

## Stage-two surgery using collagen soft tissue grafts: clinical cases and ultrastructural analysis

### ABSTRACT

In the case reports presented in this study the Authors show the application of two different products that could be used as alternatives to autologous tissues usually harvested from the palate like free gingival grafts (FGG) or subepithelial connective tissue grafts (SCTG) during stage-two implant surgery.

Different soft tissue grafts are available on the market, including acellular dermal matrices (ADMs) (derived from human or porcine skin), and bilayer collagen matrices (CMs) with a dense and a porous part (porcine origin). The grafts selected for the study were OsteoBiol® *Derma* (Tecnoss®, Giaveno, Italy) and Mucograft® (Geistlich Pharma). *Derma* is a xenogenic ADM obtained from dermis of porcine origin and it is not cross-linked. It is available in different thicknesses and sizes and is resorbed within 3 to 5 months. It is normally used for recession coverage or for keratinized attached gingiva augmentation. Mucograft® is a bilayer CM of porcine origins, it is composed of collagen type I and III and it is intended to be used for keratinized attached gingiva/mucosa augmentation or for root coverage procedures.

So, the aim of this study was to present the clinical application of the two above-mentioned soft tissue grafts during stage-two surgery in order to increase mucosal thickness and keratinized attached mucosa around implants.

### CONCLUSIONS

The application of a porous CM and a xenogenic ADM has been successful in terms of keratinized attached mucosa augmentation and ridge volume increase, respectively. Porous CM was used to primarily gain keratinized tissue and ADM was used to enhance ridge volume.

Based on the positive results obtained, the Authors affirm that *“ADM is recommended primarily for ridge volume augmentation and needs to be completely covered to achieve an uneventful healing because of its dense structure. Contrary, the bilayered CM can be left exposed with the aim to gain keratinized tissue around teeth and implants. However, shrinkage of the materials, especially when left exposed, seems to be a major drawback. Further studies are needed to compare and to better understand the clinical indications and behaviour of different soft tissue substitutes”*.

### SOFT TISSUE AUGMENTATION

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KR Fischer<sup>1,2</sup>  
S Fickl<sup>3</sup>  
N Mardas<sup>2</sup>  
L Bozec<sup>4</sup>  
N Donos<sup>2</sup>

1 | Department of Periodontology, University Witten/Herdecke, Germany  
2 | Periodontology Unit, UCL Eastman Dental Institute, London, UK  
3 | Department of Periodontology, University of Wuerzburg, Germany  
4 | Biomaterials and Tissue Engineering, UCL Eastman Dental Institute, London, UK

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