camlogfoundation

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Bone Grafting With Fibrin Sealant And Deproteinized Bovine Bone

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Many guided bone regeneration techniques have been described in order to restore the bone dimension for implant site after ridge crest resorption. Most of the GBR protocols are still challenging or require to harvest autologous bone from a donor site thus increasing the morbidity and patients' discomfort

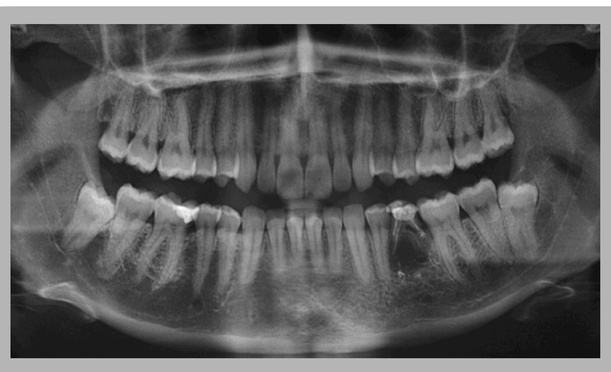
We describe a clinical protocol for bone defect reconstruction based on the use, as grafting material, of a mixture of human derived fibrin sealant and deproteinized bovine bone

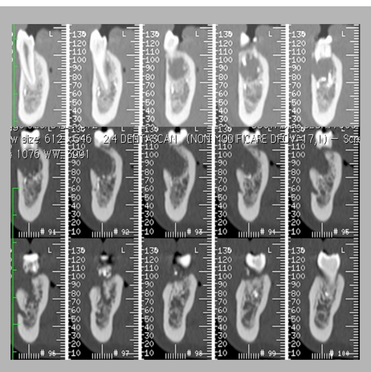
Bone defects have been grafted with the a human fibrin tissue sealant (Tisseel Fibrin Sealent, Baxter, USA) mixed with deproteinized bovine bone (Bio-Oss, Geistlich, Switzerland)

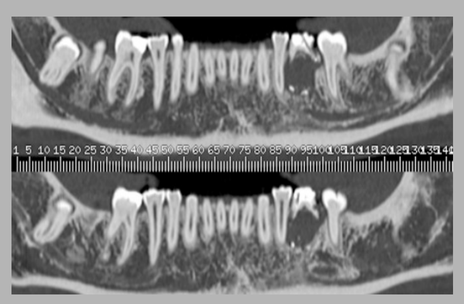
In severely resorbed alveolar ridges a collagen resorbable membrane (Remaix, Matricel GmbH, Germany) has been used to cover the graft, fibrin sealant has been also used after the suturing to improve the wound closure

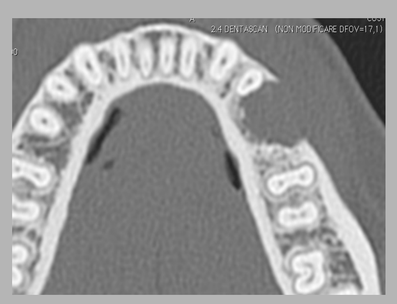
Clinical case 1

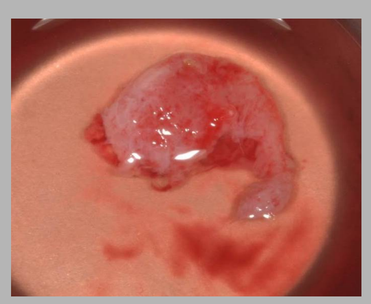
30 years old female patient with agenesis of 3.5 and presence of 7.5 with root canal filling and coronal restoration. The X-ray shows an apical lesion of 7.5 with residual endodontic filling material inside



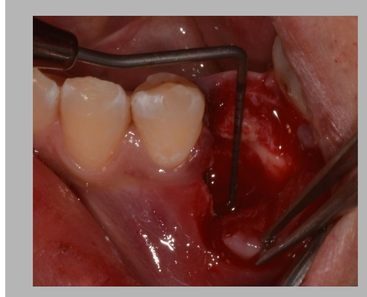


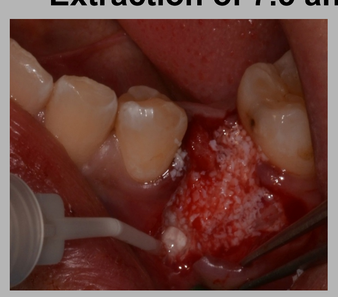


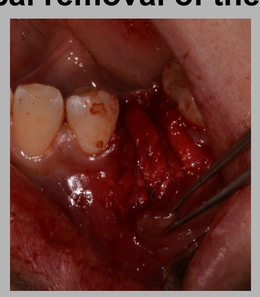


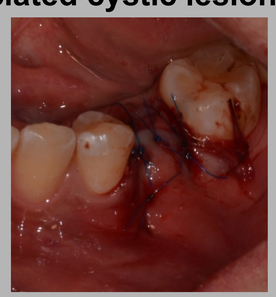


Extraction of 7.5 and surgical removal of the associated cystic lesion



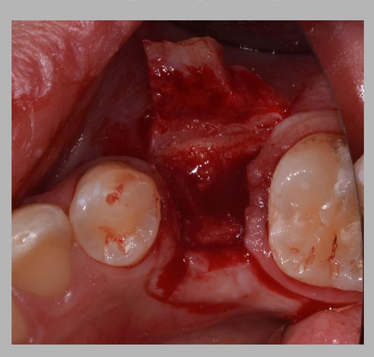




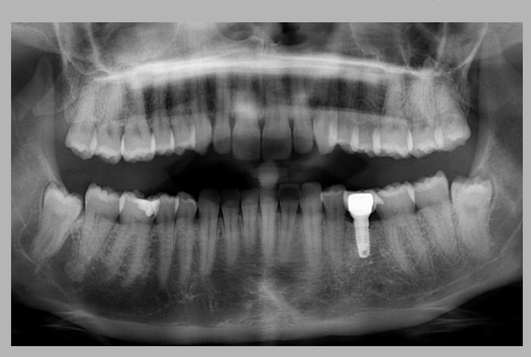


Bone grafting (Bio-Oss (0,25-1 mm) 0,5 g + Tisseel 2 ml) covered with resorbable membrane (Remaix) sutured with absorbable suture (Vicryl 5/0), flap sutured with non-absorbable suture (Prolene 5/0)

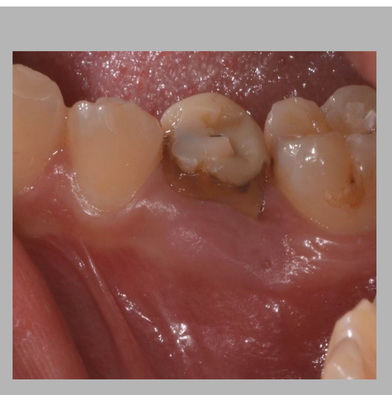
8 months after bone grafting surgical flap for implant placement (Camlog Scre-line 3,8x11)

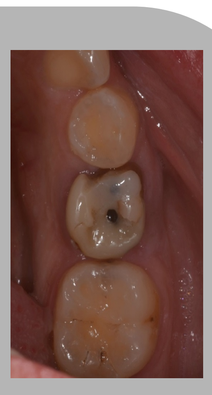


X-ray 20 months post-op (12 m. after implant placement)

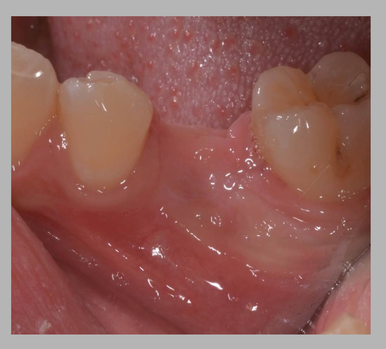


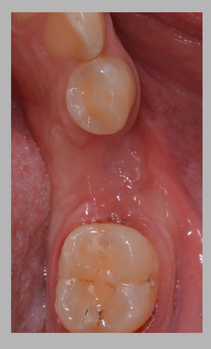
Pre-op



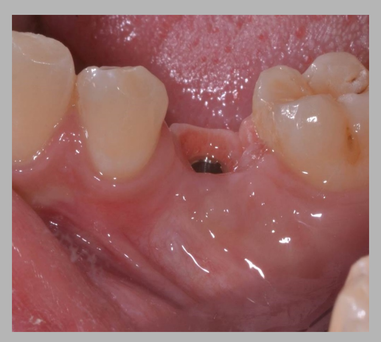


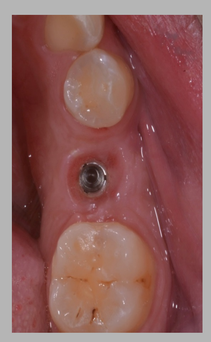
6 moths post-op



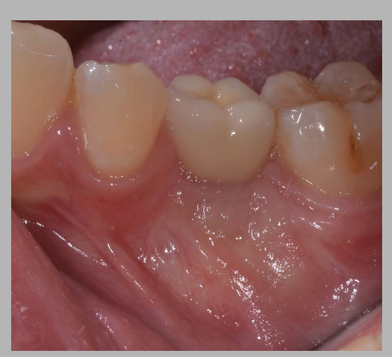


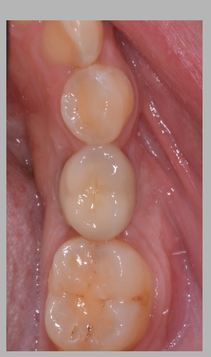
12 months post-op





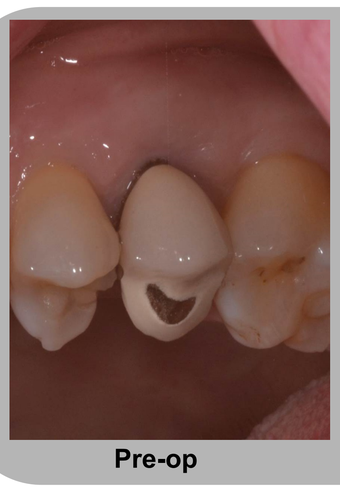
24 months post-op

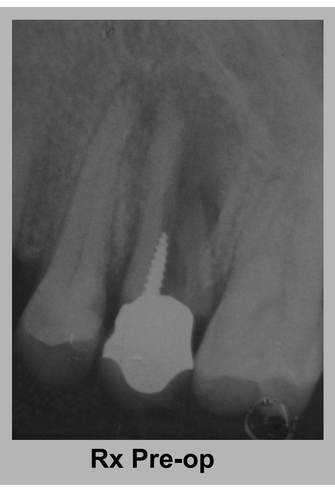


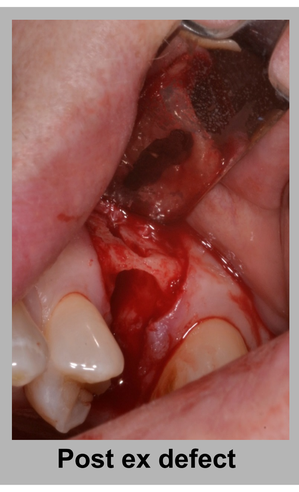


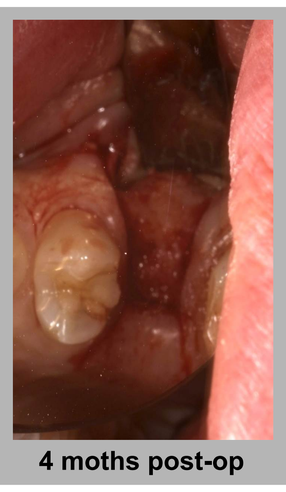
Clinical case 1

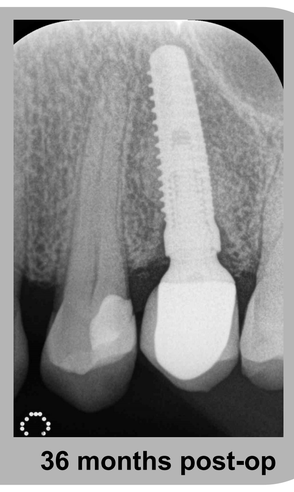
59 years old female patient with rooth fracture and endodontic lesion of 2.5.
After tooth extraction and alveolar curettage the defect and buccal dehiscence has been grafted with the mixture of Bio-Oss and Tisseel. After 4 months post-op the an implant (Camlog screw-line 3,8x13) is placed in the grafted site.


Pre-op


Rx Pre-op


Post ex defect


4 moths post-op


36 months post-op

This protocol has demonstrated the possibility to obtain good clinical results for bone regeneration in implant surgery with a relatively simple and not invasive procedure. The data in the literature on regenerative procedures based on the mix of xenografts and fibrin sealant are controversial. More clinical cases, as well as long term clinical and histological studies are needed to validate and standardize the technique in order to make it alternative to more evidence based procedures

References

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