**Science Flash**

10-Year results with Straumann® Emdogain in intra-bony defects

**Scientific source**

**Study design**
- Randomized, controlled, prospective single centre study
- 38 patients with 10-year follow-up
- Defects with probing depth of ≥ 6 mm and intra-bony component ≥ 3 mm
- 4 treatment modalities (EMD, EMD+GTR, GTR, OFD)
- Regular maintenance programme (4 visits per year)

**Results**
- All treatment modalities showed statistically significant CAL gains after 1 and 10 years
- No treatment modality demonstrated statistically significant change from 1 to 10 years

**Conclusion**
- Significantly higher CAL gain with Straumann® Emdogain vs. OFD
- Clinical results can be maintained over 10 years
- Adding a membrane (GTR) to Emdogain does not improve results

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*CAL gain (mm)*

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<th>EMD</th>
<th>GTR</th>
<th>OFD</th>
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<tbody>
<tr>
<td>1 year</td>
<td></td>
<td></td>
<td>2.0</td>
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<tr>
<td>10 years</td>
<td>2.9</td>
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<td>3.2</td>
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*Statistically significant difference in CAL gain between OFD and all other treatments approaches*

EMD = Straumann® Emdogain
GTR = Guided Tissue Regeneration (membrane)
OFD = Open Flap Debridement

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*Statistically significant difference in CAL gain between OFD and all other treatments approaches*
ABSTRACT

Ten-year results following treatment of intra-bony defects with enamel matrix proteins and guided tissue regeneration.

Sculean A, Kiss A, Miliauskaite A, Schwarz F, Arweiler NB, Hannig M.

BACKGROUND: Surgery utilizing an enamel matrix protein derivative (EMD) or guided tissue regeneration (GTR) has been shown to promote periodontal regeneration.

AIM: To evaluate the 10-year results following treatment with EMD, GTR, EMD+GTR, and open flap debridement (OFD).

MATERIAL AND METHODS: Thirty-eight patients out of an initial group of 56 participants were treated with one of the four modalities. Results were evaluated before surgery, at 1 year, and at 10 years. Primary outcome variable was CAL change.

RESULTS: Treatment with EMD yielded a mean CAL gain of 3.4 +/- 1.0 mm (p<0.001) and 2.9 +/- 1.4 mm (p<0.001) at 1 and 10 years, respectively. GTR resulted in a mean CAL gain of 3.2 +/- 1.4 (p<0.001) at 1 year and 2.8 +/- 1.2 mm (p<0.001) at 10 years. Mean CAL gain in the EMD+GTR group was of 3.3 +/- 1.1 mm (p<0.001) and 2.9 +/- 1.2 mm (p<0.001) at 1 and 10 years, respectively. Treatment with OFD demonstrated a mean CAL gain of 2.0 +/- 1.2 mm (p<0.01) at 1 year and 1.8 +/- 1.1 mm (p<0.01) at 10 years. Compared with OFD, the three regenerative treatments resulted in statistically significant (p<0.05) higher CAL gain, at both 1 and 10 years. The CAL change between 1 and 10 years did not present statistically significant differences in any of the four groups.

CONCLUSION: The present results indicate that the clinical outcomes obtained with all four approaches can be maintained over a period of 10 years.