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LETTER TO THE EDITOR

The role of new porcine collagen membrane (Mucoderm®) in soft tissue augmentation procedure

Dear Editor-in-Chief,

We would like to highlight the positive impact that a new porcine-derived acellular dermal matrix (Mucoderm®, Botiss Dental, Berlin, Germany) has in soft tissue augmentation, a regeneration which is often required in periodontology or implantology for functional and esthetic purposes to increase the width of keratinized tissue as well as to augment the soft tissue volume. Teeth with gingival recession are usually related with dentin hypersensitivity,[1] carious and non-carious cervical lesions,[2] and esthetic discomfort. Moreover, even if the need for a certain width of keratinized gingiva (KG) around teeth still remain controversial, it is a common thinking that the presence of an adequate width of KG is relevant in preserving periodontal health as well as preventing gingival recessions.[3] The keratinized tissue around implants is called keratinized mucosa (KM). A loss of KM is a common finding as a consequence of bone atrophy[4] or oral surgical treatments. It has not been demonstrated that the presence or absence of KM is a prognostic factor of implant survival. However, several studies indicate how KM might prevent peri-implant plaque accumulation and inflammation as well as the recession of the mucosa.[5]

A soft tissue regeneration is generally achieved by either free gingival[6] or connective tissue grafts.[7] However, harvesting autologous tissue graft is a time-consuming technique with limited availability at the palatal donor site, and it can be related with post-operative patient's morbidity such as pain, numbness, bleeding, and swelling.[8] According to the manufacturer, Mucoderm® is a valid alternative to avoid the morbidity of the palatal grafts: Is a three-dimensional acellular stable matrix derived from porcine dermis that both supports revascularization and soft tissue regeneration. It is necessary a rehydration in a sterile saline solution or blood for 5-20 min before the application and, after that procedure; it is possible to adapt the shape and size of the matrix to the defect with a scalpel or scissors. The membrane exposure should be avoided in case of gingival recession coverage. It is allowed an open healing only if the revitalization from the surrounding tissue is guaranteed. The membrane should be fixed to the periosteum by sutures before a tension-free closure of the flap. After 12 weeks of healing, it is for the greatest part replaced by newly formed connective tissue.[9]

In a very recent study, Schmitt *et al.*[10] showed in a preclinical dog model that the collagen matrix is statistically no-inferior to the subepithelial connective tissue graft in term of soft tissue volume and thickness increase.

Our clinical findings on humans have confirmed similar conclusions after a 6 months follow-up. In spite of the preliminary results, we believe that Mucoderm® is an effective and predictable substitute of the autologous graft.

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