Posterior horizontal augmentation in a knife edge ridge utilizing the “sausage” technique. Case report

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Objective
Horizontally augmentation of a deficient lower posterior ridge (knife edge) using a combination of anorganic bovine bone matrix (DBBM) with autogenous bone and native collagen membrane in order to prepare the site for future implant placement.

Materials and Methods
60 years old male missing teeth 35,36 and 37 for more than 20 years. CBCT scan showed good height but only 3 mms width contraindicating implant placement. Procedure included full thickness flap, isolation of mental foramen, cortical perforation for angiogenesis, autogenous bone scraped from external oblique ridge combined with DBBM (Bio-Oss®) 1:1 ratio. Stabilization of bone graft was performed using a porcine natural collagen membrane (Bio-Gide®) with bone tacks and flaps released and closed with Cytoplast® suture. Sutures were removed after 12 days. Patient was pre-medicated with amoxicilin 2 g one hour before surgery and 500 gms penicillin three times a day for one week following the surgery and anti inflammatories for 5 days combined with chlorhexidine mouth wash for two weeks. No appliance was worn by the patient during treatment.

Results
Nine months after bone regeneration, a new CBCT scan showed a horizontal bone gain of 6 mms for a total of 9 mms width. Three Biohorizons® taper implants were placed with no complication on a vascularized and hard bone tissue replacing teeth 35,36 and 37.

Conclusions
The treatment of horizontally deficient alveolar ridges with the GBR technique using autogenous bone mixed with ABBM and a natural collagen resorbable barrier membrane can be regarded as successful. The osteogenics properties of the autogenous bone, the low resorption rate and osteoconductive properties of the ABBM and the physical properties of a native porcine collagen membrane contribute in the survival of the bone graft.

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