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<tr>
<td>Author(s)</td>
<td>Kan, KW; Liu, JKS; Leung, WK; Lo, ECM; Corbet, EF</td>
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<td>Citation</td>
<td>The 77th General Session and Exhibition of the International Association for Dental Research, Vancouver, BC, Canada, 10-14 March 1999. In Journal of Dental Research, 1999, v. 78 Sp Iss, p. 138, abstract no. 261</td>
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Prevention of Periodontal Pockets on Mandibular Second Molars After Third Molar Removal


Faculty of Dentistry, The University of Hong Kong
Aim of Study

To investigate the effects of periodontal care delivered to mandibular 2nd molars along with impacted mandibular 3rd molar surgical removal.
Objective

To compare the 6-month treatment outcomes in terms of periodontal condition of adjacent mandibular 2nd molars following conventional extraction and following extraction along with periodontal interventions.
MATERIALS & METHODS
Inclusion Criteria

Patient selection

- Referred from Reception Clinic of PPDH
- Not under comprehensive care during the research period
- No medical history that may affect periodontal healing
- No CPI > 3 (excluding the mandibular 2nd molar)

Each patient contributed only one impacted mandibular 3rd molar removal and one adjacent 2nd molar to this study
Inclusion Criteria

Tooth Selection

Mandibular 3\textsuperscript{rd} Molar
- mesio-angular Impaction (>30\textdegree to long axis of 2\textsuperscript{nd} Molar)
- no sign of cystic / neoplastic change

Adjacent Mandibular 2\textsuperscript{nd} Molar
- must be present and EPT +ve
- distal PPD *5mm and BOP
- Mobility * 1

Crestal Radiolucency
- between the 2\textsuperscript{nd} & 3\textsuperscript{rd} molar (other than follicular space) apparent on pre-extraction Panoramic Radiograph
Study Design

Control Group

- OHI + Scaling + caries stabilization
- 3rd molar extraction
- 6-month post-extraction examination

- 4th week
- 0 week
- 6 week
- 12 week
- 18 week
- 24 week

Test Group

- OHI + Scaling + caries stabilization
- 3rd molar extraction
- Specific OHI + Deplaque
- 6-month post-extraction examination
- Root surface debridement + Chemical plaque control for first 6 weeks
RESULTS
# Subject Demography

<table>
<thead>
<tr>
<th></th>
<th>Test Group</th>
<th>Control Group</th>
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</thead>
<tbody>
<tr>
<td>No. subjects</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>Mean age*</td>
<td>35.7*6.8</td>
<td>28.9*7.3</td>
</tr>
<tr>
<td>Gender</td>
<td>36% male</td>
<td>63% male</td>
</tr>
<tr>
<td>Smoker</td>
<td>22%</td>
<td>38%</td>
</tr>
<tr>
<td>Mandibular 2nd molar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>left side</td>
<td>57%</td>
<td>38%</td>
</tr>
<tr>
<td>distal caries lesion</td>
<td>21%</td>
<td>38%</td>
</tr>
<tr>
<td>distal restoration</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

* p<0.05

No loss of subject throughout the study
Local Plaque Detected

Surfaces
- mesial
- buccal
- distal
- lingual

% subjects

Test
Control

*p<0.05
Bleeding On Probing

% BOP

Sites

MB  B  DB  D  DL  L  ML

Test  Control

* p<0.05
Suppuration On Probing

% SOP

Test
Control

Sites

MB  B  DB  D  DL  L  ML

0  2  4  6  8  10  12  14  16  18  20
Probing Pocket Depth

Mean PPD (mm)

Sites

* p<0.05
Reported Pain or Discomfort in region during preceding 2 months

% Pain/Discomfort

* p<0.05
DISCUSSIONS & CONCLUSIONS
Periodontal Interventions,
in terms of root surface debridement of mandibular 2\textsuperscript{nd} molars, at the time of impacted mandibular 3\textsuperscript{rd} molar removal procedures, and a follow-up plaque control programme,
were found to be effective in promoting periodontal healing of periodontally diseased mandibular 2\textsuperscript{nd} molars in this 6-month clinical study.
Less plaque deposition
Less BOP
Less SOP
Shallower PPD
Greater Recession
Less Reported Pain/Discomfort
Clinical Applications

- Pre-extraction assessment (Clinical & Radiographic)
- Root surface debridement of diseased Mandibular 2^{nd} Molars
- Post-extraction personal oral hygiene
- Evaluation of periodontal condition
- Supportive Periodontal Care