



Vestibular Approach to Facial Defect Augmentation and Immediate Implant Placement in the Maxillary Esthetic Zone: A Case Report

Shelby Maurice DMD, Mohanad Al-Sabbagh DDS, MS

Division of Periodontology - University of Kentucky, College of Dentistry, Lexington, KY, USA

BACKGROUND

Dental implant therapy in the maxillary esthetic zone is a complicated endeavor, made even more so in cases with a compromised extraction socket. Multiple surgical interventions, while often structurally necessary, can lead to esthetic challenges, including soft tissue recession and clinical attachment loss, and increases the incidence of complications with each intervention.

OBJECTIVE

As an alternative to conventional staged augmentation, patients with compromised extraction sites can be treated with a vestibular approach involving immediate implant placement and hard tissue augmentation with particulate bone graft stabilized with a demineralized cortical allograft bone sheet.

Vestibular Approach to Facial Defect Augmentation and Immediate Implant Placement in the Maxillary Esthetic Zone: A Case Report

Shelby Maurice DMD, Mohanad Al-Sabbagh DDS, MS

Division of Periodontology - University of Kentucky, College of Dentistry, Lexington, KY, USA



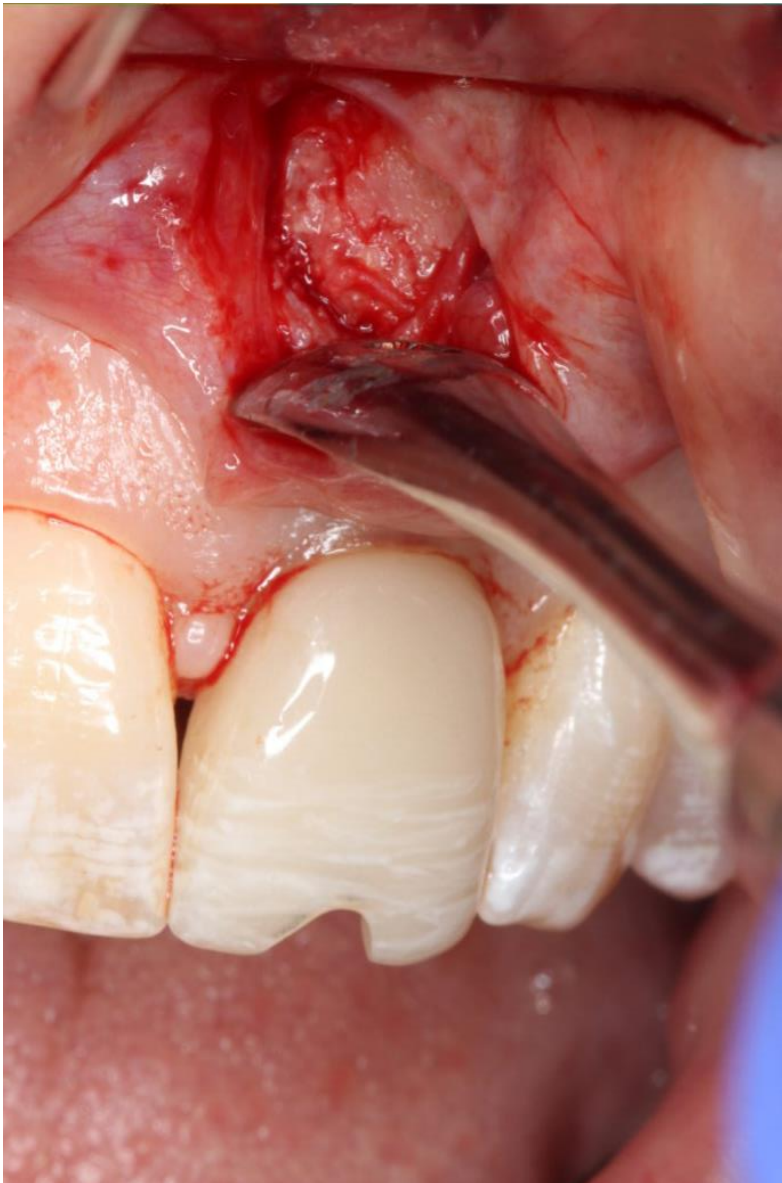
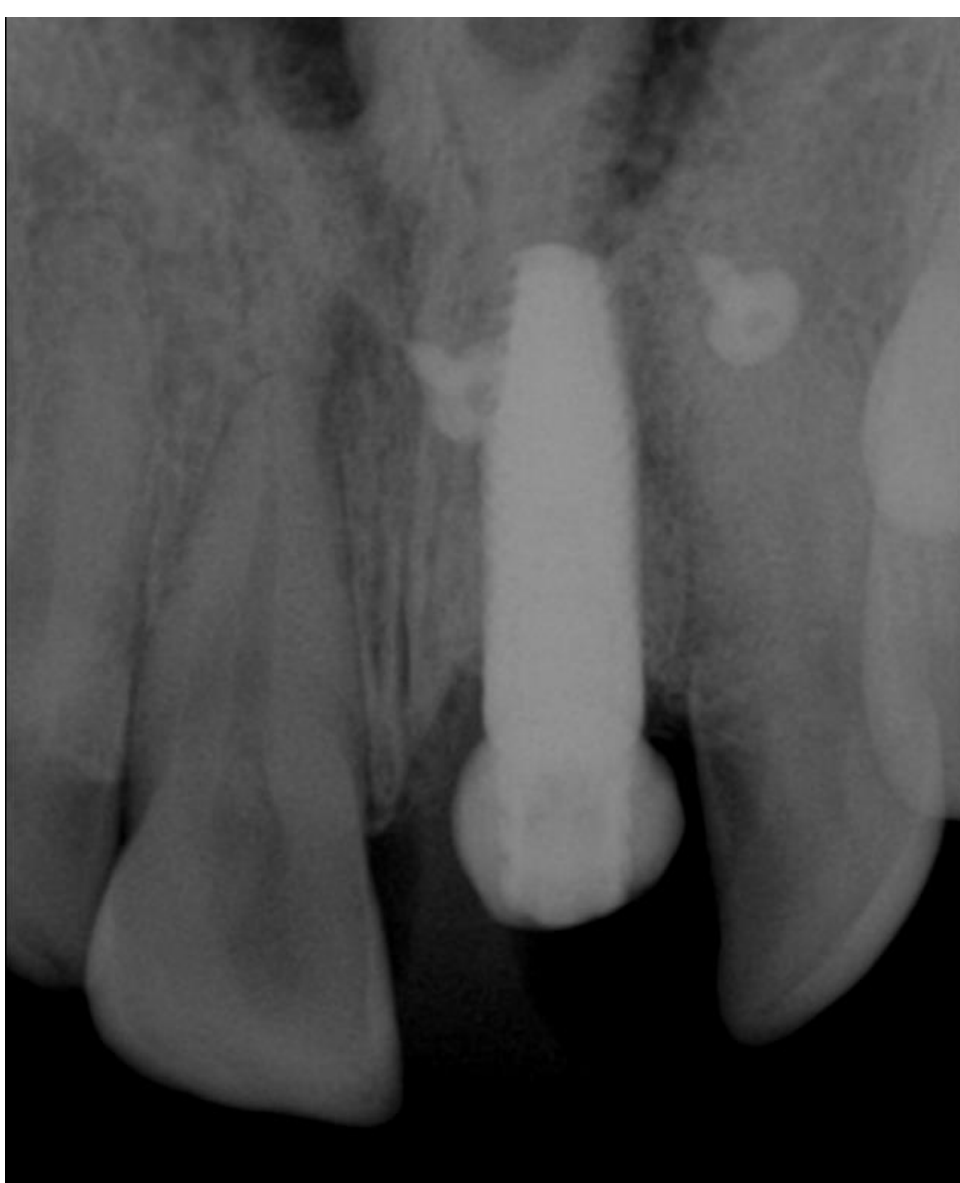
Clinical Case

- 48-year-old healthy female patient
- Asymptomatic
- Normal clinical and periodontal exam
- CBCT: #9 – large periapical lesion, fracture
- High lip line.
- Patient informed that:
 - tooth is non-salvageable
 - gum and bone recession following surgery may lead to non-ideal esthetic result.
- Patient acknowledge and consented to procedure.



Results

Adequate facial bone was noted during vestibular approach for soft tissue augmentation with CTG at 8 mo. follow up.

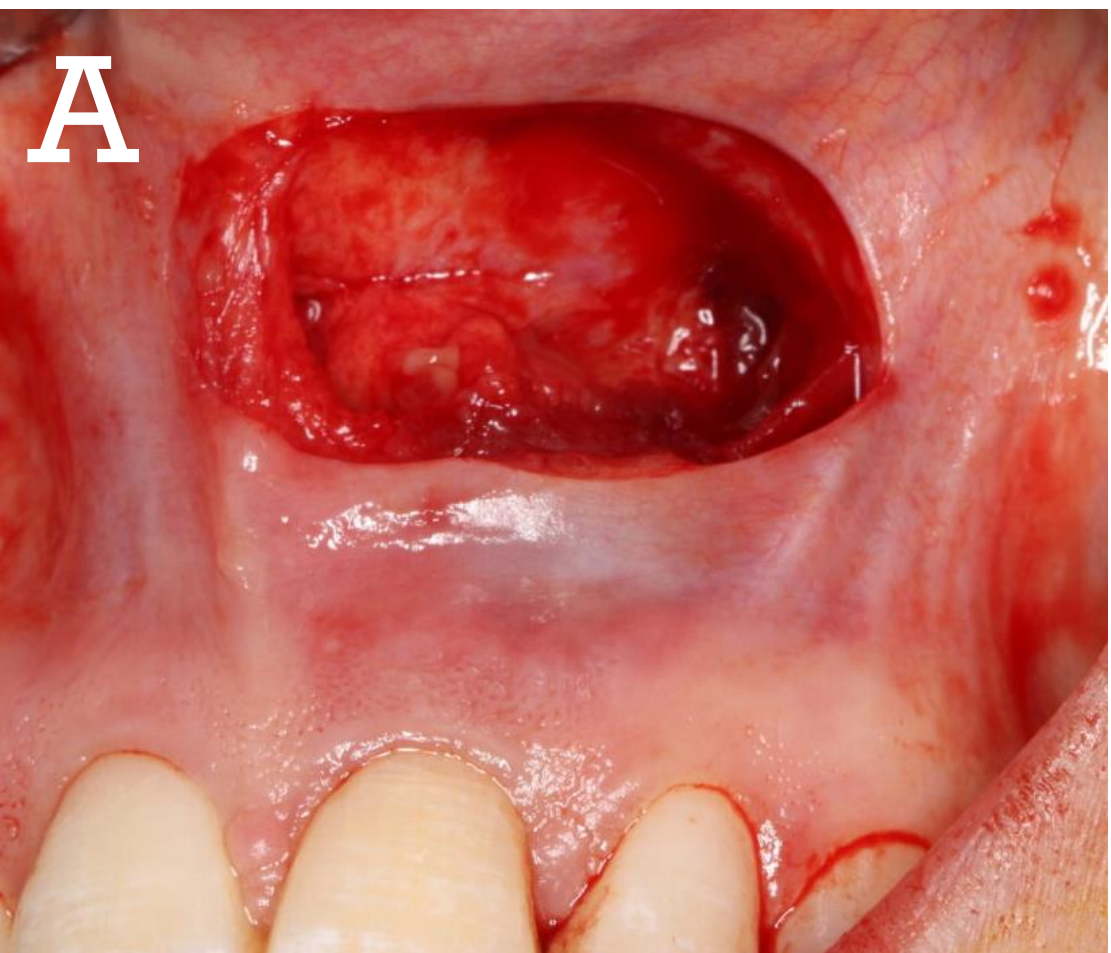
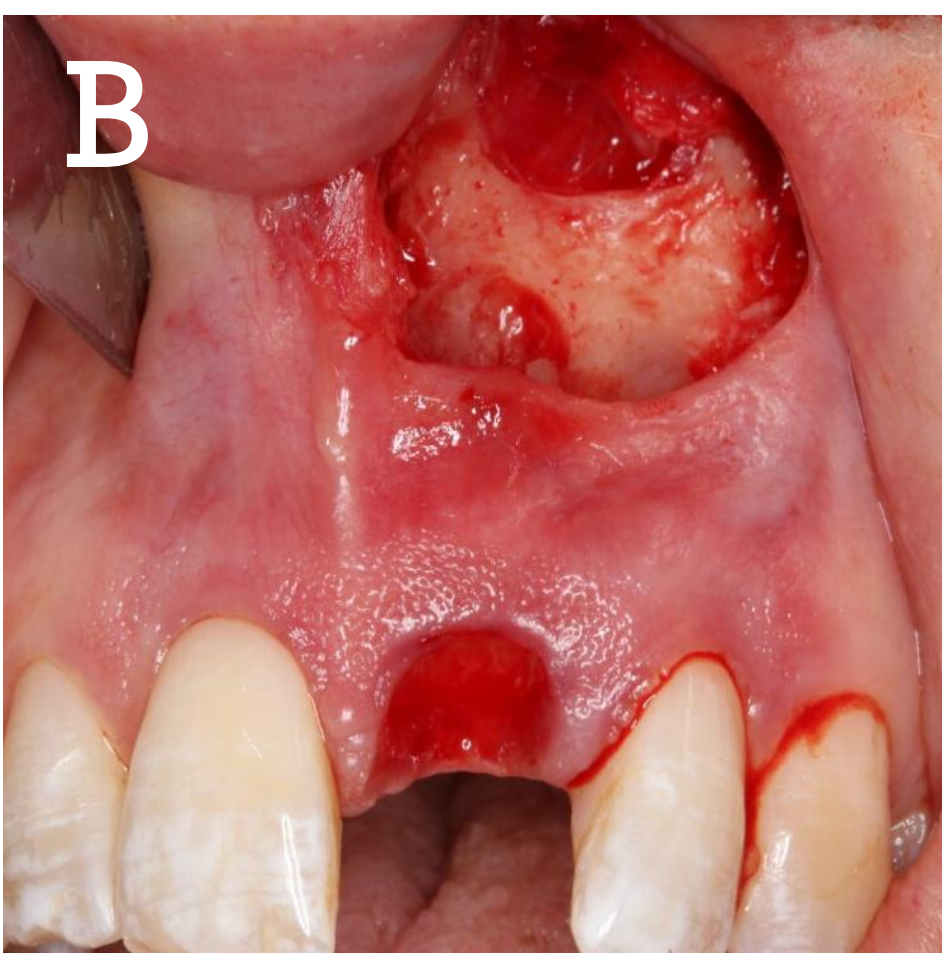
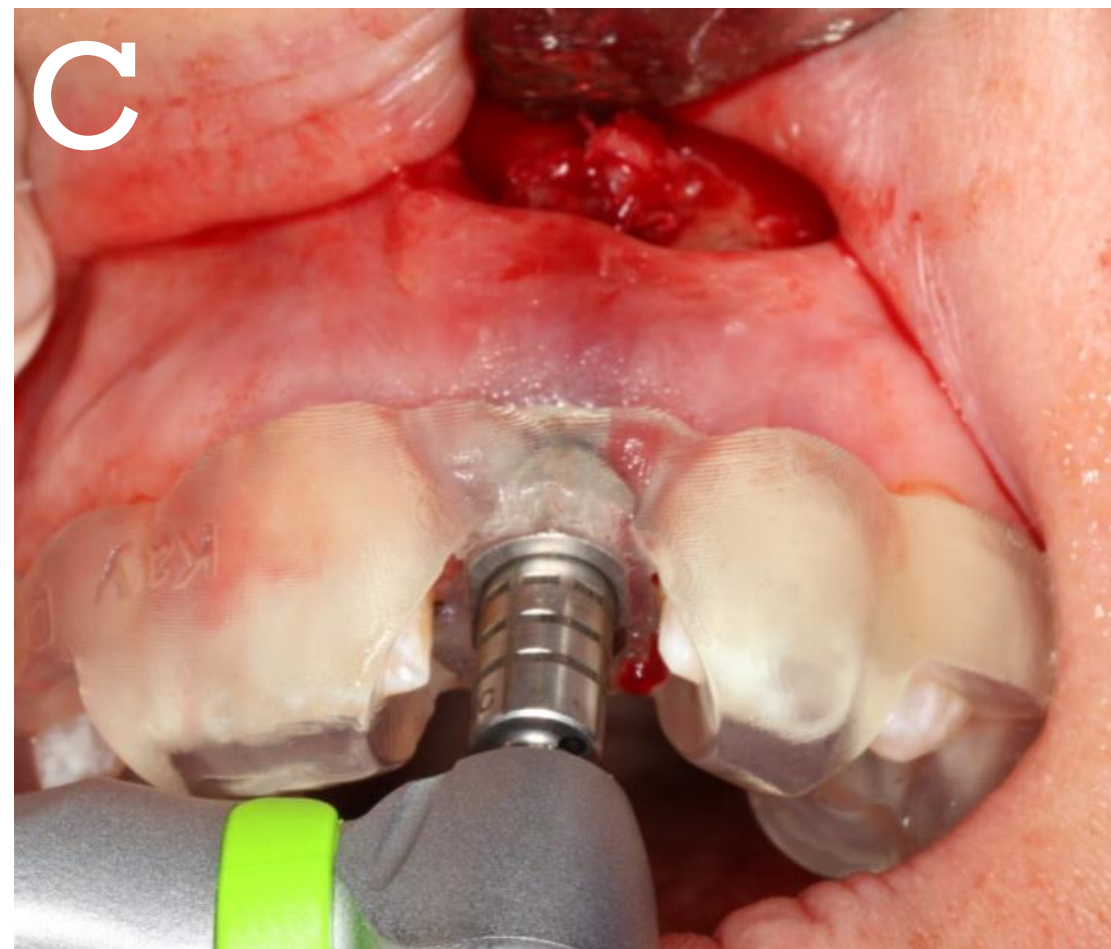
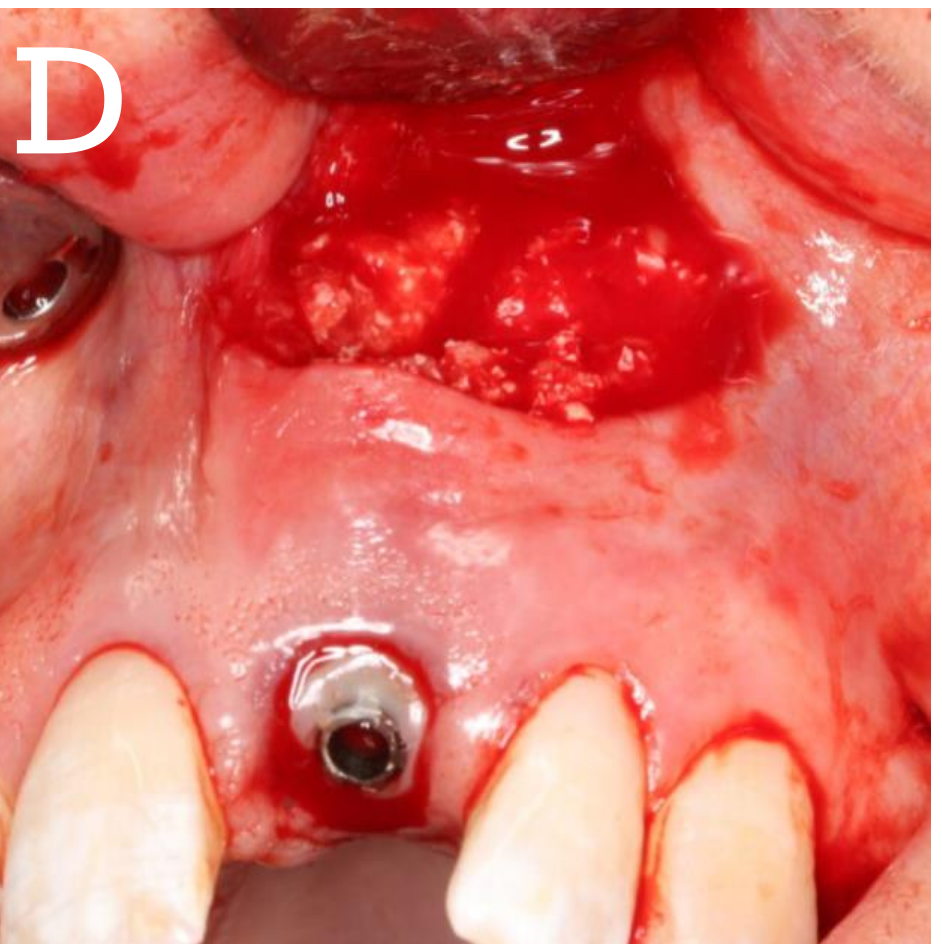
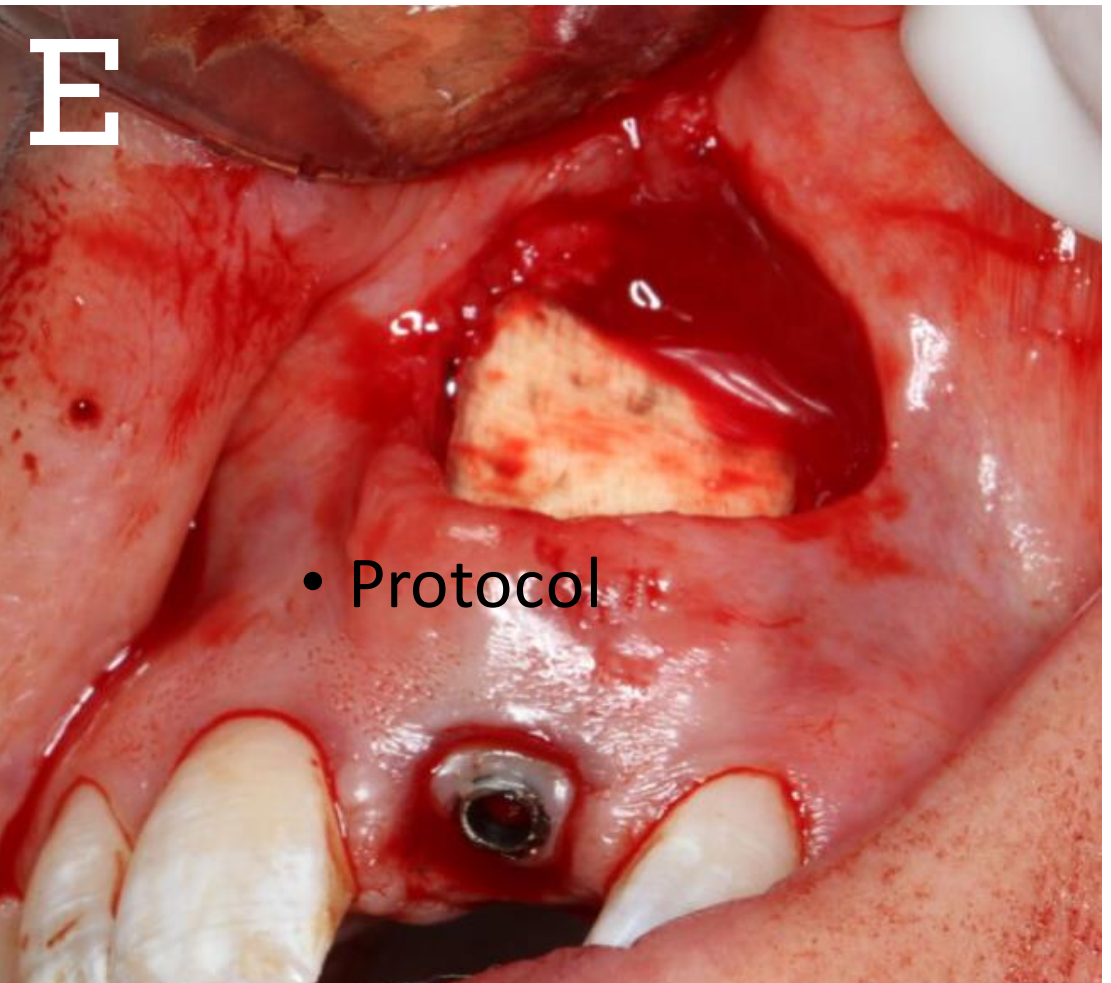
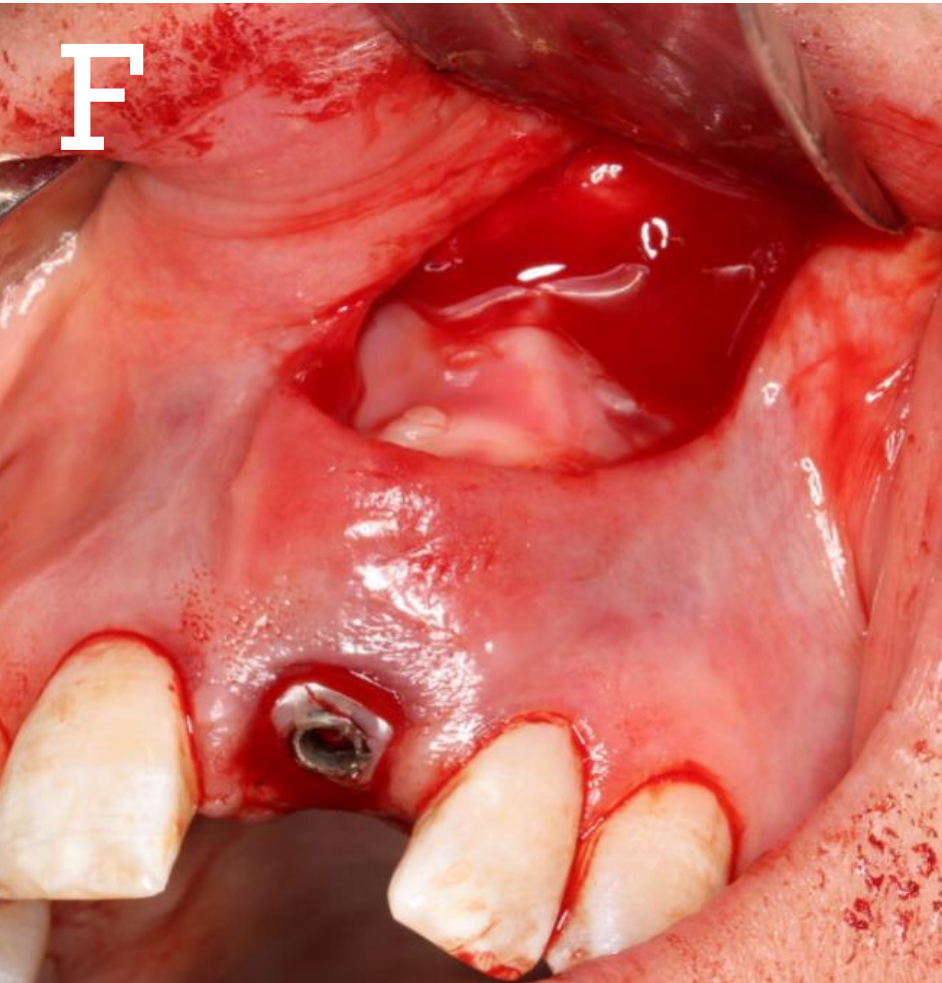
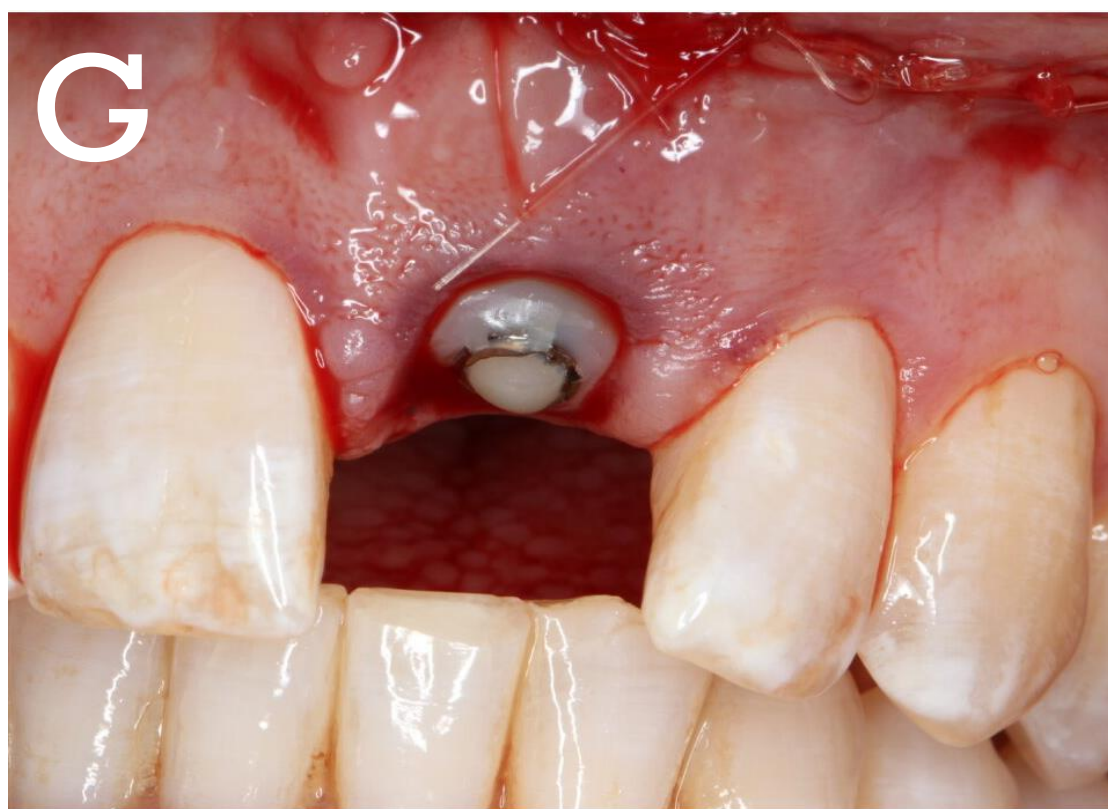
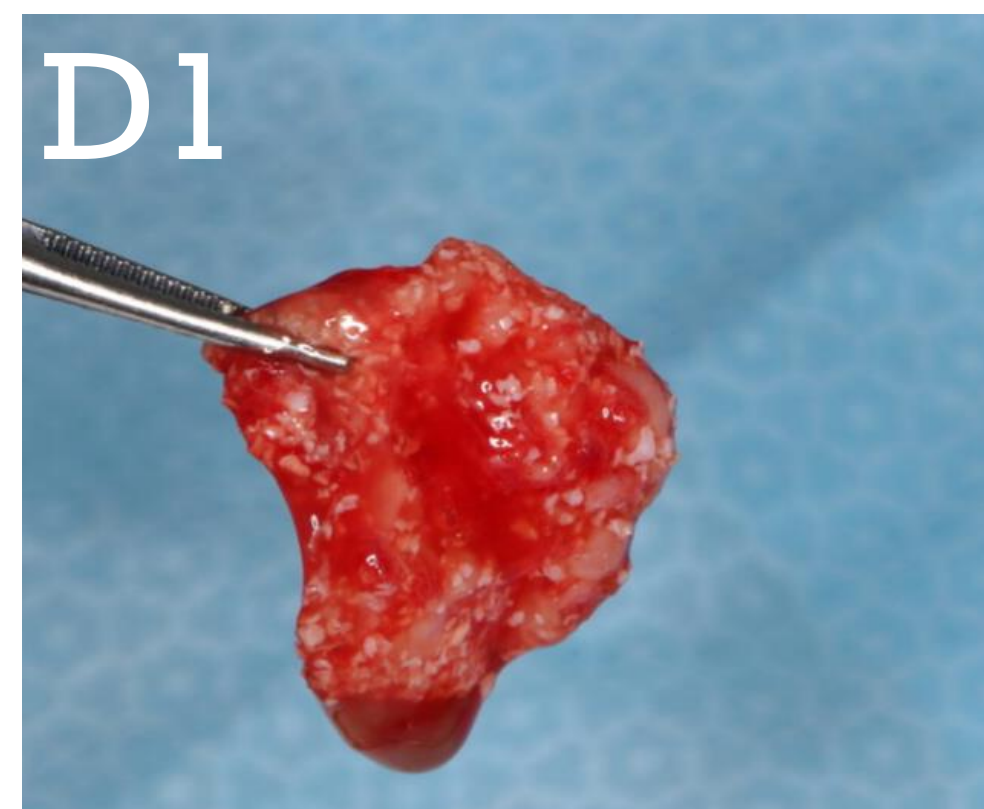
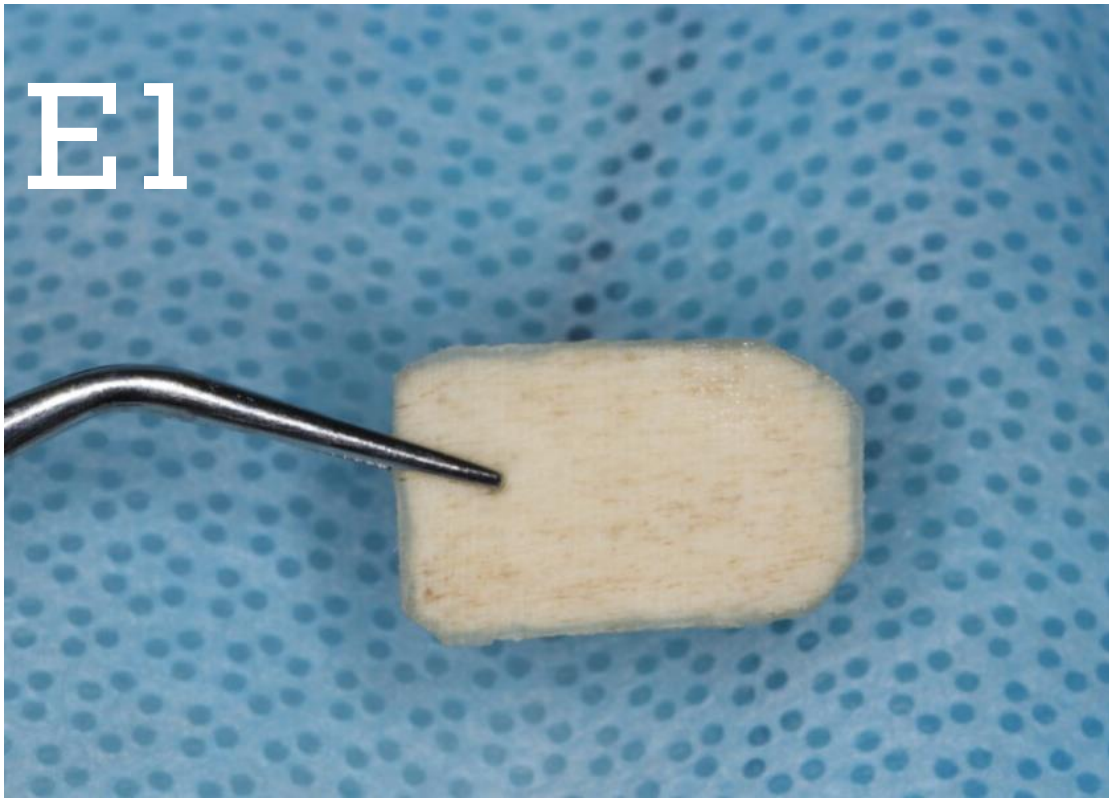


Conclusion

This approach demonstrated good outcomes and a decrease in number of surgeries needed in a case with a compromised extraction site in the maxillary esthetic zone.

Methods

1. A single incision in the vestibule (A)
 - Facilitates hard and soft tissue augmentation
 - Eliminates crestal bone exposure and papilla elevation
 - Minimally invasive flap manipulation leads to less soft tissue compared to the staged approach
2. Atraumatic extraction and socket debridement (B)
3. Immediate implant placement (C)
4. Bone grafting of a facial defect (D)
 - Sticky bone - autogenous and xenograft (D,D1)
 - Thin, pliable bone shield secured with pins (E,E1)
 - L-PRF membranes (F)
5. Placement of custom metal healing abutment (G)
6. Immediate post-operative radiograph (H)



Vestibular Approach to Facial Defect Augmentation and Immediate Implant Placement in the Maxillary Esthetic Zone: A Case Report

Shelby Maurice DMD, Mohanad Al-Sabbagh DDS, MS

Division of Periodontology - University of Kentucky, College of Dentistry, Lexington, KY, USA



References

- Elaskary, Abdelsalam et al. “Immediate Implant Placement in Intact Fresh Extraction Sockets Using Vestibular Socket Therapy Versus Partial Extraction Therapy in the Esthetic Zone: A Randomized Clinical Trial.” *The International journal of oral and maxillofacial implants* 38.3 (2023): 468–478. Web.
- ElAskary A, Elfana A, Meabed M, Abd-ElWahab Radi I, Akram M, Fawzy El-Sayed K. Immediate implant placement utilizing vestibular socket therapy versus early implant placement with contour augmentation for rehabilitation of compromised extraction sockets in the esthetic zone: A randomized controlled clinical trial. Clin Implant Dent Relat Res. 2022 Oct;24(5):559-568. doi: 10.1111/cid.13120. Epub 2022 Jul 10. PMID: 35811090.
- Elaskary A, Gaweesh YY, El Tantawi M, Maebed MA. Vestibular Socket Therapy: A Novel Approach for Implant Placement in Defective Fresh Extraction Sockets With or Without Active Socket Infection (One-Arm Cohort Study). Int J Oral Maxillofac Implants. 2021 Jan-Feb;36(1):146-153. doi: 10.11607/jomi.8732. PMID: 33600536.