

20-year follow-up of a bony defect

Carlos E. Nemcovsky¹

Being one of the first users of Emdogain®, Prof. Nemcovsky comments on the product introduction and underlines the long-term success the product is able to provide in regenerative therapies.

Prof. Nemcovsky, Emdogain® was introduced in 1995 to the European market and is celebrating its 20th birthday this year. How did Emdogain change periodontology and how has it changed your work?

Nemcovsky: Real breakthroughs in clinical practice are those that provide a real treatment planning alternative. Accordingly, when Emdogain® was first introduced for clinical application in 1995 by Lars Hammarstrom, Lars Heijl and Stina Gestrelus, we were extremely doubtful that it would fulfill the high expectations and be such a breakthrough in periodontal regenerative treatment.

Have you been positively surprised?

Nemcovsky: Yes. Because, in the meantime, basic, pre-clinical and clinical research has clearly confirmed the enormous value of Emdogain® for periodontal treatment. And after 20 years, we realize that the clinical potential of Emdogain® is still to be explored. At this point, there is no alternative supported by a comparable level of scientific evidence. It is histologically and scientifically proven that the application of Emdogain® on the exposed root surface is able to achieve a biologically-induced periodontal regeneration. Cases with distinctive periodontal destruction may be successfully treated and maintained in health for long periods of time by providing a more biologically-oriented treatment compared to tooth extraction and implant placement.

How do you see Emdogain®'s role in future periodontology?

Nemcovsky: It is the never-ending quest of Periodontology to explore new, target-directed periodontal treatment alternatives, and it is difficult to envisage possible next-generation compounds that will be able to further improve treatment outcomes. But it can be stated that Emdogain® was and continues to be a real breakthrough in periodontal treatment.

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Initial situation

A systemically healthy 17-year old patient was diagnosed with a localized severe aggressive periodontitis. A pre-operative X-ray revealed an intra-bony defect in the mesial aspect of the first lower right molar (Fig. 1). Following the initial preparation, a remaining 10mm-periodontal pocket was evident (Fig. 2).

Procedure

Treatment planning: A regenerative periodontal surgery with Emdogain® and bone graft was scheduled.

Surgical procedure

Following intrasulcular incisions and a full thickness flap elevation, thorough debridement was performed. An intrabony lesion, which could be classified as a 1-wall defect

in the coronal area, while in the apical area, a 2- or 3-wall defect became evident (Fig. 3), 10 mm CAL was confirmed. Root conditioning with PrefGel® was performed. After rinsing and slightly drying the area with gauze pads, Emdogain® was applied on the exposed root surface and into the defect (Figs. 4 and 5). Bone grafting was performed and the area sutured to achieve primary soft tissue closure (Fig. 6).

Treatment outcome

An immediate post-operative radiograph captured the bone graft in place (Fig. 7). The next sequence of radiographs shows the gradual bone fill of the defect at six months (Fig. 8), 3 years (Fig. 9), seven years (Fig. 10) and twenty years (Fig. 11).

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