Science Flash
clinical study

bone & tissue regeneration

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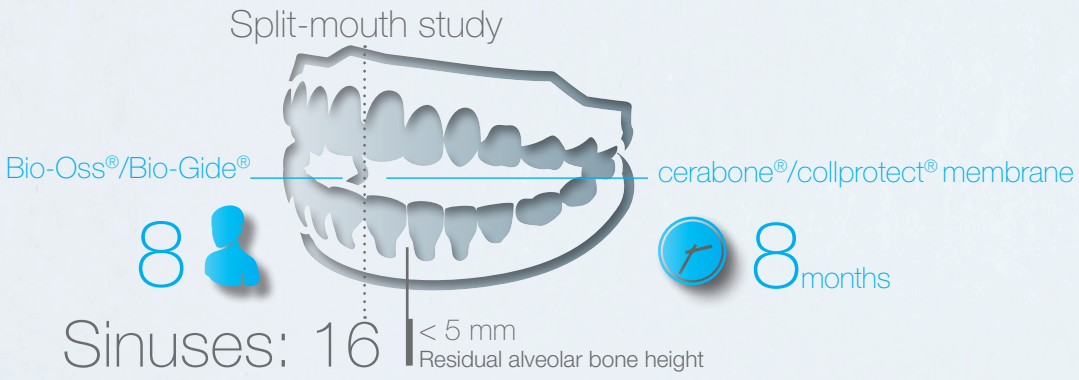
Comparative evaluation of cerabone® and Bio-Oss® in bilateral sinus augmentation – Both materials show similar radiographic and histomorphometric outcomes

Scientific source:

Panagiotou, D., Özkan Karaca, E., Dirikan İpçi, Ş., Çakar, G., Olgaç, V. and Yılmaz, S. (2015), "Comparison of two different xenografts in bilateral sinus augmentation: Radiographic and histologic findings", Quintessence international, Vol. 46(7): 611-619.

http://www.ncbi.nlm.nih.gov/pubmed/25699296

Study design:



- In both groups uneventful healing with good soft tissue response
- Histologic appearance of all samples similar
- No evidence of inflammatory cell infiltration present in the samples

Results:

Intra-group comparison of histomorphometric parameters (in each group, n = 8).

	Bio-Oss® + Bio-Gide®, mean ± SD (median)	cerabone® + collprotect®membrane, mean ± SD (median)
Total area [mm²]	0.34 ± 0.10 (0.38)	0.31 ± 0.13 (0.38)
New bone [mm²]	0.09 ± 0.08 (0.07)	0.09 ± 0.06 (0.07)
Residual graft particles [mm²]	0.05 ± 0.08 (0.02)	0.04 ± 0.02 (0.04)
Residual graft particles [%]	14.77 ± 21.01 (9.1)	13.01 ± 5.49 (12.76)
New bone [%]	24.63 ± 19.76 (18.42)	29.13 ± 13.81 (24.73)

Panagiotou et al. (2015)
Quintessence international
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Abstract

OBJECTIVE:

The aim of this study was to evaluate the radiographic and histomorphometric results of two different xenografts in bilateral sinus augmentation in patients with posterior maxillary atrophy.

METHOD AND MATERIALS:

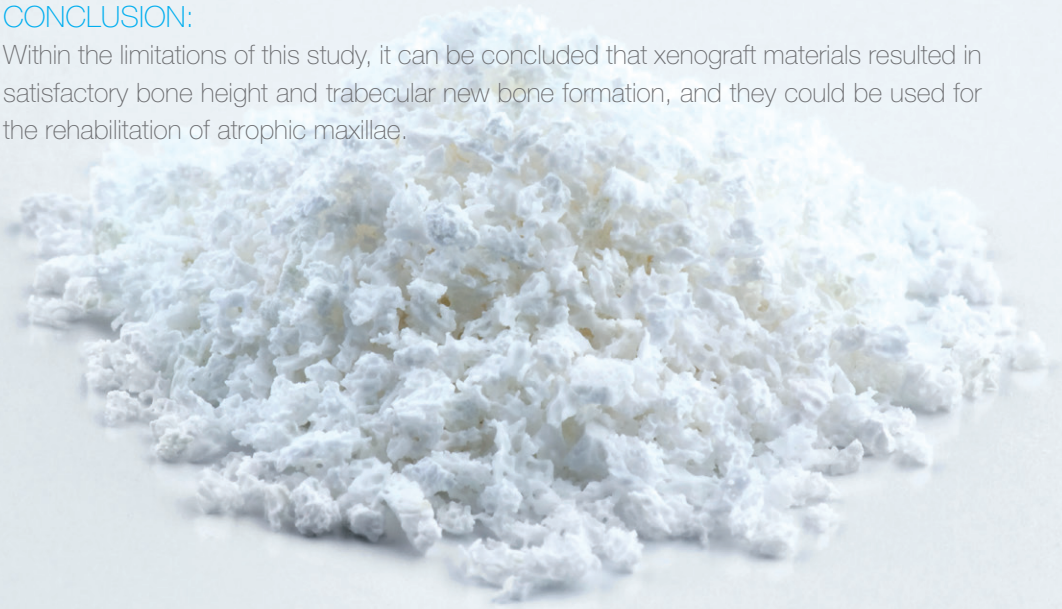
Eight patients with less than 5 mm residual alveolar bone height were included in this study. One side was augmented with bovine bone graft-1 and the other side with bovine bone graft-2. Radiographic analyses were performed before and after augmentation, and before the implant placement. After 8 months of healing period, bone biopsies were obtained during implant placement.

RESULTS:

No statistically significant difference was found between the groups, based on post-augmentation and pre-implantation graft heights ($P > .05$). Histomorphometric evaluation demonstrated 24.63% and 29.13% newly formed bone in the graft-1 and graft-2 groups, respectively. Intergroup differences were not significant for the mean percentage of new bone formation ($P > .05$).

CONCLUSION:

Within the limitations of this study, it can be concluded that xenograft materials resulted in satisfactory bone height and trabecular new bone formation, and they could be used for the rehabilitation of atrophic maxillae.



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