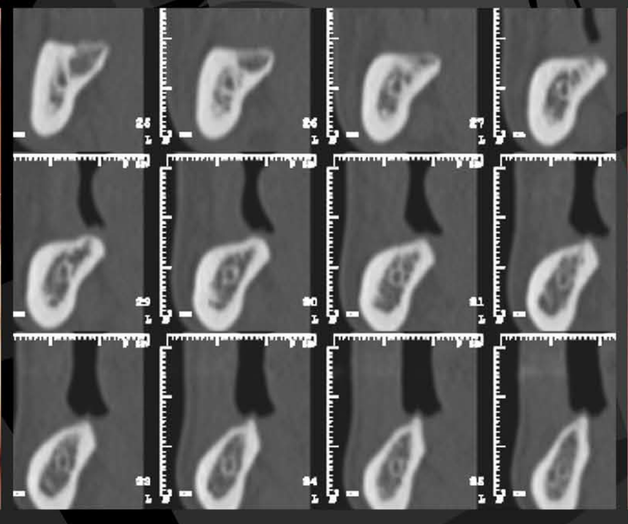
Vertical augmentation of atrophic posterior mandible for implant placement using an inlay technique without miniscrews or miniplates

Alves D., Pais A.,
Santana L., Almeida F.

CENTRO FORMAÇÃO FA

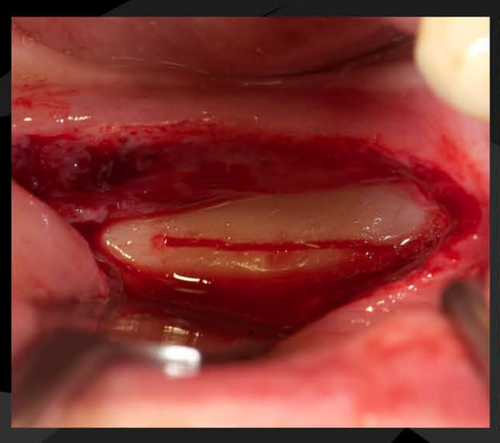
OBJECTIVES

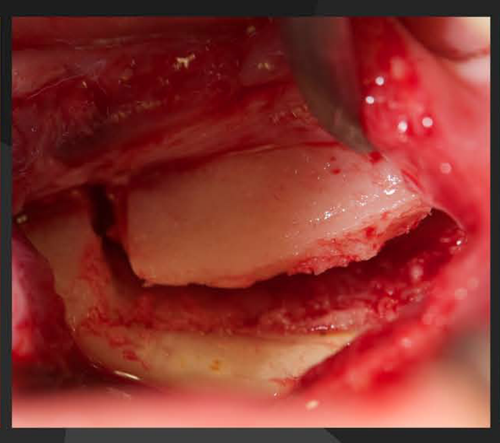
The aim of this clinical case is to show that is possible to do vertical ridge augmentation of the posterior mandible with just 2 mm of bone height using an inlay technique without the use of miniscrews or miniplates.

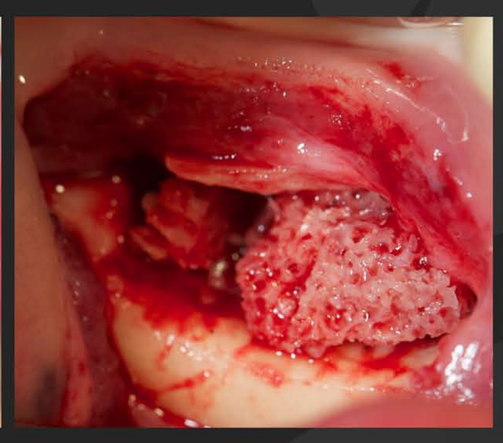


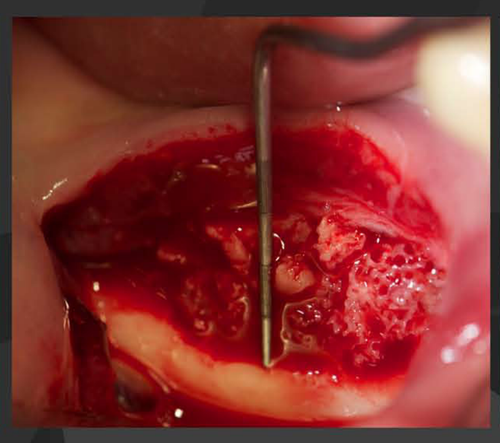
METHODS

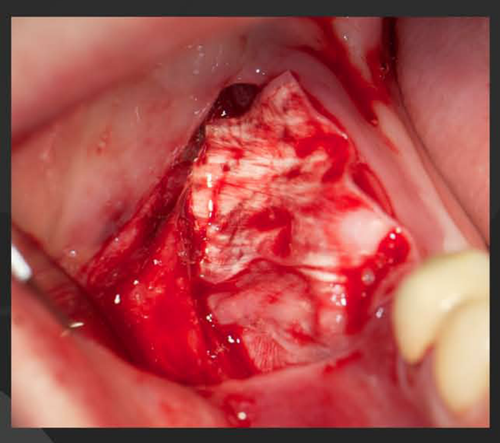
Female patient, 46 years old, healthy, non-smoker came to the dental practice for fixed rehabilitation in the right molar area.
The patient was diagnosed with just 2 mm of bone height. It was decided to increase the alveolar ridge vertically using an inlay technique with a block of xenograft without screws or plates as described by Scarano, A. in 2011. After a paracrestal incision in the buccal vestibule and a subperiosteal tissue dissection limited to the buccal side, a horizontal osteotomy was performed just above the mandibular canal, and two oblique cuts were made using piezosurgery. The osteotomized segment was then raised in the coronal direction, sparing the lingual periosteum. One block of equine bone was inserted between the cranial osteotomized segment and the mandibular basal bone. The residual space was filled by particles of cortical-cancellous porcine bone. A resorbable collagen membrane was applied above the buccal surface of the surgical site and the flap was sutured.





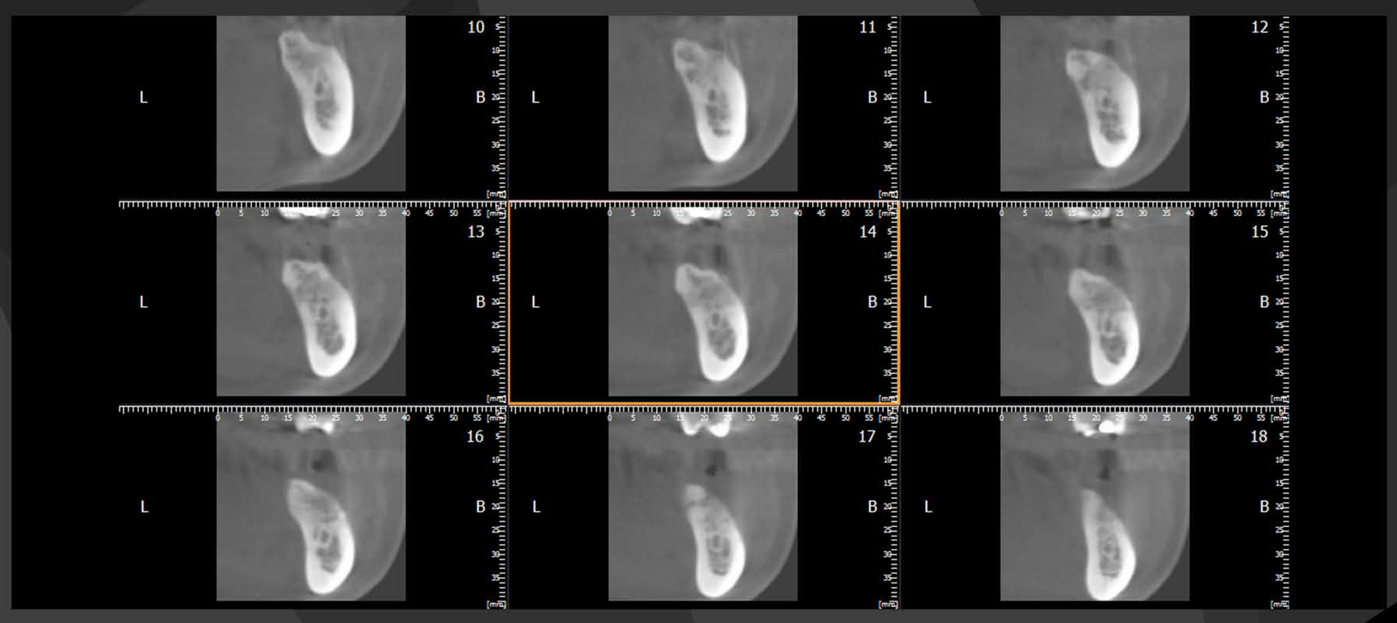






RESULTS

The increase of bone height, during the surgery, was 9 mm, measured with the periodontal probe in the buccal aspect. 6 months after the graft procedure, it was done a Cone Beam Computed Tomography for evaluation of available bone to place implants. It was observed an increase of height of 6 mm.
Two submerged implants were placed in the areas of teeth 4.6 and 4.7. 3 months after implant placement it was done an implant-supported fixed rehabilitation, a metal-ceramic framework with two teeth.



CONCLUSION

This technique seems to allow the placement of implants in patients with high bone resorption in the posterior mandible. However, the bibliography tells little about this procedure.
There is only a published article and belongs to the lowest level of evidence. As in most surgical interventions, the success of this approach depends largely on the surgical skill and experience of the surgeon.