

## Cortical lamina: a new device for the treatment of moderate and severe tridimensional bone and soft tissue defects

### ABSTRACT

Ridge defects treatment sometime can be challenging and different surgical approaches have been proposed over the years in order to solve this kind of clinical situation. Among these, guided bone regeneration technique is based on the use of barrier membranes, combined with different combinations of autogenous bone and bone grafts.

The aim of this article was to evaluate, through the presentation of three patient cases, a membrane made of collagenated porcine bone called cortical lamina (OsteoBiol® *Lamina*, TecnoSS®, Giaveno, Italy), available in three forms: OsteoBiol® *Curved Soft Lamina* is curved, very stiff but also very elastic; OsteoBiol® *Lamina Soft* is very rigid and square-shaped; OsteoBiol® *Lamina* is a 'bone layer'-type rigid biomaterial, representing a piece of cortical bone and is used to replace one or more of the wall's defects.

In the first case, OsteoBiol® *Lamina Soft* was used in a ridge augmentation procedure in a 49-year-old male patient in order to restore an extent bone loss following several root extractions. The post-procedure evaluation confirmed that OsteoBiol® *Lamina* favoured both horizontal and vertical augmentation and offered good implant and soft tissue support.

In the second case, OsteoBiol® *Curved Soft Lamina* was used in a 53-year-old female patient in order to regenerate an extended bone loss in the maxillary right quadrant. To augment the area A mixture of xenograft, collagenated porcine bone (OsteoBiol® *Gen-Os*®, TecnoSS®), and autogenous bone chips collected from the tuberosity was used. Post-surgery evaluation showed that soft tissue had a completely new volume and shape. After 6 months, a CBCT scan showed how the grafted site was changing in volume while the bone graft was mineralizing and integrating. In the third case, two portions of rigid OsteoBiol® *Lamina* was used to perform an horizontal and vertical ridge augmentation in a 45-year-old male patient, using a xenograft (OsteoBiol® *Gen-Os*®) to graft the defined four-wall defect. After 6 months, the two bone plates showed a good degree of integration and produced a new anatomy, with a 90-degree ledge supporting the soft tissue.

### CONCLUSIONS

Based on the positive results, the Authors suggested to use a) OsteoBiol® *Lamina Soft* in any situation, horizontal or a combined defect, where one would use a resorbable membrane; b) OsteoBiol® *Curved Soft Lamina* in situations where the anatomy is favourable (ie, where the lamina would fit and stabilize without the need for pins and/or screws), with the goal to augment both horizontally and vertically; and c) Bone layer rigid OsteoBiol® *Lamina* as a substitute for the autogenous bone in a modified Khoury technique.

### HORIZONTAL & VERTICAL AUGMENTATION

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BARRIER  
**OsteoBiol® Lamina**

**HOR**

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