SCIENCE FLASH
TREATMENT OF CLASS II FURCATION WITH STRAUMANN® EMDOGAIN

Scientific source

Study design
- Prospective, multicenter, randomized controlled clinical trial
- Indication: buccal class II furcations in mandibular molars
- 45 patients with 90 contra-lateral defects (split mouth design)
- 2 treatment modalities: Emdogain (test) vs. bioresorbable Membrane (control)
- Defect dimensions measured at surgery and during re-entry at 14 months

Results

<table>
<thead>
<tr>
<th>Median Reduction of Horizontal Furcation</th>
<th>N° of patients</th>
<th>Furcation Closure</th>
<th>Pain/Swelling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complete</td>
<td>Partial</td>
</tr>
<tr>
<td>Emdogain</td>
<td>1.8</td>
<td>27</td>
<td>11</td>
</tr>
<tr>
<td>Membrane</td>
<td>2.6</td>
<td>27</td>
<td>9</td>
</tr>
</tbody>
</table>

p = 0.033

Conclusion
- Significantly greater reduction in horizontal furcation depth with Emdogain
- Complete defect closure in 18% of cases with Emdogain and 7% with membrane
- Lower incidence of postoperative pain/swelling following Emdogain use
ABSTRACT

Treatment of Class II Furcation with Straumann® Emdogain

Jepsen S.

Background: The objective of this multicenter, randomized trial was to compare enamel matrix derivative (EMD; test) with barrier membranes (control) for the treatment of mandibular buccal Class II furcation defects.

Methods: Forty-five patients with 90 comparable defects on contralateral molars were included. Defects were randomly assigned to EMD or bioabsorbable barrier membrane; the contralateral defect received the alternative treatment. Assessments at baseline and 8 and 14 months included gingival margin levels, probing depths, bleeding on probing, vertical attachment levels, and vertical bone sounding from a stent at five buccal sites/tooth. Defect dimensions were recorded at surgery and during reentry at 14 months. Change of open horizontal furcation depth was the primary outcome variable. Adverse reactions and patient perceptions were also noted.

Results: Both treatment modalities led to significant clinical improvements. The median reduction of open horizontal furcation depth was 2.8 mm with the corresponding interquartile interval (1.5 mm, 3.5 mm) at test sites compared with 1.8 mm (1.0 mm, 2.8 mm) at control sites. The Hodges-Lehmann estimator of the advantage (reduction test versus control) was 0.75 mm (95% confidence interval [CI]: 0.125 mm, 1.375 mm, P = 0.033, Wilcoxon). The frequency of complete furcation closure was 8/45 (test) and 3/45 (control); partial closure, 27/45 in both groups; no change, 9/45 and 11/45, respectively; and deterioration, 1/45 and 4/45, respectively. The frequency of no pain or no swelling at 1 week post-surgery was 62% and 44%, respectively, at the test sites and 12% and 6% at the control sites.

Conclusion: There was a significantly greater reduction in horizontal furcation depth and a comparatively lower incidence of postoperative pain/swelling following enamel matrix derivative compared to membrane therapy. J Periodontol 2004; 75:1150-1160.

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