

Alveolar ridge augmentation using xenogenic bone graft and resorbable membrane

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INTRODUCTION Bone resorption follows tooth loss and occurs in all three dimensions. Especially in the anterior region of the alveolar ridge, it can be a significant problem. Nevertheless, bone has a significant ability for regeneration due to the dynamic balance of osteoblastic and osteoclastic activity. Therefore, many different biomaterials and procedures are being used in bone augmentation with the aim to restore lost tissue and function.

CASE REPORT Male patient, the age of 22, lost a crown of upper right canine due to extensive caries and developed a periapical cyst. Cone beam computed tomography (CBCT) showed a considerable bone loss with a loss of buccal corticalis. After root extraction and debridement, a mucoperiosteal flap was raised buccally and the defect was filled with xenogenic bone substitute (Cerabone, Botiss GmbH). Resorbable membrane (Jason membrane, Botiss GmbH) was placed on top of the defect securing the bone substitute in place. A mucoperiosteal flap was secured with 5-0 sutures. Following the six months of healing, control CBCT was done to assess density of the newly formed bone. The dental implant was placed at the site of augmentation and still needs to undergo a full osseointegration process, after which the patient will be provided with a definite prosthetic crown.

CONCLUSION This case emphasizes augmentation of the alveolar ridge using xenogenic bone substitute and resorbable membrane as a goal to restore patients function and aesthetics, and to prevent further complications that follow tooth loss.