

Restoration of the Partially Edentulous Posterior Mandible with Tissue Level Implants: A Case Report



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Background

The rehabilitation of partially or fully edentulous patients with dental implants has become a routine method of treatment in the last decades, with reliable long-term results. Currently, we have the option of using either tissue- or bone-level implants for these purposes. Traditional tissue-level implants are placed in a single-stage manner thereby decreasing the overall treatment time required for restoration of edentulous posterior areas. Another advantage of tissue-level implants relative to those placed equicrestally, is that the implant-to-abutment microgap is moved away from the bone crest. As a result, microbial contamination of the microgap is less likely to lead to inflammatory-mediated crestal bone resorption. However, with use of tissue-level implants, there is potential for gingival recession, resulting in exposure of the implant collar. This case report describes the use of tissue-level implants to restore the edentulous posterior mandible and demonstrates the exceptional esthetic outcome that was achieved.

Case Report

A 61 year-old female presented to the University of Pennsylvania School of Dental Medicine Department of Periodontics with a chief complaint: “I need implants”. The patient was missing #'s 18 and 19. Her medical history was non-contributory. Since the patient desired a fixed restoration to replace the missing teeth, she was treatment planned for an implant-supported crown in the position of #19. A cone beam computed tomographic scan revealed adequate bone height and width to place an implant at site #19. A mid-crestal incision was made in the edentulous area and sulcular incisions around the teeth anterior to the site. Full-thickness mucoperiosteal flaps, were elevated to expose the edentulous ridge. An osteotomy was prepared for placement of a 4.8 x 8 mm Straumann Tissue Level implant. The site was irrigated and the implant was inserted at 45 Ncm achieving adequate primary stability, followed by placement of a coverscrew. The flaps were coapted around the implant platform and post-surgical instructions were reviewed including prescriptions for Amoxicillin (500 mg tid or one week, Ibuprofen (600 mg q6-8h prn for pain), and 0.12% chlorhexidine mouthwash. The patient was seen two and eight weeks after the surgery and the exam was noted as healing without complications (figure 1).

Results

Patient returned for regular maintenance during healing. At four months, a new radiograph and CBCT revealed adequate osseointegration and delivery of final prostheses. The soft tissue profile and radiographic bone level around the implant was stable and well maintained when compared to immediate post-placement. Clinically, the tissues appeared healthy with an overall pleasing esthetic result.

Conclusion

With reliable long-term results, tissue-level implants are reliable, safe, and a predictable way to address an edentulous area, given that the surgical procedure is performed on a good quality soft tissue.

Case

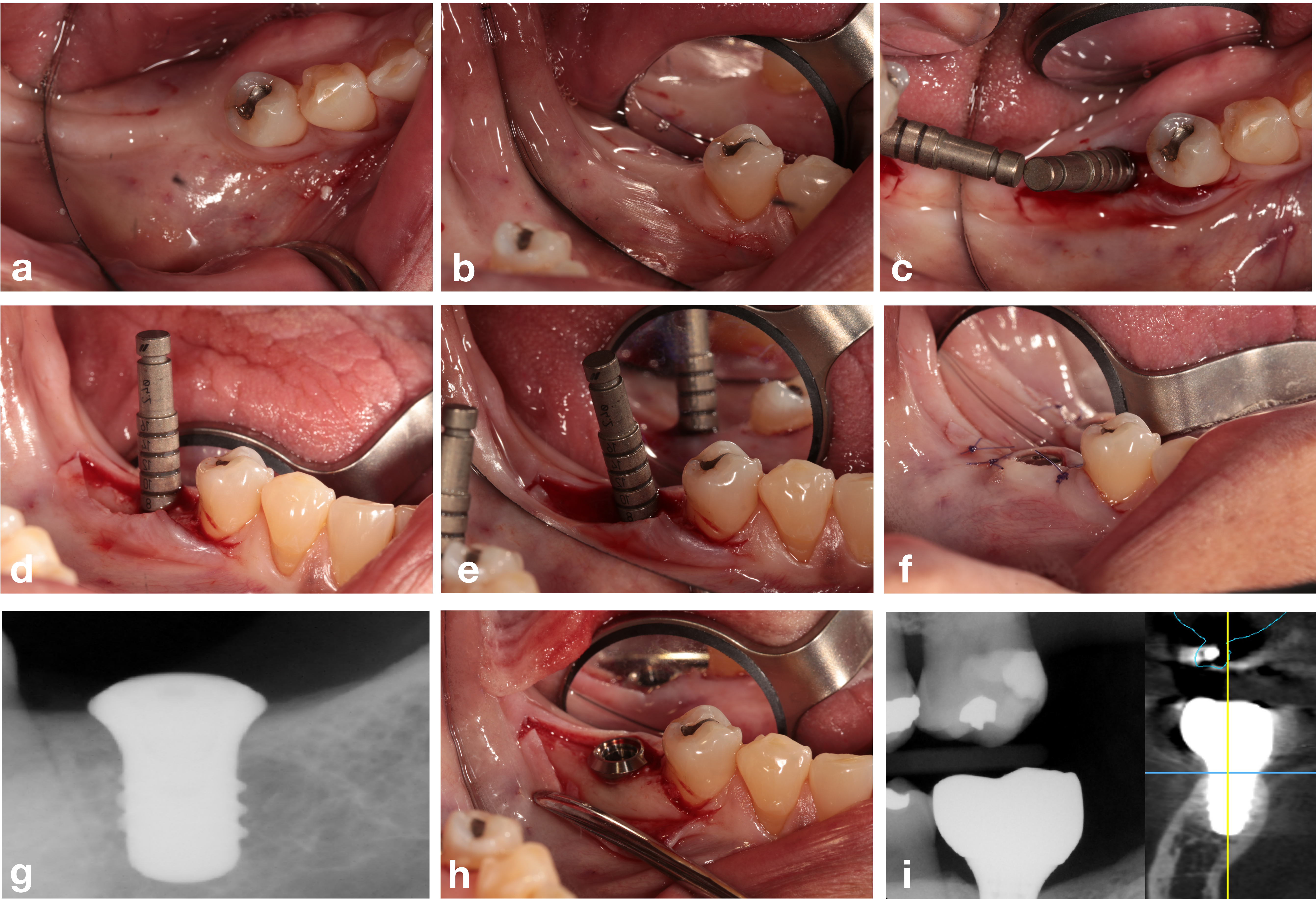


Figure 1: (a) (b) Pre-operative view (c) Implant placement – occlusal view (d) Implant placement – buccal view (e) Implant placement – lingual view (f) Suturing (g) Immediate post implant placement (h) Eight-month follow up radiograph and CBCT

