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Original Research

Assessment of complications of tooth extraction- A clinical study

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ABSTRACT

Background: Tooth extraction is one of the common procedures undertaken in dental surgery clinics. The present study was conducted to assess complications of dental extraction in given population. **Materials & Methods:** The present study was conducted on 112 patients of both genders who underwent dental tooth extraction due to various reasons. Patients underwent tooth extraction following standardized surgical procedures. Complications were recorded in accordance with their presentation either intra operative or postoperative. **Results:** Out of 112 patients, males were 60 and females were 62. In males, intraoperative complications were 12 and post operative were 8. In females, intraoperative complications were 5 and post operative were 7. The difference was significant ($P < 0.05$). Common complications were dry socket in 7, oro- nasal communication in 3, hematoma in 2, facial nerve anesthesia in 4, Osteomyelitis in 3, roots left in 5, canine space infection seen in 2, swallowing of tooth in 1 and foreign body granuloma in 1. The difference was significant ($P < 0.05$). **Conclusion:** Most common complication was dry socket, oro- nasal communication, hematoma, facial nerve anesthesia, osteomyelitis and roots left.

Key words: Complication, dry socket, osteomyelitis

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INTRODUCTION

Tooth extraction is one of the common procedures undertaken in dental surgery clinics. Post-extraction complications generally do not occur; however, there are times when the dentist is faced with post-extraction complications. In such instances, the dentist should be aware of the treatment procedures and management of post-extraction complication.¹ Simple extractions of teeth can become complicated when teeth are fractured. Adequate lighting, accessibility, visibility and surgical techniques are considered to be important in a tooth extraction procedure. Radiographs before tooth extraction and also during procedure are of great value to assist with tooth extractions.² Many serious complications may occur during or after tooth extraction. Aspiration of a tooth is one of the serious complications especially in children and necessitates prompt recognition and early management to minimize the major

and sometimes even fatal consequences. Patients requiring dental extraction who are debilitated by systemic diseases are of great concern.³ A bleeding tooth socket has been reported as the initial sign and presentation of chronic disseminated intravascular coagulopathy. Adequate training is imparted to the dental doctors during the course of their curriculum and during training in internship. The dentist should be aware of the treatment procedures and management of post-extraction complication.⁴ The present study was conducted to assess complications of dental extraction in given population.

MATERIALS & METHODS

The present study was conducted in the Department of Oral & Maxillofacial surgery, Govt. Dental College Srinagar. It comprised of 112 patients of both genders who underwent dental tooth

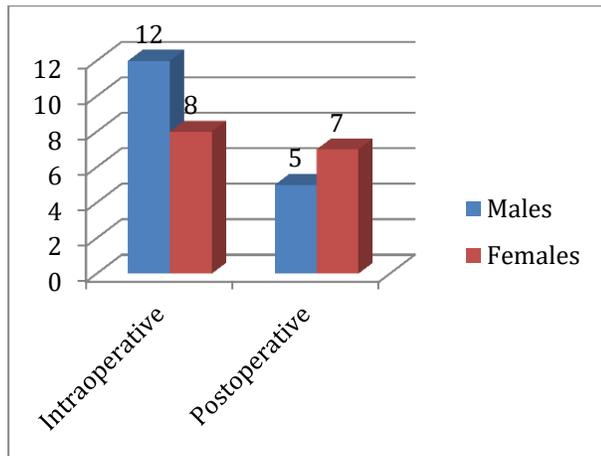
extraction due to various reasons. All the participants were well informed regarding the study and written consent was obtained. General information such as name, age, gender etc. was recorded. Patients underwent tooth extraction following standardized surgical procedures. Complications were recorded in accordance with their presentation either intra operative or postoperative. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant. Results

Table I Distribution of patients

Total- 112		
Gender	Males	Females
Number	60	62

Table I shows that out of 112 patients, males were 60 and females were 62.

Graph I Type of complications



Graph I shows that in males, intraoperative complications were 12 and post operative were 8. In females, intraoperative complications were 5 and post operative were 7. The difference was significant (P< 0.05).

DISCUSSION

In dentistry complications are unwanted consequences experienced during oral health care delivery. Complications either intra operative or postoperative are frustrating and daunting experiences to both patients and doctors. Upcoming advances in science and technology in medical and dental fields are aimed at quality care and treatment. Tooth extractions may be followed by several known complications. Among intraoperative complications

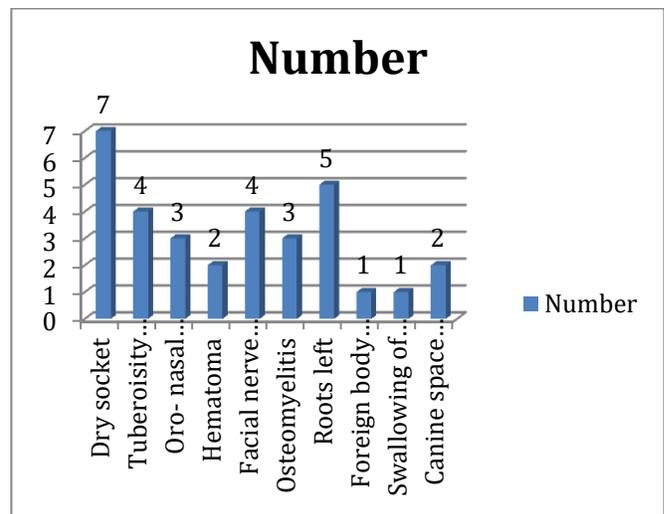
Table II Different complications in patients

Complications	Number	P value
Dry socket	7	0.05
Tuberoisity fracture	4	
Oro- nasal communication	3	

Hematoma	2
Facial nerve anesthesia	4
Osteomyelitis	3
Roots left	5
Foreign body granuloma	1
Swallowing of tooth	1
Canine space infection	2

Table II, graph II shows that common complications were dry socket in 7, oro- nasal communication in 3, hematoma in 2, facial nerve anesthesia in 4, Osteomyelitis in 3, roots left in 5, canine space infection seen in 2, swallowing of tooth in 1 and foreign body granuloma in 1. The difference was significant (P< 0.05).

Graph II Different complications in patients



encountered the following are included: needle breaks, bleeding, crown or root fractures, damage to other teeth, alveolar fractures, jaw fractures, soft tissue abrasions, gingival tears, foreign body aspirations, tooth displacement into the maxillary sinus or soft tissue and other spaces and pain.⁵

Immediate post-operative complications include: bleeding, pain, infections, hematomas, soft tissue emphysema. Late postoperative complications include: epulis granulomatosum, trismus, pain, paraesthesias, temporomandibular joint disorders, sinus communications, and alveolar osteitis. There is a higher risk for such complications due to the inconvenient circumstances and due to the medical complexity of patients treated at bedside.⁶ The present study was conducted to assess complications of dental extraction in given population.

We found that out of 112 patients, males were 60 and females were 62. In males, intraoperative complications were 12 and post operative were 8. In females, intraoperative complications were 5 and post operative were 7. Osborn et al⁷ in a study of complications after third molar removal found that alveolar osteitis occurred in 4.2% and was a common complication followed by sensation disorder (1.5%). Pogrel et al⁸ for the clinical evaluation of extraction site healing had shown that localized osteitis was present in 8.2% of cases, followed by acutely infected alveolus in 1.6% and acutely inflamed alveolus in 1.2% of the patients. Most

of the complications were present in the molars (60.0%) and females were more commonly affected by the complications than males. In our study we found that 77.5% of patients had adequate knowledge of management of dry socket. We observed that common complications were dry socket in 7, oro- nasal communication in 3, hematoma in 2, facial nerve anesthesia in 4, Osteomyelitis in 3, roots left in 5, canine space infection seen in 2, swallowing of tooth in 1 and foreign body granuloma in 1. Manor et al⁹ found that 90 complications (1.06%) were observed. 53(58.89%) complications were intraoperative and 37(41.12%) complications were postoperative. 60(0.84%) complications were observed in the tertiary center and 30 (2.3%) complications were observed in the peripheral centers and the difference was highly significant. The most frequent complication in the tertiary centre was fracture of tuberosity (0.15%) and in the peripheral centers it was 'roots left' (0.77%). Prevalence of 'roots left', injury to adjacent tooth and postoperative hemorrhage was significantly high in peripheral centers. Meijer et al¹⁰ found that 111 patients met the inclusion criteria, 54 males and 57 females. The mean age was 77 in the study group and 69 in the control group. The patients underwent 162 dental extractions. Most of the patients had neurologic and cognitive diseases like dementia, Parkinson, s/p brain stroke as well as hypertension and diabetes. Indications for extractions included hopeless teeth, periodontitis and dental caries, there was no need for bone removal or flap elevation. The rate of minor complications was found in 10% of the patients intraoperatively and postoperatively. All the complications were solved on the spot by the dental staff. None of the patients had life threatening complications or other conditions requiring hospital based treatments.

CONCLUSION

Most common complication was was dry socket, oro- nasal communication, hematoma, facial nerve anesthesia, osteomyelitis and roots left.

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