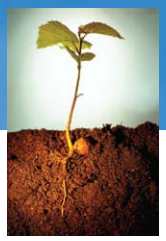

OsteoBiol® by Tecnoss

Posterior atrophic jaws rehabilitated with prostheses supported by 6 mm long x 4 mm wide implants or by longer implants in augmented bone. Five-year post-loading results from a within-person randomised controlled trial

ABSTRACT

The aim of this RCT was to compare the outcomes up to 5 years after loading of partial fixed prostheses supported by 6-mm-long and 4-mm-diameter implants with prostheses supported by implants at least 10-mm long placed in posterior jaws augmented either with mandibular interpositional blocks of collagenated equine bone or with granular porcine bone placed through a lateral window below the elevated maxillary membrane. In total, 40 patients were enrolled in the trial, 20 with bilateral edentulous mandibles and 20 with bilateral edentulous maxillae. The augmentation procedure consisted in the insertion of an interpositional block of collagenated cancellous equine bone (OsteoBiol® *Sp-Block*, Tecnoss®, Giaveno, Italy) in mandibles or a mix of cancellous and cortical porcine-derived collagenated bone having a granulometry of 250 to 1000 μm (OsteoBiol® *Gen-Os*®, Tecnoss®) in maxillary sinuses. The grafted areas were covered with a collagen resorbable barrier (OsteoBiol® *Evolution*, Tecnoss®, Fine 30 × 30 mm) derived from the equine pericardium. At mandibular grafted sides, implants were placed 3 months after augmentation, whereas implants were inserted in maxillae simultaneously to sinus elevation procedures. All implants were submerged and loaded, after 4 months, with provisional prostheses. Four months later, definitive prostheses were delivered. Outcome measures were prosthesis and implant failures, any complication and radiographic peri-implant marginal bone level changes.

CONCLUSIONS

Three-year post-loading data indicate that 6 mm long implants achieved similar (in the maxilla) if not better (in the mandible) results than longer implants placed in augmented bone and, consequently, short implants might be a preferable choice to bone augmentation, especially in posterior mandibles. Anyway, in the Authors' opinion, *"5 to 10 years' post-loading data from larger trials are necessary before being able to produce reliable recommendations"*.

Abstract author: Cristina Rodighiero, dental journalist, free publication, not for resale. Printed by Tecnoss® Dental s.r.l.

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ORIGINAL ARTICLE
International Journal Of Oral Implantology
2019;12(1):57-72