OsteoBiol® by Tecnoss

Surgical reconstruction of peri-implant bone defects with prehydrated and collagenated porcine bone and collagen barriers: case presentations

DEHISCENCES AND FENESTRATIONS

047

C Slotte[1]
N Lindfors[2]
U Nannmark[3]

ABSTRACT

One of the main concern related to implant treatment is the peri-implant bone loss mainly due to infection. Over the years, various techniques have been proposed in order to solve this problem and barrier technique has been shown to reduce defect depth in case presentations. Some reports have shown enhanced outcome with a combination of barriers and autogenous bone grafts in animal experiments as well as in humans. In this case report, the aim of the Authors was to evaluate the healing capacity of PCPB material in the surgical reconstruction of long-standing chronically infected peri-implant defects. To do so, PCPB particles (OsteoBiol® *mp3*®, Tecnoss®, Giaveno, Italy - granulometry: 600-1000 μm) were used as defect-filling material, combined with a bioresorbable collagen barrier (Bio-Gide®, Geistlich AG, Wolhusen, Switzerland) to cover the defects and the implanted bone mineral. In this case study, three patients enrolled for treatment of advanced peri-implant infection and bone loss around one or more implants participated. After local anesthesia and the preparation of the target sites, OsteoBiol® *mp3*® was applied into the defects. The Bio-Gide® barriers were adjusted and placed to cover defects and implants. After 6 and 12 months of healing, clinical and radiographic examinations were done. All defects healed uneventfully. At 6 months, probing depths were reduced by 3-4 mm with no bleeding on probing or pus formation. At 12 months, healthy peri-implant conditions were found. Intra-oral radiographs showed gain of the marginal bone level by 2-4 mm.

CONCLUSIONS

The results of this study show that PCPB have favorable properties enhancing bone regeneration in peri-implant bone defects. In contrast to other xenogenic materials, PCPB seems to activate the Bone Metabolic Units (BMU) by triggering phagocytosis of the graft material and subsequently favor deposition of new matrix and subsequent mineralization. After discussing the results, the Authors concluded that *"the encouraging treatment outcome of reconstructive surgery found here is based on three cases and must consequently be considered with caution. However, it can still serve as a promising topic for future short- and long-term studies"*.

1 | Department of Periodontology, Institute for Postgraduate Dental Education, Jönköping, Sweden
2 | Department of Oral and Maxillofacial Radiology, Institute for Postgraduate Dental Education, Jönköping, Sweden, and Department of Biomaterials, Institute for Clinical Sciences, Sahlgrenska Academy, Gothenburg University, Göteborg, Sweden
3 | Department of Medical Biochemistry and Cell Biology, Institute of Biomedicine, Sahlgrenska Academy, Gothenburg University, Göteborg, Sweden

ORIGINAL ARTICLE
Clinical Implant Dentistry and Related Research
2013 Oct;15(5):714-23

Grafted with

BONE SUBSTITUTE
OsteoBiol® *mp3*®

DEH