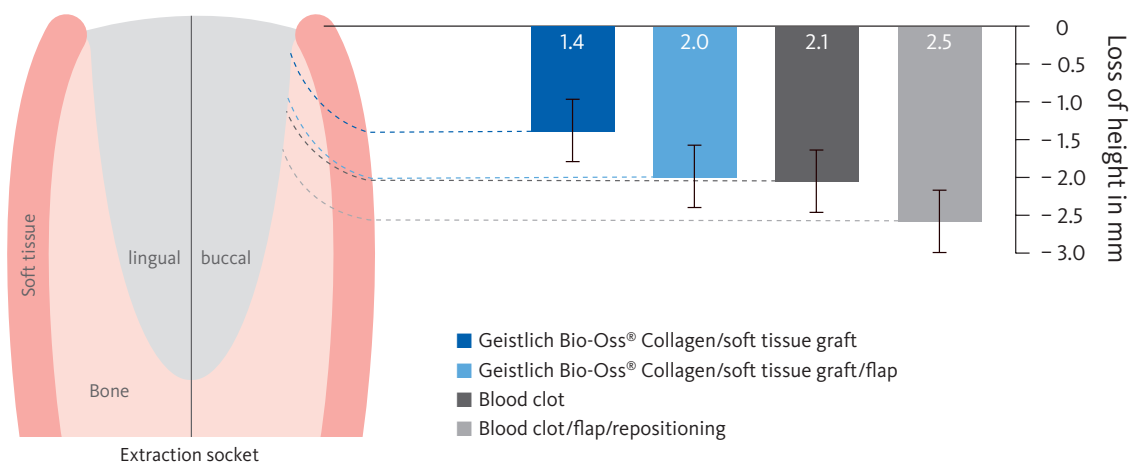


Post extraction volume preservation thanks to biofunctional Geistlich Bio-Oss® Collagen

Excerpt from Fickl S., Zuhr O., Wachtel H., Bolz W., Huerzeler M. Tissue alterations after tooth extraction with and without surgical trauma: a volumetric study in the beagle dog. J. Clin. Periodontol. 2008 Apr; 35(4): 356-63.

Results

Buccal loss of tissue 4 months after tooth extraction



Least loss of volume with Geistlich Bio-Oss® Collagen

Study design

Animal study on 5 dogs (beagle dogs)

Volumetric analysis of the ground specimens 2 and 4 months after extraction

Comparison of 4 different treatment methods of extraction sockets (first P1 and second P2 premolar)

- Group 1: Spontaneous healing with blood clot
- Group 2: Spontaneous healing with blood clot and mucoperiosteal flap
- Group 3: Socket preservation with Geistlich Bio-Oss® Collagen and palatinal-gingival soft tissue graft
- Group 4: Socket preservation with Geistlich Bio-Oss® Collagen, palatinal-gingival soft tissue graft and mucoperiosteal flap

Outcome

Without mucoperiosteal flap (flapless) significantly lower resorption rates are achieved, both with and without augmentation.

- up to 0.7 mm more tissue and bone preservation without mucoperiosteal flap (flapless)
- less volume loss of the alveolar structures in the coronal-buccal region, when the extraction sockets are treated with Geistlich Bio-Oss® Collagen and a gingival soft tissue graft

Order

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Tissue alterations after tooth extraction with and without surgical trauma: a volumetric study in the beagle dog

Fickl S., Zuhr O., Wachtel H., Bolz W., Huerzeler M. Tissue alterations after tooth extraction with and without surgical trauma: a volumetric study in the beagle dog. J. Clin. Periodontol. 2008 Apr; 35(4): 356-63.

Abstract

Objectives: The aim of this study is to evaluate whether tooth extraction without the elevation of a muco-periosteal flap has advantageous effects on the resorption rate after tooth extraction.

Material and Methods: In five beagle dogs polyether impressions were taken before the surgery. The roots of the first and second pre-molars (P1 and P2) were extracted and the sites were assigned to one of the following treatments: treatment group (Tx) 1, no treatment; Tx 2, surgical trauma (flap elevation and repositioning); Tx 3, the extraction socket was filled with Bio-Oss Collagen® and closed with a free soft-tissue graft; Tx 4, after flap elevation and repositioning, the extraction socket was treated with Bio-Oss Collagen® and a free soft-tissue graft. Impressions were taken 2 and 4 months after surgery. The casts were scanned, matched together with baseline casts and evaluated with digital image analysis.

Results: The “flapless groups” demonstrated significant lower resorption rates both when using socket-preservation techniques and without. Furthermore, socket preservation techniques yielded better results compared with not treating the socket.

Conclusion: The results demonstrate that leaving the periosteum in place decreases the resorption rate of the extraction socket. Furthermore, the treatment of the extraction socket with Bio-Oss Collagen® and a free gingival graft seems beneficial in limiting the resorption process after tooth extraction.