



## Posterior jaw rehabilitation using partial prostheses supported by implants 4.0 x 4.0 mm or longer: three-year post-loading results of a multicentre randomised controlled trial

### ABSTRACT

When bone volumes in edentulous jaws are inadequate, implant rehabilitation can be challenging. In this clinical trial, the Authors aimed to evaluate 4.0 x 4.0-mm dental implants as a viable alternative to implants of length at least 8.5 mm when placed in posterior jaws with adequate bone volumes. One hundred and fifty patients were enrolled: 75 patients were treated using short implants and 75 patients using long implants.

In case of post-extraction implants, sockets were carefully debrided and all horizontal buccal bone-to-implant gaps of 2 mm or more were filled with 600 to 1000-µm diameter granules of pre-hydrated cortico-cancellous porcine bone mixed with approximately 10% collagen gel (OsteoBiol® mp3®, Tecnos®, Giaveno, Italy) covered with a resorbable haemostatic collagen sponge. Four months after placement, implants were restored with definitive metal-composite or metal-resin screw-retained restorations. Patients were followed-up until 3-year post-loading, and the measured outcomes were prosthesis and implant failures, any complications, and changes in peri-implant marginal bone levels. Three years after loading, short implants showed similar results to longer implants in posterior jaws in the presence of adequate bone volumes.

### CONCLUSIONS

As all the interventions performed were assessed in real-world clinical conditions, with broad inclusion criteria of the patients, the Authors conclude that it is possible to affirm that similar results can be obtained by other experienced operators treating patients with similar characteristics. Anyway, they suggest that 5 to 10-year post-loading data are necessary before reliable recommendations can be made.

### ALVEOLAR REGENERATION

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