



## The Bone Lamina Technique: a novel approach for lateral ridge augmentation - a case series

### ABSTRACT

Even if nowadays dental implants are considered a successful option for the treatment of edentulousness, resorption of the alveolar ridge is still a concern as it may interfere with optimal three dimensional implant placement. In order to overcome this problem, different guided bone regeneration (GBR) technique have been suggested. As collagen membranes and nonresorbable membranes reinforced with titanium both present some drawbacks, in this case series the Authors present a different treatment approach for lateral ridge augmentation, called "Bone Lamina Technique". This technique uses a xenogenic cortical bone shield in combination with particulated bone substitutes and a thin collagen barrier, resulting in a biocompatible and mechanically stable concept for space maintenance and blood clot protection.

Four systemically healthy patients (aged 48 to 59 years) with inadequate dental alveolar ridge widths were selected for inclusion. All ridge defects were augmented using a xenogenic cortical bone shield (OsteoBiol® Lamina, TecnoSS®, Giaveno, Italy) in combination with a particulated bone substitute (OsteoBiol® mp3®, TecnoSS®) and a thin collagen barrier (OsteoBiol® Evolution, TecnoSS®) positioned on top of the bone Lamina. At re-entry surgery, biopsy specimens were harvested for histologic analysis and the results revealed a sufficient amount of bone structure for implant placement without additional augmentation procedures.

### CONCLUSIONS

After the GBR, in all cases it was possible to place one or two implants without the need for additional augmentation procedures. Postoperative healing was uneventful, and clinically healthy mucosa without signs of infection covered the defect after 5 to 6 days.

The Authors affirmed in their conclusions *"this case series inaugurated a novel clinical approach for lateral ridge augmentation, the Bone Lamina Technique. Re-entry surgery revealed that sufficient amount of bone was achieved in all treated cases and implants could be placed without an additional augmentation procedure. Histology revealed osteoconductive properties of the material and also indicated that resorption of the cortical Lamina had taken place. Therefore, this approach may have the potential to act as a biologic and stable barrier technique for augmentation procedures"*.

H Wachtel<sup>1</sup>  
S Fickl<sup>2</sup>  
M Hinze<sup>3</sup>  
W Bolz<sup>3</sup>  
T Thalmeier<sup>3</sup>

1 | Private Practice, Munich, Germany; Clinical Associate Professor, Department of Restorative Dentistry, Charité - Medical University, Berlin, Germany

2 | Clinical Assistant Professor, Department of Periodontology, Julius-Maximilians University, Würzburg, Germany

3 | Private Practice, Munich, Germany

### ORIGINAL ARTICLE

International Journal of Periodontics  
Restorative Dentistry  
2013 Jul-Aug; 33(4):491-7

### Grafted with

BONE SUBSTITUTE  
**OsteoBiol® mp3®**

MEMBRANE  
**OsteoBiol® Evolution**

BONE BARRIER  
**OsteoBiol® Lamina**