



Vertical ridge augmentation of the atrophic posterior mandible with a 2-stage inlay technique: a case report

ABSTRACT

In case of atrophic posterior mandible, the application of the inlay technique showed to be able to achieve good augmentation results. Instead of using autogenous bone, some authors have suggested to use inorganic bovine bone blocks for inlay bone grafting in atrophic posterior mandibles, obtaining histological and clinical outcomes comparable to those achieved using autogenous bone.

In this article, the use of a 2-stage inlay technique in atrophic posterior mandible with more than 10-mm thickness and less than 5-mm height above the inferior alveolar nerve is described. The Authors performed an inlay procedure using a cancellous equine bone block (OsteoBiol® Sp-Block, Tecnos®, Giaveno, Italy) in order to allow the subsequent implant placement for prosthetic rehabilitation of the affected region. The first surgical procedure was a basic corticotomy of the buccal and lingual bone. One month later, a complete inlay procedure was performed. The cancellous equine bone block graft material was shaped and placed between the cranial osteotomized segment and the mandibular basal bone and a resorbable collagen membrane (OsteoBiol® Evolution, Tecnos®) was applied to the buccal surface of the surgical site.

CONCLUSIONS

After the inlay technique application, computed tomography and conventional radiography showed a mean vertical bone gain of 11,5 mm. This 2-stage inlay technique avoids the use of chisels to complete bone osteotomy and reduces postsurgical nerve disturbances in atrophic posterior mandibles.

The Authors concluded that *“a randomized controlled clinical trial is necessary to compare outcomes using this modification of the inlay technique with those obtained using the original procedure.”*

VERTICAL AUGMENTATION

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