

Original Research

Assessment of incidence of complications after extraction of impacted molar

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ABSTRACT:

Background: Extraction of third molars is one of the most common procedures performed by oral surgeons. The present study was conducted for assessing the incidence of complications after extraction of impacted molar. **Materials & methods:** A total of 82 patients who underwent minor surgical procedure for removal of impacted third molar were enrolled. Postoperative follow-up was done and incidence of complications was assessed. Nerve injury was assessed by an abnormal lingual or the labial sensation. The diagnosis for alveolar osteitis or dry socket was made on the basis of persistent throbbing pain and exposure of bare alveolar bone, presenting 48-72 h post-surgery. All the results were recorded in Microsoft excel sheet. **Results:** In the present study, a total of 82 patients were analyzed. Out of these 82 patients, complications occurred in 15.86 percent of the patients. Out of 13 patients with presence of complications, dry socket, nerve injury, delayed healing, Trismus and damage to adjacent tooth was seen in 38.46%, 23.08%, 15.38%, 15.38% and 7.69% of the patients. **Conclusion:** Dry socket and nerve injury are the most common type of injury associated with removal of impacted molar.

Key words: Impacted molar, Dry socket

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INTRODUCTION

Extraction of third molars is one of the most common procedures performed by oral surgeons. Generally, these surgeries do not encounter difficulties but at times can result in complications; a complication rate of 4.6–30.9% following the extraction of third molars is reported in the literature. Complications may occur intraoperatively or develop during the postoperative period. Intraoperative complications may include bleeding, damage to adjacent teeth, injury to surrounding tissues, displacement of teeth into adjacent spaces, fracture of the root, maxillary tuberosity or the mandible. Postoperative complications may include swelling, pain, trismus, prolonged bleeding, dry socket, infection and sensory alterations of the inferior alveolar nerve (IAN) or lingual nerve (LN).¹⁻³

Surgical removal of third molars is often associated with postoperative pain, swelling, and trismus. Factors thought to influence the incidence of complications after third molar removal include age, gender, medical history, oral contraceptives, presence of pericoronitis,

poor oral hygiene, smoking, type of impaction, relationship of third molar to the inferior alveolar nerve, surgical time, surgical technique, surgeon experience, use of perioperative antibiotics, use of topical antiseptics, use of intra-socket medications, and anesthetic technique.⁴⁻⁶ Hence; the present study was conducted for assessing the incidence of complications after extraction of impacted molar.

MATERIALS & METHODS

The present study was conducted for assessing the incidence of complications after extraction of impacted molar. A total of 82 patients who underwent minor surgical procedure for removal of impacted third molar were enrolled. Postoperative follow-up was done and incidence of complications was assessed. Nerve injury was assessed by an abnormal lingual or the labial sensation. The diagnosis for alveolar osteitis or dry socket was made on the basis of persistent throbbing pain and exposure of bare alveolar bone, presenting 48-72 h post-surgery. All

the results were recorded in Microsoft excel sheet. All the results were analyzed by SPSS software.

RESULTS

In the present study, a total of 82 patients were analyzed. Out of these 82 patients, complications

occurred in 15.86 percent of the patients. Out of 13 patients with presence of complications, dry socket, nerve injury, delayed healing, Trismus and damage to adjacent tooth was seen in 38.46%, 23.08%, 15.38%, 15.38% and 7.69% of the patients.

Table 1: Incidence of complications

Variable	Number	Percentage
Complications	13	15.86
Total impactions	82	100

Table 2: Type of complications (n=13)

Type of complications	Number	Percentage
Dry socket	5	38.46
Nerve injury	3	23.08
Delayed healing	2	15.38
Trismus	2	15.38
Damaged adjacent tooth	1	7.69

DISCUSSION

The extraction of impacted mandibular third molars is a common procedure in oral and maxillofacial surgery. The reasons for extracting these teeth include acute or chronic pericoronitis, presence of cysts or a tumour, periodontal problems and presence of a carious lesion on the second or third mandibular molar. Several complications are associated with extraction of impacted mandibular third molars, the most common being alveolitis, infection and paresthesia of the inferior alveolar nerve. Hemorrhage during or after surgery and paresthesia of the lingual nerve are relatively rare; surgical technique seems to play a major role in the occurrence of the latter problem. Most of these problems are temporary, but in some cases, paresthesia may become permanent and lead to functional problems.⁷⁻⁹ Hence; the present study was conducted for assessing the incidence of complications after extraction of impacted molar.

In the present study, a total of 82 patients were analyzed. Out of these 82 patients, complications occurred in 15.86 percent of the patients. Sayed N et al investigated complications associated with the extraction of third molars. A total of 1,116 third molars (56% mandibular and 44% maxillary) were extracted and the majority (67.7%) was from female patients. The mean age at extraction was 24 ± 5 years and most patients (77.7%) were 20–29 years old. The intraoperative and postoperative complication rates were 3.7% and 8.3%, respectively. The intraoperative complications included tuberosity fracture (1.2%), root fracture (1.1%), bleeding (0.7%), soft tissue injury (0.5%) and adjacent tooth damage (0.2%). Postoperative complications were sensory nerve injuries (7.2%), swelling/pain/trismus (0.6%) and dry socket (0.5%). Nerve injury was temporary in 41 patients and permanent in four cases. Most complications resulting from third molar extractions were minor and within the reported ranges in the scientific literature.¹⁰

In the present study, out of 13 patients with presence of complications, dry socket, nerve injury, delayed healing, Trismus and damage to adjacent tooth was seen in 38.46%, 23.08%, 15.38%, 15.38% and 7.69% of the patients. Osunde O et al determined the surgical indications and risk factors for complications of third molar surgery. A total of 330 impacted teeth were extracted from 250 patients. Male comprises (104/250 [41.6%]) and female (146/250 [58.4%]). The mesioangular (176/330 [53.4%]) and distoangular (73/330 [22.1%]) impactions were the commonest types. Recurrent pericoronitis (154/330 [46.7%]) was the most common indication for extraction. The complications were delayed healing (19/330 [5.8%]), alveolar osteitis (9/330 [2.7%]) and injury to alveolar nerve (2/330 [0.6%]). Cigarette smoking ($P < 0.001$), Oral contraceptives use ($P = 0.01$), age of the patient ($P = 0.03$) and the surgeon's experience ($P = 0.04$) were found to be significantly associated with the development of alveolar osteitis; nerves injuries were significantly associated with the raising of a lingual flap ($P < 0.001$) and the technique of surgery ($P \leq 0.001$). The age of the patient, cigarette smoking and oral contraceptive use at the time of surgery are some of the factors affecting outcome in third molar surgery.¹¹

CONCLUSION

Dry socket and nerve injury are the most common type of injury associated with removal of impacted molar.

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