



Guided bone regeneration of an atrophic maxilla using heterologous cortical lamina

HORIZONTAL & VERTICAL AUGMENTATION

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ABSTRACT

In an implant-supported rehabilitation, it is essential to have the correct amount of bone and soft tissues to support dental implants in achieving their good function and prognosis. When the amount of bone left is not enough, it is often necessary to adopt a guided bone regeneration (GBR) technique. In GBR, either resorbable or non-resorbable barrier membranes, representing an essential part of this technique. This is because, on one hand, they avoid the proliferation of non-osteogenic cells in the area of the wound, and, on the other hand, they promote the growth of slow-maturing tissue made by osteoforming cells. Moreover, they create and maintain the space in which the pluripotent and osteogenic cells are free to migrate.

An ideal membrane should show biocompatibility, integration with soft tissues, clinical manageability, ability to isolate the bone graft, and adequate mechanical and physical properties.

In this report, the Authors present a clinical case of severe atrophy of the maxilla in which the defect was filled with a mixture of autogenous and xenogenic bone (OsteoBiol® Apatos, Tecnos®, Giaveno, Italy), covered by a barrier membrane fixed with microscrews. It was decided to use a heterologous cortical lamina (OsteoBiol® Lamina) instead of other barriers, such as a titanium mesh, because of its resorbable properties.

CONCLUSIONS

Based on the results of the study, the Authors concluded that *“heterologous cortical laminas used as barrier membranes are a plausible biomaterial to be used in GBR, especially in medium and large bone defects. Long-term randomized studies are necessary to compare cortical lamina properties with other types of membranes that are more commercialized and well-studied”*.

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ORIGINAL ARTICLE
Case Reports in Dentistry
2019, 5216362

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