Clinical Considerations in the Horizontal Bone Augmentation With Simultaneous Implants Placement in the Rehabilitation of Atrophic Maxilla

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Fig 1. Clinical case

Introduction:

The horizontal bone augmentation with simultaneously implants placement is a predictable treatment for implant rehabilitation. However, it's essential to consider different factors for the success of the treatment.

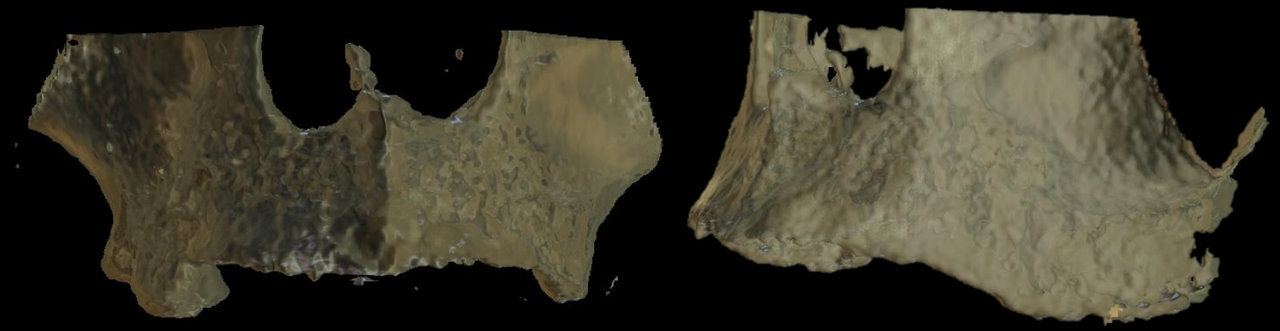

Fig 2. 3D reconstruction of the maxilla.

Methods:

A 68 years old female with controlled type 2 Diabetes Mellitus history presents typical signs of combination syndrome bone loss in the anterior maxilla, papillary hyperplasia and overgrowth of the tuberosities.

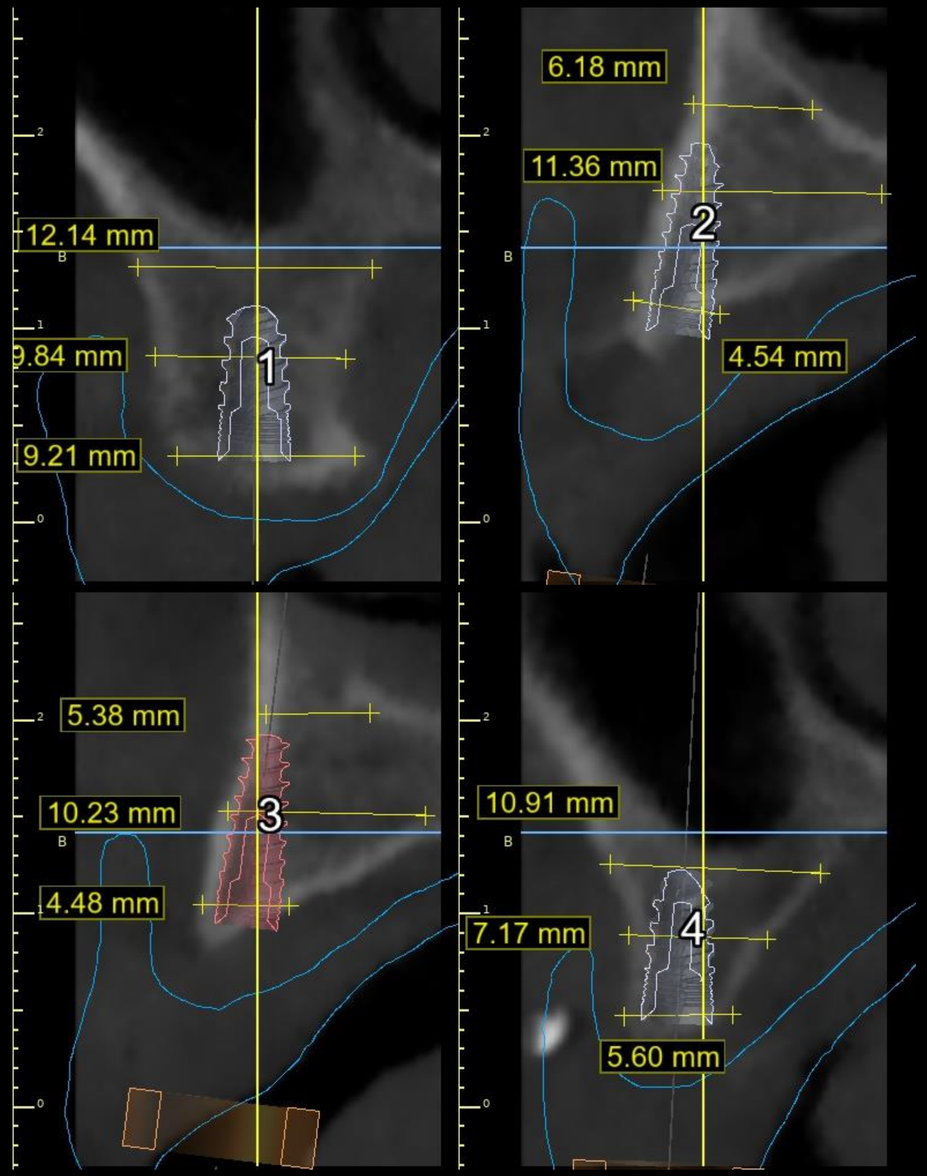

Fig 3. Tomographic planification

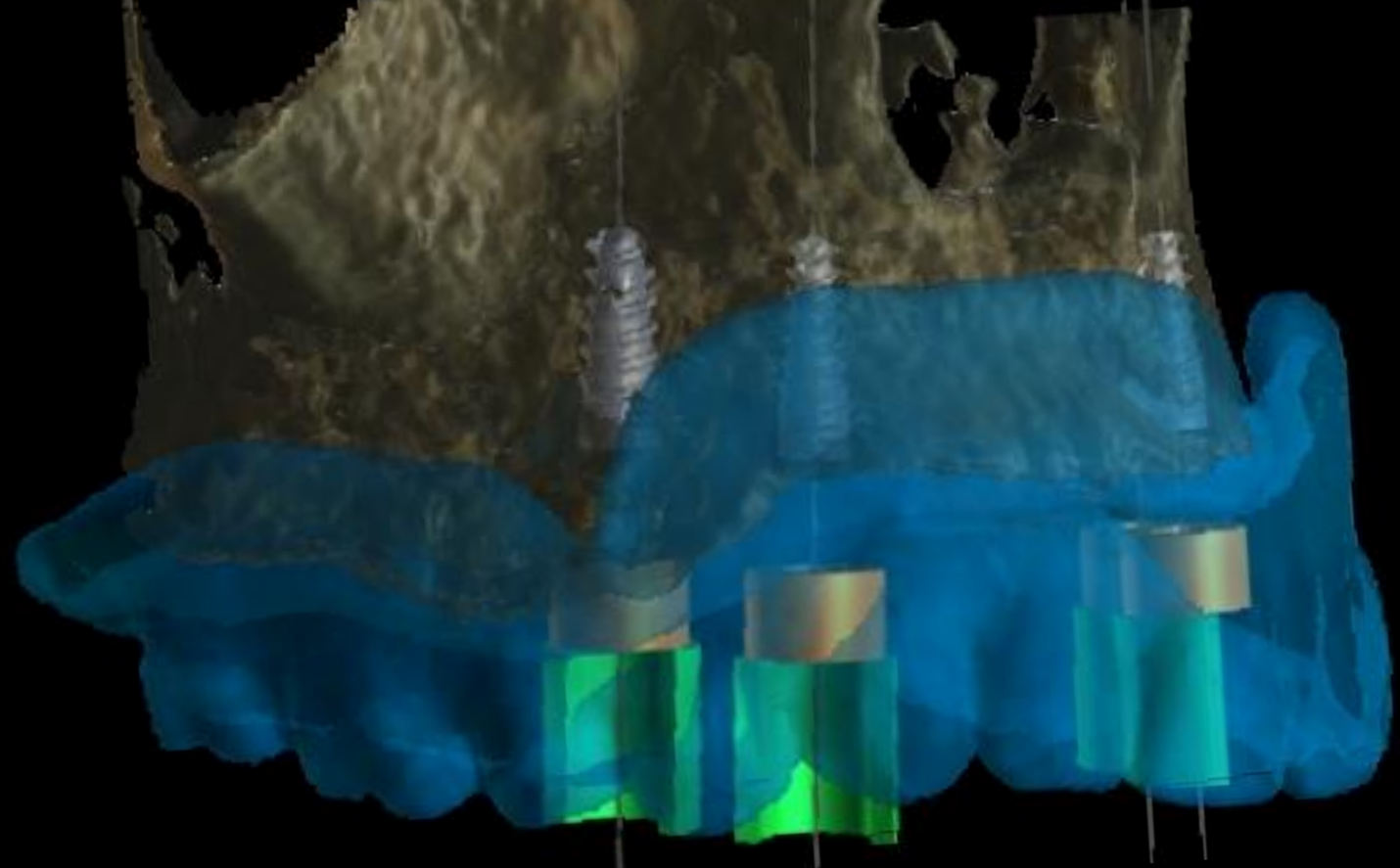

Fig 4. 3D planning

The treatment plan consisted in the placement of 4 implants in the maxilla, two of 3.75x10 mm in the canine areas and two of 4.2x10 mm in the premolar zone with simultaneous guided bone regeneration.

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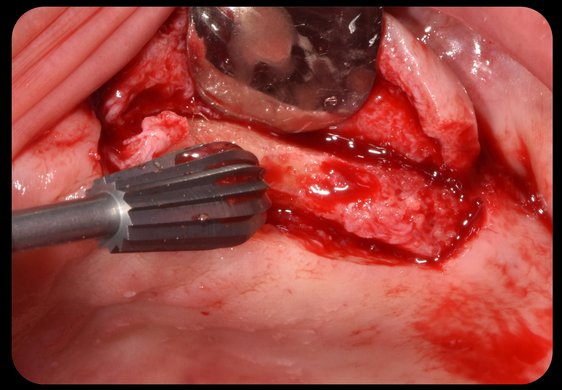
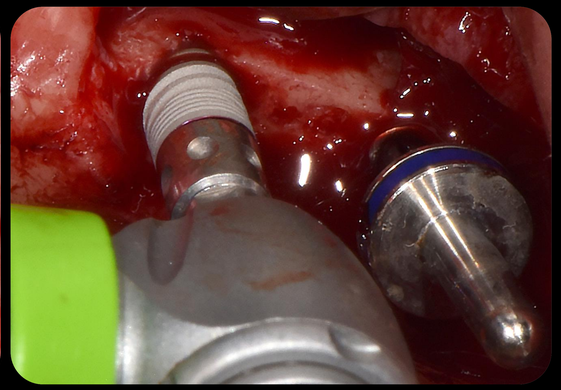




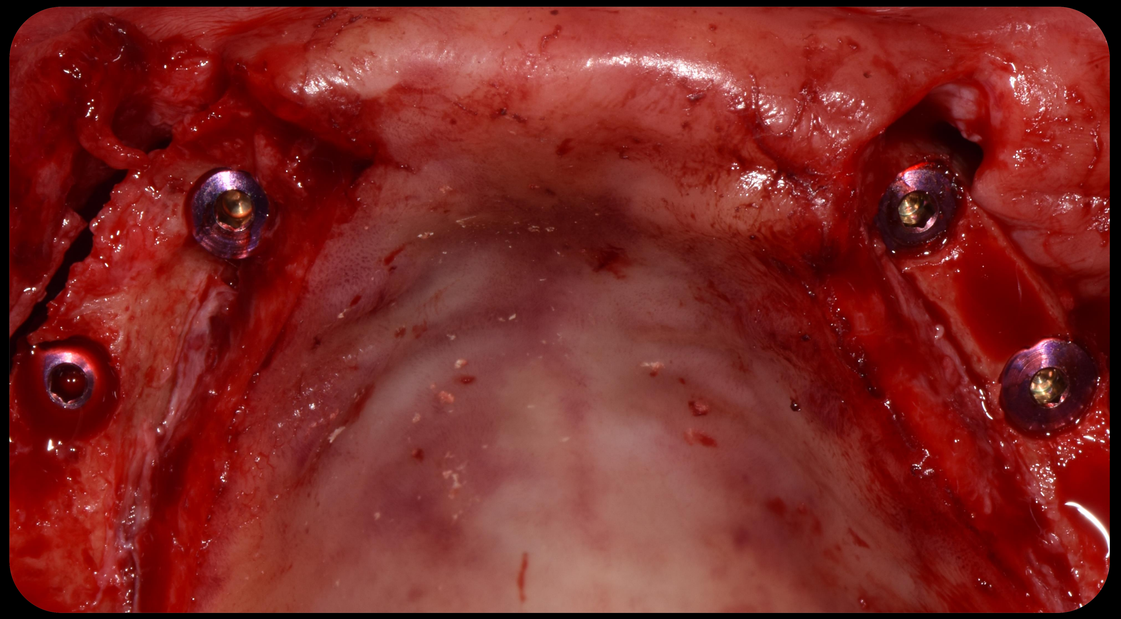
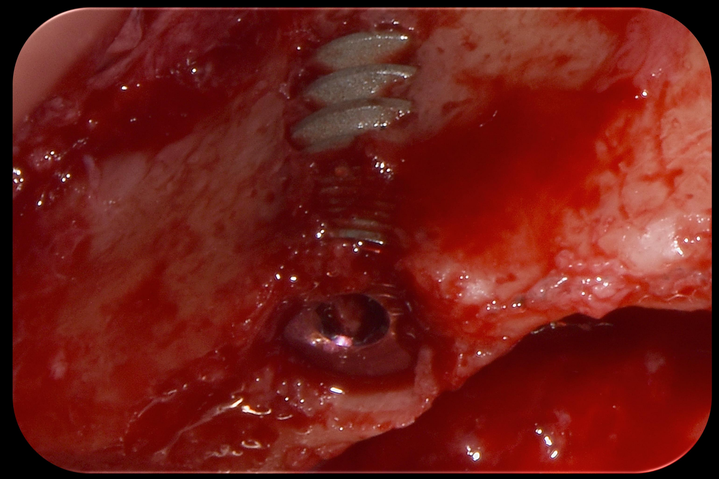


Fig 5-7. Surgical procedure and four implant placement.

Two full thickness flaps, regularization of alveolar ridge and insertion of 4 implants was performed in the surgical procedure

Horizontal augmentation was generated with a mixture of allo and xenograft and the use of cross-linked collagen membranes, which were fixed to the flap.



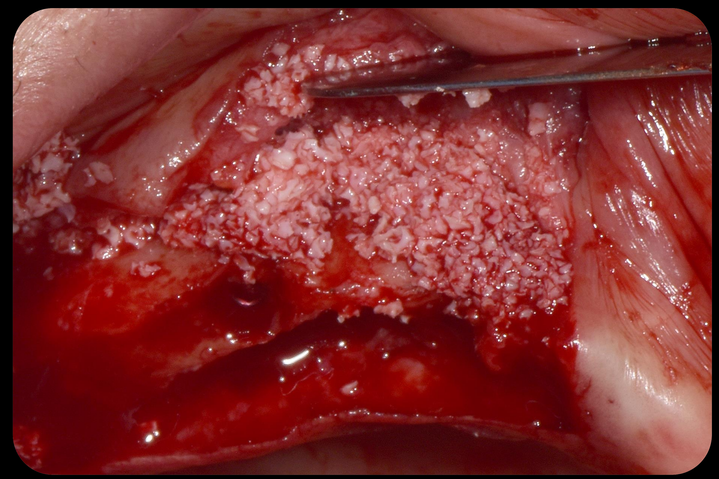


Fig 8 and 9. Regenerative procedure.

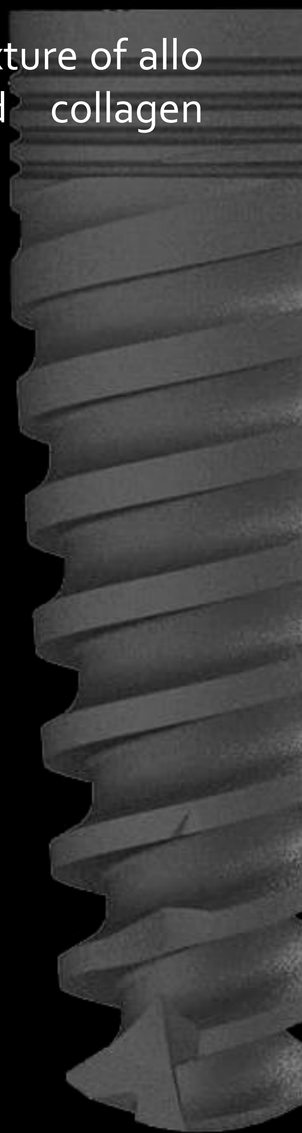


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Fig 10. 10-month bucal view.

Results:

A clinical follow-up was given for 4 months. A 10-month control tomography was performed, where loss of the bone graft from the vestibular area was observed in the implants placed in the canine areas.

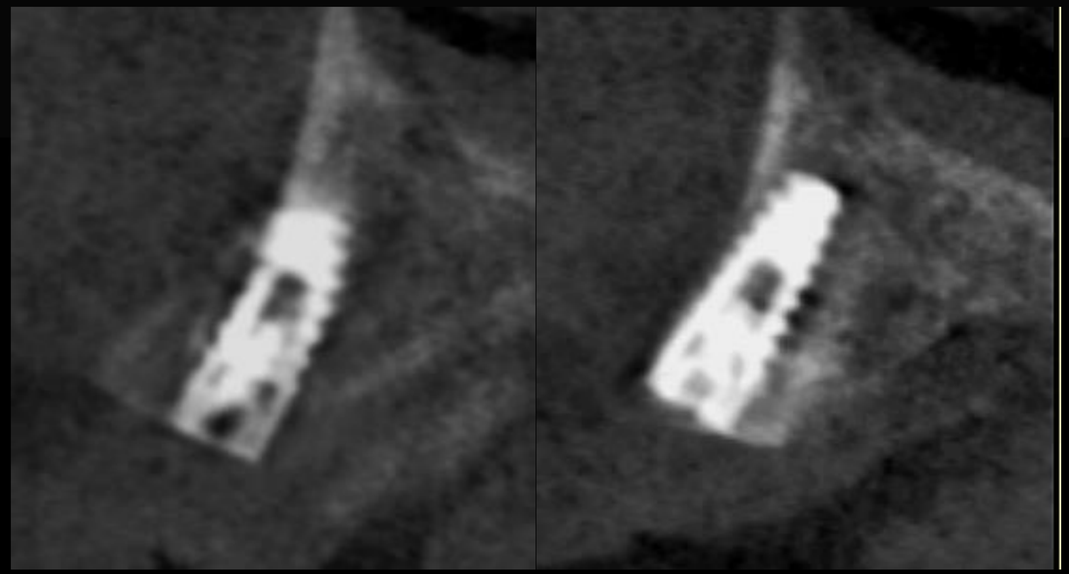

Fig 11 and 12. 10-month tomographic views of 13 and 23 implants.

Conclusions:

Multiple factors must be considered to achieve success of guided bone regeneration, such as the surgical technique, primary wound closure, biomaterials stabilization during healing process, consolidation and osseointegration time.

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