Reconstruction of an Edentulous Mandible after Losing 4 Implants by Severe Peri-implantitis

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Objectives

A 79-year-old female patient wearing a 10-year-old implant fixed restoration presented with an increasing bone loss caused by a progressive peri-implantitis, and she requested a new implant fixed prosthesis because she was not able to get a conventional prosthesis attached in her edentulous mandible. The basic situation was marked by a major 3D bone defect in area 35 to 45. The inflammation and the occurred explantation left quite an ungentle and scar-penetrated soft tissue. Based on a DVT diagnostic, a customized YxossCBR® titanium scaffold was constructed and the surgery performed (1. augmentation; 2. Implantation). Following the prosthetics were designed and incorporated (time interval in total of 9 months). The case aims to demonstrate a possible solution to move from a severe peri-implantitis to a complete restoration of the intraforaminal area using a new implant loaded prosthesis fixed in an edentulous mandible, under ambulant conditions. In addition, we will show an in house statistic about 27 implanted Yxoss meshes, including also failures and complications.

Conclusions

The Yxoss CBR® titanium scaffold is a 3D-printed scaffold that combines the advantages of titanium, 3D-imaging, planning -tools and -printing. Customized, it has an optimized fit and preserves volume for osteogenesis. Our in-house statistics show that despite a high rate of dehiscences 96,3% of cases could be augmented successfully. Further, 75% of the patients need to be implanted in a single session. Compared to upper jaw lower jaw has higher average volume (1482/1108mm³), longer wearing time (20/12 month) and more average implants per mesh (2,6/1,75).