



Rescuing a Failed Implant Site in The Esthetic Zone with Hard and Soft Tissue Augmentation

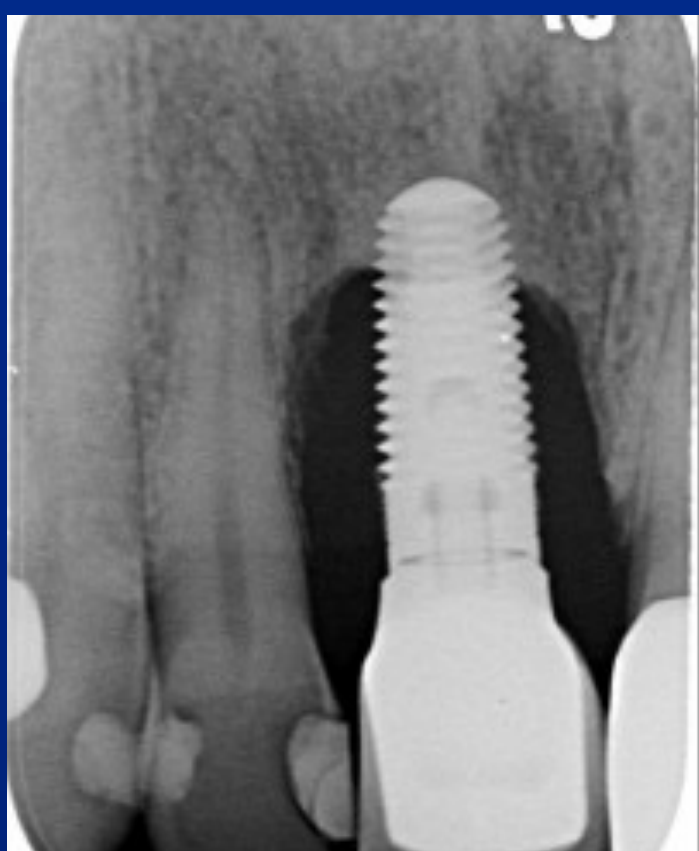


JULIA MAINELLI, DMD, AVINASH S. BIDRA, BDS, MS, FACP

UNIVERSITY OF CONNECTICUT SCHOOL OF DENTAL MEDICINE, POST-GRADUATE PROSTHODONTICS, FARMINGTON, CT

INTRODUCTION

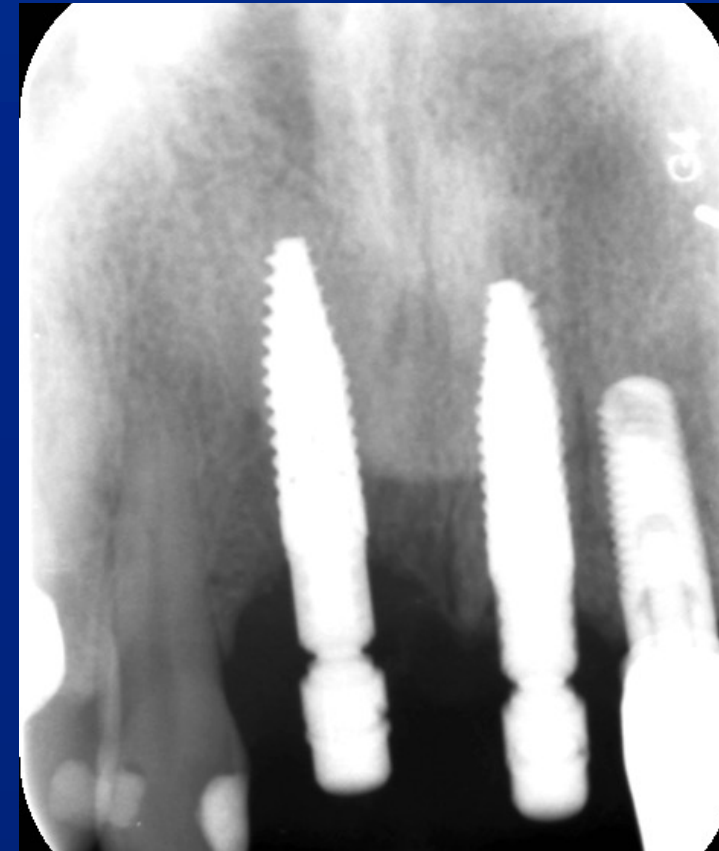
- Implant failure in the esthetic zone presents significant functional, biological, and cosmetic challenges
- Patients with vertical and horizontal deficiencies require correct diagnosis and often a staged approach to improve outcomes¹
- Subcrestal implant placement can significantly reduce crestal bone loss, while the use of a tall healing abutment as a tenting pole can significantly increase soft tissue thickness^{2,3}
- This presentation highlights a comprehensive approach to rehabilitating a severely compromised site in the anterior maxilla following implant failure with sequential tissue augmentation



1/16/24
From outside provider
Failing #8 implant



3/18/25
Initial presentation
Explanted #8, extracted #9



5/6/25
Implant replacement #8
Implant placement #9

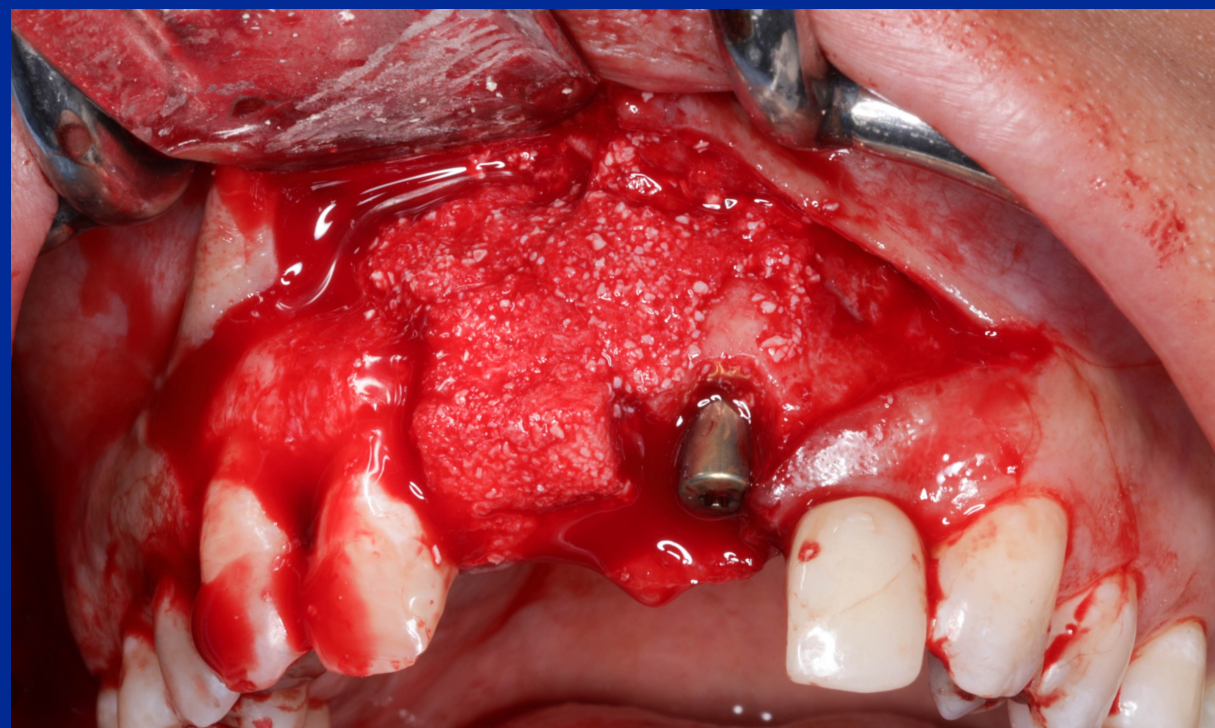
CASE DESCRIPTION

- 37 year old patient presented with extensive horizontal and vertical ridge deficiencies after explantation of failed implant at site #8 and extraction of adjacent tooth #9
- At the time of subsequent implant placement, guided bone regeneration was performed and tall healing abutments were placed using a tent-pole concept to support the soft tissue volume
- 12 weeks later, a secondary procedure utilizing a collagen matrix was performed to enhance the peri-implant mucosa and the patient was provisionalized with a fixed interim prosthesis

SURGICAL TECHNIQUE



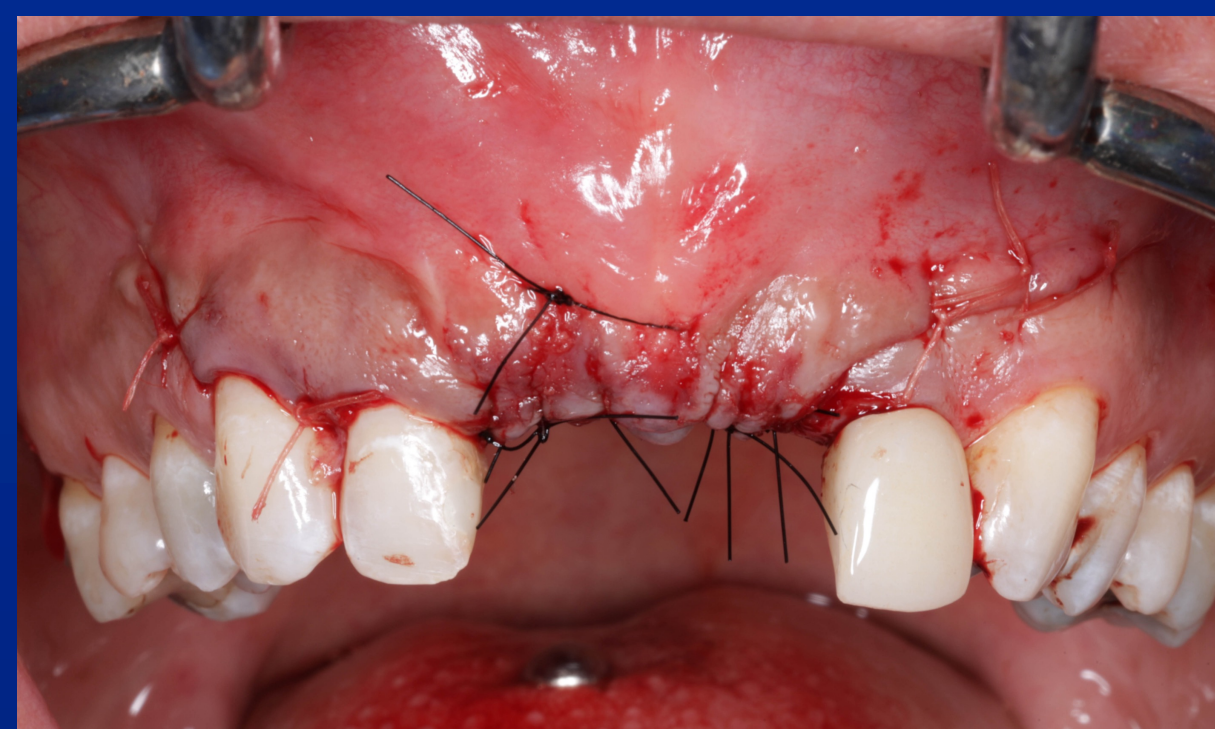
1: Adequate incision and implant placement guided by prosthetic plan and available bone



2: 6mm healing abutments placed and contour grafting with xenograft



3: Resorbable collagen membrane covering grafting and healing abutments



4: Tension free closure with a horizontal mattress and simple interrupted sutures



5: Partial thickness flap raised after 3-month healing period



6: Placement of a resorbable collagen matrix trimmed to size of area to be inserted

CONCLUSIONS

- Combined hard and soft tissue augmentation can be utilized in managing compromised implant sites in the esthetic zone
- Tall healing abutments using a tent-pole concept promote soft tissue support and allow for future contouring using optimal provisional restorations
- Proper flap design, periosteal release, tall healing abutments and appropriate choice of biomaterials are the main keys to treatment success

CASE PRESENTATION



Initial presentation with vertical and horizontal defects



3 week healing post implant surgery and hard tissue augmentation



Provisional delivery at time of soft tissue augmentation



Initial vs new provisional delivery [Treatment in progress*]

REFERENCES

1. Palacci, P. and Nowzari, H. (2008), Soft tissue enhancement around dental implants. *Periodontology* 2000, 47: 113-132.
2. Verardi, S., Orsini, M., Lombardi, T., Ausenda, F., Testori, T., Pulici, A., Oreglia, F., Valente, N. A., & Stacchi, C. (2020). Comparison between two different techniques for peri-implant soft tissue augmentation: Porcine dermal matrix graft versus tenting screw. *Journal of periodontology*, 91(8), 1011-1017.
3. Linkevicius, T., Puisys, A., Linkevicius, R., Alkimavicius, J., Gineviciute, E., & Linkeviciene, L. (2020). The influence of submerged healing abutment or subcrestal implant placement on soft tissue thickness and crestal bone stability. A 2-year randomized clinical trial. *Clinical implant dentistry and related research*, 22(4), 497-506.