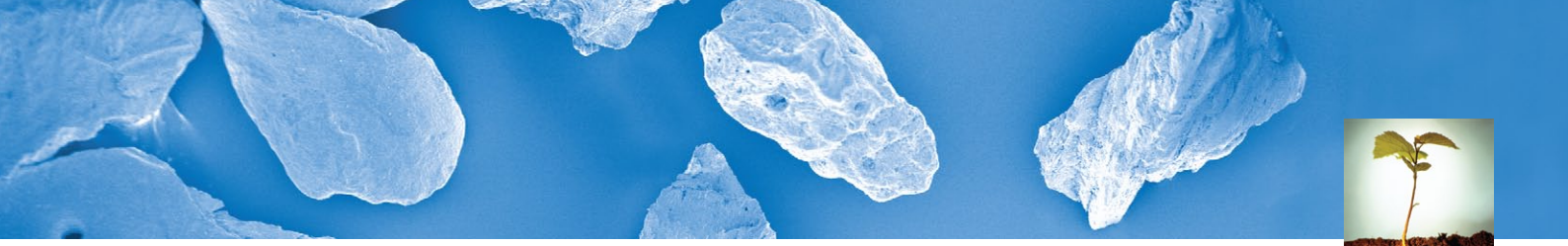

OsteoBiol® by Tecnoss

# Posterior atrophic jaws rehabilitated with prostheses supported by 6 mm-long, 4 mm-wide implants or by longer implants in augmented bone. Preliminary results from a pilot randomised controlled trial



## ABSTRACT

The aim of this study was to evaluate whether 6 mm-long by 4 mm-wide dental implants could be an alternative to longer implants placed in bone augmented with bone substitutes in posterior atrophic jaws. In order to do this, 20 patients with bilateral atrophic mandibles and 20 patients with bilateral atrophic maxillae, having 5 to 7 mm of bone height above the mandibular canal or below the maxillary sinus, were randomised according to a split-mouth design to receive one to three 6 mm-long and 4 mm-wide implants or at least 10-mm long implants in augmented bone. The augmentation procedure consisted of an interpositional block of collagenated cancellous equine bone (OsteoBiol® *Sp-Block*, Tecnoss®, Giaveno, Italy) in mandibles or a mix of 100% cancellous and cortical porcine-derived collagenated bone having a particle size of 250 to 1000 μm (OsteoBiol® *Gen-Os*®, Tecnoss®) in maxillary sinuses. Both sides were to be treated during the same surgical session (one side to be augmented and the other to receive short implants). Outcome measures were prosthesis and implant failures, any complication, time needed to fully recover mental nerve function (only for mandibular implants) and patient preference. There were no statistically significant differences in graft, implant or prosthesis failures, though significantly more intra- and postoperative complications occurred at grafted sites. All 20 patients treated with mandibular implants and 15 patients treated with maxillary implants preferred short implants, whereas 5 patients treated with maxillary implants described both procedures as equally acceptable. These differences were statistically significant.

## CONCLUSIONS

Based on the short-term data (5 months after loading) it is possible to suggest that short implants may be as effective, if not more effective, than longer implants placed in augmented posterior jaws. It should be noted that the long-term prognosis is yet unknown and the sample size of the present and other published RCTs are still relatively small to be drawing definitive conclusions. In the Authors' opinion, "*5- to 10-year post-loading data are necessary before making reliable recommendations*".

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