

P-16 Treatment of Peri-implantitis Bone Defects using Submerged Guided Bone Regeneration Technique

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Although the long-term predictability of osseointegrated implants for tooth replacement has been documented by several longitudinal studies, various complications can occur. Progressive bone loss around functioning dental implants is of special concern, since it can jeopardize the long-term prognosis of the implants.

The principle of guided bone regeneration recently has been evaluated for the treatment of peri-implantitis. The present case report demonstrates the application of submerged membrane technique for the treatment of peri-implantitis bone defects.

Four patients presented with peri-implantitis and radiographically detectable angular defects around seven IMZ Implants. The implants had an average functional phase of 50 months, with a minimum of 40 months and a maximum of 55 months. The topography of the seven peri-implant bone defects involved a moderate to advanced circumferential intrabony defect.

The surgical therapy included removal of superstructure, flap reflection, granulation tissue removal, implant surface treatment with an air-powder abrasive system for 30 seconds, and e-PTFE membrane placement. Primary soft tissue closure was completed.

The patients were instructed to rinse twice daily for 2 weeks with 0.1% chlorhexidine solution, and an antibiotic regimen was prescribed. After a submerged healing period of 3 to 6 months, membrane removal and clinical evaluation of the treatment outcome were carried out.

Flap separation was not seen in any of seven treated peri-implant defects. Two sites without premature exposure of the membrane showed evidence of complete closure of the defect with hard bonelike tissue. Five implant sites in two patients developed fistulae after 8 weeks and three of them showed 100% fill at the time of membrane removal.

This case report suggests that significant bone regeneration around previously contaminated implants can be obtained in human peri-implantitis bone defects by a submerged membrane technique. This membrane technique can be used to regenerate the bone in peri-implantitis bone defects around ailing dental implants.