



Volumetric alterations around single-tooth implants using the socket-shield technique: preliminary results of a prospective case series

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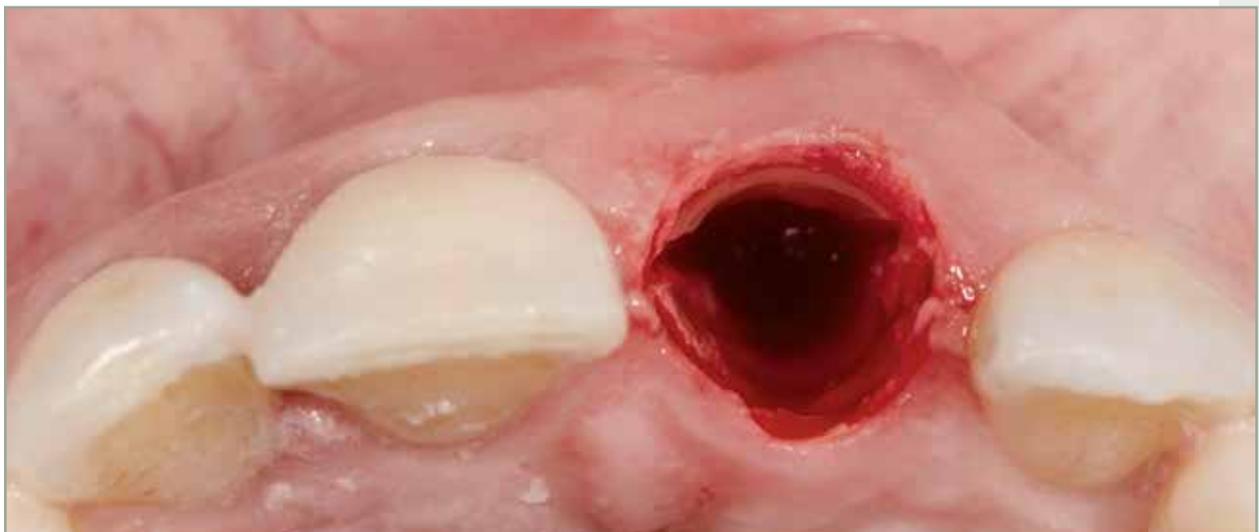
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Abstract

Objective: To demonstrate in a prospective cohort study that immediate implantation and provisionalization in combination with the socket-shield technique will result in volume stability of the mucosa adherent to the inserted implant.

Material and methods: Patients with an indication for a single tooth implant underwent application of the socket-shield technique and immediate implantation of a provisional implant crown. A non-invasive volumetric measurement was performed according to the method described by Windisch et al (2007) at baseline and 12 weeks later. The influence of potential confounders was evaluated. Patients rated their satisfaction with the treatment, fitting accuracy of implant, intraoperative discomfort, postoperative pain, and ability to chew soft and hard foods using visual analog scales.

Results: Fifteen patients with a mean age of 49.2 ± 11.9 years were enrolled in the study. All implant sites showed uneventful healing and no socket-shield exposures were observed. The soft tissue volume change assessed with the mean distance change was < 0.5 mm in all cases (-0.07 ± 0.16 ; range -0.37 to $+0.32$). A slight but significant influence of the buccal bone plate width on the soft tissue volume change was observed ($\beta = 0.25$; $P = 0.037$). No influence was found for apical bone height, width of gingival tissue, buccal recession or probing depths. The patients were highly satisfied with their treatment as well as with the pain and functional outcomes.

Conclusions: Based on preliminary data, preservation of a buccal root segment in conjunction with immediate implant placement and provisionalization can minimize buccal contour changes after tooth extraction on a short-term basis. (*Int J Esthet Dent* 2018;13:2–26)

