temporary Crown Fixation

On the day following surgery, a single temporary crown was fabricated and fixed. The provisional restoration was designed to support peri-implant soft tissues and maintain a natural emergence profile, while remaining free of occlusal contacts to avoid functional overload of the implant.

The patient reported excellent comfort and immediate aesthetic satisfaction.



Discussion

Immediate implant placement in the aesthetic zone requires precise surgical technique, careful case selection, and sufficient primary stability. In this case, atraumatic extraction combined with controlled bone augmentation allowed for favorable early soft tissue healing.

Delayed fixation of the temporary crown on the following day provided additional control over soft tissue management while maintaining implant stability.

Conclusion

Immediate implant placement followed by next-day fixation of a single temporary crown in the anterior maxilla resulted in:

- Stable primary implant fixation
- Preservation of hard and soft tissue contours
- Favorable early healing and aesthetic outcome

This minimally invasive approach proved to be a predictable and effective solution for single-tooth replacement in the aesthetic zone.

