Third Molar Surgery: Risk Factors and Complications after Removal of Third Molars

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Abstract

Background: Surgical removal of third most usual involvement in the oral surgery. Third molar surgery is commonly related with significantly complications after extraction that have social and medical health collision. This study was organized to examine the expected complications after the extraction of third molar/wisdom tooth.

Aim: The objective of this prospective study was to observe the expected complications after removal of third molar and the risk elements that were related to the complications at Nishtar Institute of Dentistry, Multan.

Methods: In this prospective study, conducted at Nishtar Institute of Dentistry Multan w.e.f. 06.05.2017 to 05.05.2018. Included one hundred and sixty four patients aged of 17 to 41 years. In which men were 64 and 100 were women (39.02% men and 60.97% women). The mean age calculated 22.9±4.1 years. All patients have surgical extraction of wisdom tooth. We examined the complications occurred in the third to 12th day of after removal of third molar. These complications were noted as swelling of mouth, Severe pain, continuous bleeding, trismus, infections and fracture. Patients with other medical problems except third molar surgery were excluded in this study.

Results: In this study we observed most common complications like, swelling, pain and trismus. We found problem of dry socket in 20(12.2%) patients and 5(3.04%) patients were nerve obstacles. We observed most instant and late problems in women and older age patients. Usually instant and late problems were related to removal of 2 molars, already have pericoronitis, time duration in surgical extraction of tooth, displacement of tooth.

Conclusion: The most common instant and late problems/complications found after surgical extraction of third molar were trismus, severe pain, operation time duration, surgical oscillate, extraction of bone and sectioning of tooth could forecast and a collision on the occurrence of complications after surgical removal of third molar or wisdom tooth. We observed complications mostly in females and other patients after the removal of third molar.

Keywords: Severe pain, Dry Socket, Swelling, Removal of third molar and complications after removal.

Introduction: In oral surgery the removal of third molar is most common.[2] It is commonly related with significantly problems after extraction and have social and medical health collision.[3,4] These problems comprises swelling on object, severe pain, dry socket, fracture, infections, trismus, hemorrhage, communicational oral problems, damaged of teeth and displacement of teeth.[5,6] Elements or factors that affected the incidence of the problems after extraction of third molar contains their gender, age, smoking history(duration), use of oral drugs, bad oral health, due to pericoronitis, connection of tooth with alveolar nerve, types of conditions of tooth, surgical equipment and surgeon experience and techniques, operation time duration, use of antiseptic and intrasocket drugs.[5,6]

After surgical treatment, problems/complications of affected tooth still persist the occurred element or factors causes in patients physically ease and healing of subjected organ.

The comprehension knowledge of different techniques would help to prevent the complications after removal of TM(third molar).[6]

Methods: This study was conducted at Nishtar Institute of Dentistry, Multan, for the period from 06.05.2017 to 05.05.2018. In this prospective study we included one hundred and sixty four patients aged of 17 to 41 years. In which men were 64(39.02%) and 100(60.97%) patients were women. The mean age calculated 27.9±10.1 years. All patients were examined properly with radiography before and after removal of third molar (surgical). Previous history of complaints regarding third molar and personal info of patient before surgery were included in this study, such as gender, age, education, name, occupation, marital status and residence. The angle measurement of the subjected tooth regarding with the longitudinal axis of the 2nd molar was examined from orthopantomography and resulted as classification of winter.[7] Patients with other medical problems except third molar surgery were excluded in this study. All patients included in this study have surgical extraction of lower third molar.

After surgical extractions the observation noted as the total number of operated teeth, time consumption during surgery, flap type, need of the
removal of bone, tooth sectioning and instant and late problems of the third molar surgery.

The observed problems or complication contains trismus, swelling, severe pain, fracture, severe bleeding, dry socket, infections. The instant problems were observed during the first third days after the surgical extraction and late problems were indicated from 5 to 12th day of surgical extraction. The data were analyzed by SPSS software.

Table 1. Patients aged range and percentage

<table>
<thead>
<tr>
<th>Participants age</th>
<th>Patients No</th>
<th>%age</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-21</td>
<td>10</td>
<td>6.09</td>
</tr>
<tr>
<td>22-26</td>
<td>13</td>
<td>7.92</td>
</tr>
<tr>
<td>27-31</td>
<td>21</td>
<td>12.8</td>
</tr>
<tr>
<td>32-36</td>
<td>57</td>
<td>34.76</td>
</tr>
<tr>
<td>37-41</td>
<td>63</td>
<td>38.41</td>
</tr>
<tr>
<td>Women</td>
<td>100</td>
<td>60.97</td>
</tr>
<tr>
<td>Men</td>
<td>64</td>
<td>39.02</td>
</tr>
</tbody>
</table>

Results: In this study 52(31.7%) patients had extraction of lower third molar in which 30 were left and 22 were right third molar. 112(68.29%) patients were both third molars extraction.
We observed most common complications such as swelling, trismus and severe pain, infections and fracture, problem of dry socket was observed in 20(12.2%) patient and five patients were nerve obstacles.

We found mostly instant or late problems in women and older aged patients. Such as removal of both molars, already have pericoronitis, surgical time duration, surgical treatment with bone extraction, sectioning of tooth. Also, envelop flaps were apply in 55 patients in which 35 were women and 20 were men, need for removal of bone in 136 patients in which 90 were women and 46 were men, 62 patients were need of tooth sectioning and 108 patients were need of flaps with vertical incision.

<table>
<thead>
<tr>
<th>Characteristics Applying in all patients</th>
<th>Patients No.</th>
<th>%age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Envelop flaps</td>
<td>55</td>
<td>33.53</td>
</tr>
<tr>
<td>Bone extraction</td>
<td>136</td>
<td>82.92</td>
</tr>
<tr>
<td>Tooth sectioning</td>
<td>62</td>
<td>37.8</td>
</tr>
<tr>
<td>Flaps with vertical incision</td>
<td>108</td>
<td>65.85</td>
</tr>
</tbody>
</table>

Discussion: In this study we observed that few factors have involved in complication after surgical extraction of third molars. Female patients have more complication this is same to the other studies regarding extraction of third molars. It is because women have small jaw as compared to the men, Also status of hormones and dense bones could make the operations more hard and complicated.

Patients 7 to 12th days and older patients has more complications as similar to other studies. This may be cause to less capacity of healing the wounds, bone density make operation more traumatic.

In this study we observed most instant complication and problems occurred due to the long time duration of operation, surgical treatment with bone extraction, removal without sectioning.
may be the causes of making operation more difficult and this will be the risk factors for occurrence of complications after the surgical extraction of third molars. These observations contrast to other studies.[8,12]
In our study we observed problem of dry socket in 20(12.2%) patients and five patients had nerve obstacles.
This study depends on evaluation of complication after surgical extraction of third molar in all patients, need for removal of bone and sectioning of subjected teeth, flap utilization. We observed factors related to complications in patients such as already have paricoronitis, long time duration in surgical extraction, without tooth sectioning. Complications noted as severe pain, light pain, trismus, swelling, infections and fracture.
**Conclusion:** The most common instant and old problems were trismus, light and severe pain, swelling of face and factors involve in these before operation problems, operation time duration, surgical techniques, surgeon experience, extraction of bone, tooth sectioning. We observed problems mostly in women and older patients after the removal of third molar by surgery.

**References:**