Localized ridge augmentation using titanium micro mesh.


ABSTRACT.
Guided bone regeneration (GBR) has been used recently for the regeneration of bone in conjunction with the placement of dental implants, for augmentation of resorbed alveolar crests, and to treat localized ridge deformities. Twenty-two patients with alveolar crest defects or peri-implant dehiscences participated in this study. Titanium implants (Bone System, Italy) were inserted, and the defects were covered with a titanium micromesh (Bone System, Italy), above which was positioned an e-PTFE membrane. After healing, the 2 membranes were removed and a small specimen of the underlying tissues was retrieved with a small trephine. The postoperative healing was mostly uneventful, and only a few dehiscences with membrane exposure were observed. The space under the membranes was, in all patients, filled by a tissue with the macroscopic features of newly formed bone. No residual bone defects were observed and an increase of the alveolar width or height was observed. No untoward effects on bone regeneration were observed in the cases with membrane exposure. Histology showed that the underlying regenerated tissues were composed, in all cases, by newly formed bone. In conclusion, our results show that very satisfactory results concerning GBR techniques can be obtained even without the use of grafts under barrier membranes.