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# Regenerative Potential of Bovine Xenograft with Enamel Matrix Derivative in the Treatment of Peri-Implantitis

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**Background**: Experimental and clinical studies show no reliable regenerative treatment of peri-implantitis. The aim of this study was to examine the regenerative capacity of combined xenograft and enamel matrix derivatives in the management of peri-implantitis clinically.

**Methods**: 30 patients diagnosed with peri-implantitis (minimal probing depth of 4mm and radiographic bone loss of 20%) were included in the study. Clinical measurements recorded included probing depths, recession, radiographic bone fill, presence of gingival inflammation and bleeding on probing.

Following surgical access, the implants were initiallydebrided with alow power ultrasonic machine. The implant surfaces were thendecontaminated with 24% EDTA beforethe defects were filled with acocktail of bovine xenograft enamel matrix derivative (EMD) and doxycycline powder. The defects were finallycovered with a resorbable membrane and connective tissue grafts were placed if necessary, particularly around anterior implants. The clinical measurements were repeated after 12, 24 and 36 months of healing.

**Results:** A reduction in mean probing depth from 8.9 mm to 3.5 mm was noted at the 36th month measurement. The mean initial radiographic bone loss of 57% was reduced to 14.5% after 24 months. These results were statistically significant. There was no statistically significant difference in the recession values between the initial and 36 month measurements. The clinical symptoms of peri-implantitis such as gingival inflammation and bleeding on probing also improved over this time.

**Conclusion:** Regenerative treatment of peri-implant it is using a combined mixture of bovine xenograft, EMD and doxycycline achieved promising results. The benefits of this protocol incorporating EMD should be tested in randomized clinical trials.

**Biography:**

Faustino Tino Mercado finished his Postgraduate Diploma in Oral Pathology at the University of Queensland in 1997 and went on to finish his Masters in Dental Science in Periodontics in the same University in 2000. He was involved in the dental undergraduate and periodontal postgraduate training at the University of Queensland and more recently at the University of Sydney.