



Four mm-long versus longer implants in augmented bone in posterior atrophic jaws: 4-month post-loading results from a multicentre randomised controlled trial

ABSTRACT

In the absence of bone of adequate height, clinicians are faced with the dilemma of whether to attempt an augmentation procedure or to place shorter implants with an intra-bony length of 8 mm or less. The aim of this pilot study was to compare the outcome of single implant-supported crowns and partial fixed prostheses supported by 4 mm-long implants (test procedure), with prostheses supported by at least 10 mm-long implants (control procedure), placed in posterior jaws augmented. Augmentation consisted of interpositional blocks of collagenated cancellous equine bone (OsteoBiol® Sp-Block, Tecnos®, Giaveno, Italy) in mandibles or the insertion of a mix of cancellous and cortical collagenated porcine-derived granular bone having a granulometry of 250 to 1000 µm (OsteoBiol® Gen-Os®, Tecnos®) in a lateral window below the lifted maxillary sinus membrane. The same bone substitute was also used to fill gaps between bone blocks and the surrounding mandibular bone. The grafted areas were covered with resorbable collagen membranes derived from equine pericardium (OsteoBiol® Evolution, Tecnos®).

CONCLUSIONS

Four months after loading, 4 mm-long implants achieved similar results to longer implants in augmented jaws but were affected by fewer complications. The present findings suggest that short implants may be an alternative to augmentation procedures of posterior jaws at least up to 5 years after loading. Anyway, it must be underlined that the long-term prognosis of short implants is not sufficiently known and 5- to 10-year post-loading data from larger trials are necessary before being able to offer reliable recommendations.

VERTICAL AUGMENTATION

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