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# Bone regeneration of the maxilla with blocks of xenogenic origin- case report

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Key words: Bone augmentation of the maxillary ridge, Bone grafting, Bone Substitutes, Bone regeneration, Bovine bone mineral block, Case reports

## Objectives of the procedure

Bone reconstruction of the maxilla for the placement of implants.

## Presentation of the case

Female patient, 50 years old, without systemic pathologies, smoker of 10 cig/day, with average bone crest thickness of ≤3 mm.

A linear incision was made between the teeth region 18 and 28, being full thickness flapped.



The bilateral maxillary sinus was elevated by the lateral window technique described by Cadwell-Luc, the xenograft blocks were fixed with screws on a xenograft bed and covered with collagen membranes to promote ROG by the principles described by Melcher. Sutured with single stitches (supramide 4/0) was performed.



## Immediate results, short and medium term

After 10 months CT showed a bone gain that allowed implant rehabilitation as planned.

### Discussion

In the first 2- to 3-year period after extraction, occurs a reabsorption of the original bone volume between 40-60% [1].

The gold standard for reconstruction with onlay bone blocks is autologous bone intra- or extra-oral [2]. Harvesting requires a second surgical site, increasing surgical time, risk of morbidity and patient discomfort [3], has a tendency to resorb, especially with extra oral origin, limiting the durability of bone augmentation [4,5]. To overcome these difficulties, the xenogens blocks are a good alternative in the reconstruction of the jaws, presenting biological proprieties of remodelling and incorporation into the native bone proven histologically and radiographically [6-10]. Hammerle et al. indicate that the waiting time for the second surgical phase is 9-10

months [7].

#### Conclusions

The use of xenogenic blocks presented excellent results in the increase of the bone volume avoiding the morbidity associated to the autologous blocks.

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