

COLOMBO FABRIZIO

BACKGROUND

GBR standard protocols call for filling the space underneath the membrane with autogenous bone or a mixture composed of autogenous bone particles and heterologous biomaterials. This work describes the case of a GBR performed to restore a significant horizontal bone defect with simultaneous placement of a dental implant in the posterior maxillae that was carried out using a high density d-PTFE membrane and heterologous bovine derived bone graft without the addition of any autogenous bone.

CASE PRESENTATION

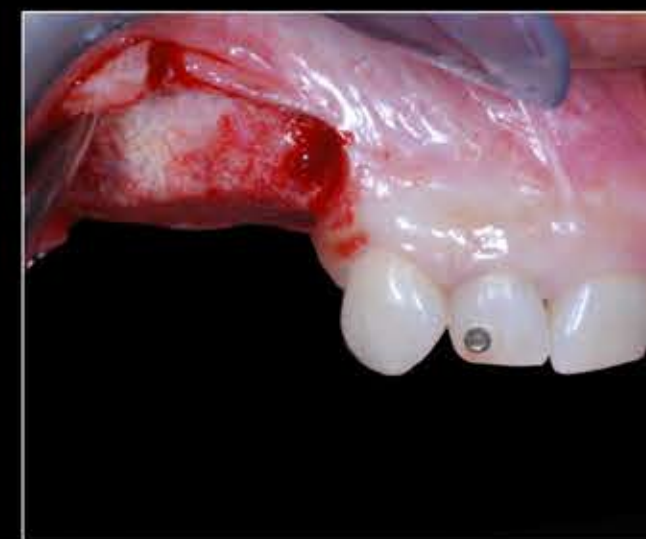
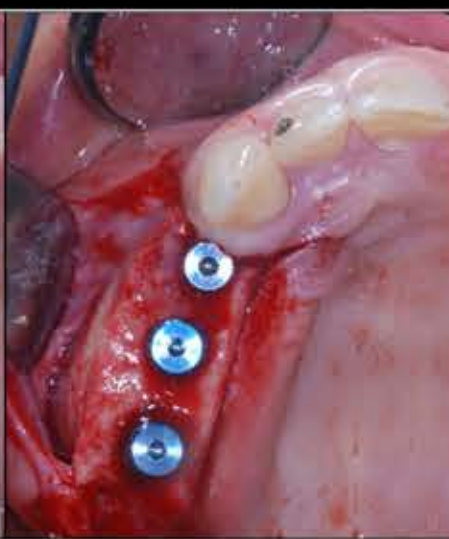
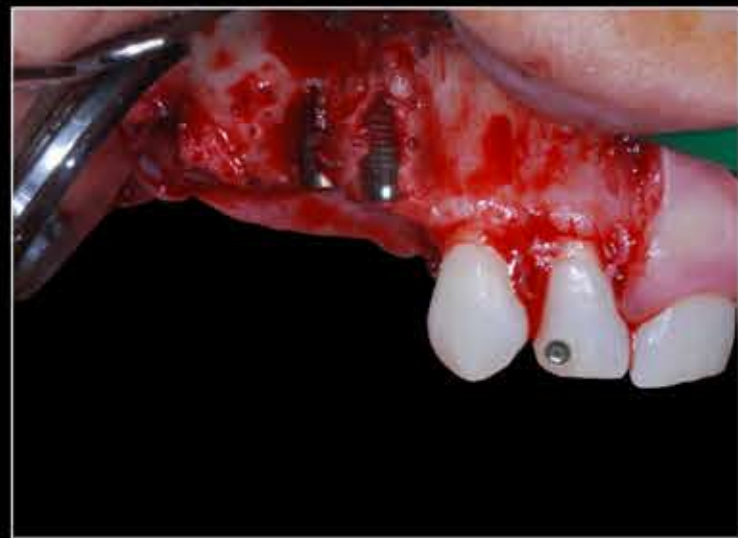
The patient S.C. aged 52 comes to our attention requiring a fixed type rehabilitation of the first quadrant where it has a monolateral edentulous. The objective examination shows the absence of 1.4, 1.5, 1.6, 1.7, a correct intercalated relationship and a horizontal bone loss recognizable to palpation in the vestibular area of 1.4 and 1.5.

The performed radiographic examinations (OPT and T.C. Cone Beam) confirm the horizontal loss of alveolar bone and the preservation of the vertical dimension showing a grade IV atrophy according to Cawood and Howell's classification. The proposed therapy consists in GBR using a non-resorbable membrane and contextual placement of implants in areas of 14-15-16.

The surgery protocol followed involves an initial implant site preparation and the placement of three endo-bone implants; two of them (1.4 and 1.5) have quite complete exposure of the buccal spirals from the cervical to the apex region of the fixtures.

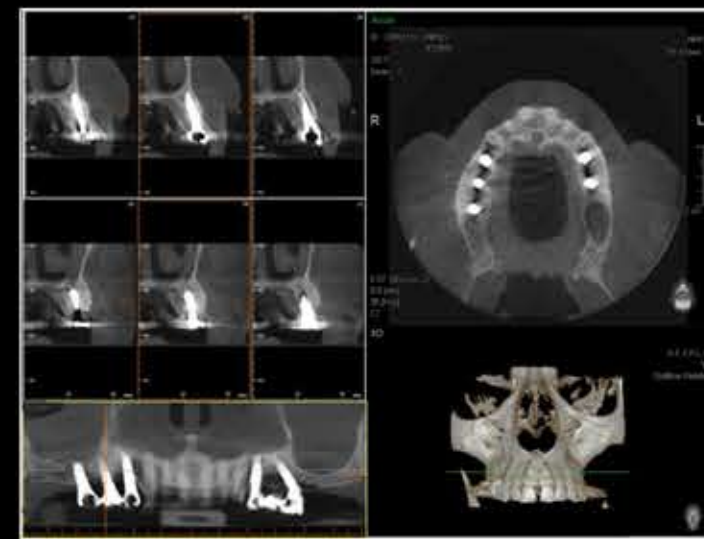
The bone graft used to correct the vestibular defect is composed only by bovine heterologous bone protected by a reinforced d-PTFE membrane.

After six months of healing, the membrane has been removed showing a good amount of a vestibular new bone covering the implants of 1.4 and 1.5; in the next 6 months a progressive prosthetic loading protocol is applied. The final prosthetic restoration is a metal-ceramic screwed bridge of 1.4,1.5,1.6.



CONCLUSIONS

This case report suggests that the use of a heterologous bone substitute alone to restore a significant horizontal defect in a GBR procedure could be as effective as the standard protocol, while avoiding the drawbacks associated with a second surgical site opening. The correct management of the flaps, their passivation, the stability of the membrane-graft complex and the presence of a good vasculature ensure the therapeutic success with perimplant new bone formation.



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