

## **Osteology in Cannes: Clinical Excellence and Risk Management in Regeneration**

**At Osteology in Cannes internationally acknowledged scientists and clinicians discussed whether new findings cast doubt upon well established regenerative treatment concepts, and what new therapies and products could be reliably used in daily practice in the future. Besides bone regeneration, soft tissue management was a main focus of the symposium.**

Lucerne, 19 April 2011 – At the international Osteology Symposium in Cannes, taking place from 14 to 16 April 2011, about 3000 participants from 70 countries learned about the latest scientific results in regenerative dentistry and received many guidelines and tips for daily practice. With a total of 85 speakers and moderators, 24 workshops, 145 posters, an interactive clinical forum, and 60 companies present in the industry exhibition, the Osteology Symposium linked science with practice and enabled the valuable exchange of knowledge and ideas in a broad selection of regenerative indications. The participants received lot of information on the current state-of-the-art and new trends in bone and soft tissue regeneration, some of which are summarized as follows.

### **How to avoid complications in bone regeneration**

GBR (Guided Bone Regeneration) is a highly successful treatment in dehiscence defects but also in healed narrow ridges. One of the most frequent complications in GBR is membrane exposure. Membranes with an extended resorption time such as cross-linked collagen membranes have a higher complication rate than native collagen materials: in case of exposure the soft tissue healing is impaired and the risk of wound infections and bone loss is increased.

When treating fresh extraction sites, the resorption of the buccal bone cannot be prevented, but the contour of the ridge is preserved by using a slow resorbing bone substitute. Immediate implant placement into extraction sockets is risky especially in aesthetic sites and in case of thin tissue. The adequate implantation time point should therefore be carefully selected according to the individual situation and risk profile.

### **Risk management in periimplantitis and in complex cases**

Main risk factors for periimplantitis are poor oral hygiene, a history of periodontitis and smoking. But also implants exhibiting a radiological defect height of more than 1 mm are at higher risk. The beneficial effect of non-surgical therapies such as local anti-infective treatment, curetting or ultrasound is only temporarily. In supracrestal and circumferential

defects bone substitutes and collagen membranes may be a treatment option. However, the success rates are lower than in normal GBR procedures.

Although sinus floor augmentation with bone substitutes or autogenous bone is a standardized, reliable procedure and the overall complication rate is low, an adequate case selection and careful planning of each treatment step are important to prevent complications. In complex bone augmentations such as vertical reconstructions procedures, intraoral bone blocks contoured with bone substitutes yield positive results. Main challenges in these cases are soft tissue management, correct 3-D planning, and optimal stabilization of the graft. In the future growth factors such as PDGF or BMP might facilitate surgery, allow faster healing times and reduce morbidity in complex defects. However, more studies are needed.

### **Periodontal regeneration and root coverage**

Regenerative procedures using bone substitutes combined with Enamel Matrix Protein are effective in enhancing long-term prognosis of teeth. Soft tissue handling is very important for the success: The flap design should allow a tension free primary wound closure and complete coverage. In the future growth factors such as PDGF and GDF-5 could be used in periodontal regeneration.

In recession treatment soft tissue appearance and colour match are more important for the aesthetic result than complete root coverage. But also the position of the cement-enamel junction, the presence of abrasion defects or patient expectations have to be taken into account. Sometimes other treatments such as crown lengthening or additional composite restorations are the better way to achieve an optimal outcome.

### **Keratinized mucosa for optimal tissue health**

The wider the keratinized mucosa, the lower the bone loss and the better the soft tissue health around implants. If possible, there should be a width of at least 2 mm of keratinized mucosa. When augmenting soft tissue, an adequate flap thickness is important for an optimal revascularization of the soft tissue graft. Additional ischemia due to suturing should be avoided and blood clot stability should be ensured. A certain flap tension may support healing.

A new collagen matrix seems to be a suitable substitute for connective tissue grafts. The use of this material in studies resulted in an increase in the width of keratinized tissue and improvement of the colour match. In recession treatment around teeth the collagen matrix combined with a coronally advanced flap could be applied easy and fast, and reduced morbidity in comparison to connective tissue graft.

### **High level continued education in a perfect scenery**

In the Osteology Research Session several preclinical and clinical study projects funded by the Osteology Foundation were presented and gave answers to interesting, current scientific questions in regenerative dentistry. The large poster session enabled further insights into the big number of research projects from all over the world.

The beautiful Côte d'Azur and the congress centre located directly near the beach and the marina were a perfect setting for an inspiring congress offering high level scientific, clinical and practical continued education. The icing on the cake was the Osteology Movie Party on Friday where the participants were dancing and celebrating until late night.

#### **Press contact:**

Astrid Wicki  
General Manager Administration & Events

Osteology Foundation  
Landenbergstrasse 35  
CH-6002 Lucerne

Phone +41 41 368 44 40  
Fax +41 41 492 67 39  
Mobile +41 78 898 18 66

Astrid.wicki@osteology.org  
[www.osteology.org](http://www.osteology.org)