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Original Research

Assessment of various indicators for removal of impacted mandibular third molars- An observational study

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ABSTRACT
Background: Surgical removal of mandibular and maxillary third molar impactions is a most frequent procedure in the routine dentistry. The present study was conducted to various indicators for removal of impacted mandibular third molars. **Materials & Methods:** The present study was conducted on 312 patients of mandibular impacted third molars of both genders. Various indicators for removal of impacted mandibular third molars were also recorded. All patients were treated following standardized surgical protocol. **Results:** Out of 312 patients, males were 150 and females were 162. Maximum cases were seen in age group 18-24 years (180) followed by 25-34 years (120) and >35 years (12). The difference was significant (P< 0.05). The most common reason for removal of mandibular third molar was pericoronitis in 160, pulpitis in 45, periodontitis in 40, caries 2nd molar in 30, cysts/tumors in 20, root resorption in 10, orthodontics in 5 and unknown in 2. The difference was significant (P< 0.05). **Conclusion:** Authors found that most common reason for removal of mandibular third molar was pericoronitis, pulpitis, periodontitis, caries 2nd molar, cysts/tumors, root resorption, orthodontics and unknown.
Key words: Impacted, Periodontitis, Pericoronitis

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INTRODUCTION

Surgical removal of mandibular and maxillary third molar impactions is a most frequent procedure in the routine dentistry. Surgery for its removal by oral and maxillofacial surgeons is the most common performed surgical procedure might be due to pathological changes or prophylactic purposes.[1] A comprehensive preoperative evaluation is mandatory to avoid unpleasant complications related to their existence or during their surgical removal. Consequently, a proper clinical and radiographic evaluation is obligatory which gives the important information associated to the third molar and its neighboring vital structures.[2]

According to Elsey and Rock impaction of the third molar is occurring in up to 73% of young adults in Europe. Generally, third molars have been found to erupt between the ages of 17 and 21 years. Furthermore, third molar eruption time have been reported to vary with races. For example, mandibular third molars may erupt as early as 14 years of age in Nigerians, and up to the age of 26 years in Europeans. The average age for the eruption of mandibular third molars in male is approximately 3 to 6 months ahead of females.[3]

The decision to remove a third molar may often not be a simple and straight forward one. A surgeon must weigh the risks and benefits associated with the surgical removal of third molars. It, thus, becomes necessary to be aware of the specific indications wherein the removal of a lower third molar is justifiable.[4] The present study was conducted to

various indicators for removal of impacted mandibular third molars.

MATERIALS & METHODS

The present study was conducted in the department of Oral & Maxillofacial surgery. It comprised of 312 patients of mandibular impacted third molars of both genders. All were informed regarding the study. Ethical approval was obtained from institute prior to the study.

General information such as name, age, gender etc. was recorded. In all patients, a thorough clinical examination was performed. Intraoral radiographs were taken preferably IOPARs. Various indicators for removal of impacted mandibular third molars were also recorded. All patients were treated following standardized surgical protocol. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 312		
Gender	**Males**	**Females**
Number	150	162

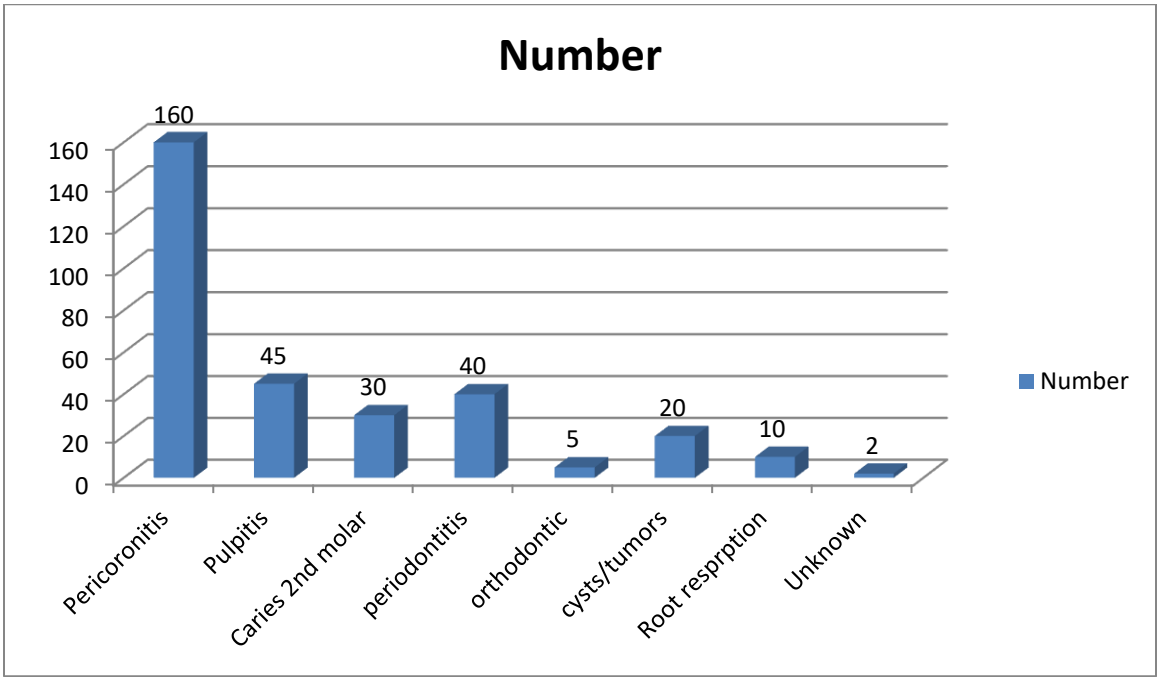
Table I shows that out of 312 patients, males were 150 and females were 162.

Table II Age wise distribution of cases

Age group (Years)	**Number**	**P value**
18-24	180	0.01
25-34	120	
>35	12	

Table II shows that maximum cases were seen in age group 18-24 years (180) followed by 25-34 years (120) and >35 years (12). The difference was significant (P< 0.05).

Graph I Indicator for removal



Graph I shows that most common reason for removal of mandibular third molar was pericoronitis in 160, pulpitis in 45, periodontitis in 40, caries 2nd molar in 30, cysts/tumors in 20, root resorption in 10, orthodontics in 5 and unknown in 2. The difference was significant (P< 0.05).

DISCUSSION

An impacted tooth is defined as one that is prevented from erupting into position because of malposition, interference or lack of space. Impaction of mandibular third molars is a common condition related with different difficulty degree of extraction operation and risk of complications, including iatrogenic trigeminal nerve injury.[5]Guidelines for the management of third molars have been proposed by the National Institute for Clinical Excellence (NICE).Third molar eruption and continuous positional changes after eruption can be related not only with race but also with nature of the diet, the intensity of the use of the masticatory apparatus and possibly due to genetic background.[6]

Indications that are considered as valid reasons for lower third molar removal include follicular cystic change associated with lower third molar, distal caries in lower second molar or caries in lower third molar not amenable to restorative measures, periodontal disease affecting the lower second molar to which the adjacent third molar was contributing, non treatable pulpal or periapical pathology, internal or external resorption of the tooth or adjacent teeth, tooth impeding surgery/reconstructive jaw surgery and infections such as osteomyelitis, fascial space involvement and recurrent episodes of pericoronitis. Significance of maintaining precise and absolute medical records should never be underestimated because they provide chronological data of the evaluation and treatment of patients and are essential for the legal protection of both the patient and dental surgeon, and provide the means to assess the quality of care.[7]The present study was conducted to various indicators for removal of impacted mandibular third molars.

In this study, out of 312 patients, males were 150 and females were 162. Maximum cases were seen in age group 18-24 years (180) followed by 25-34 years (120) and >35 years (12). Sewerin et al[8] conducted a study which was based on the data of 439 patients who had their third molars removed (Male–183; Female–256). 61% of patients were in the age groups15–24. Recurrent pericoronitis was found to be the most common indication recorded (54%), followed by pulpitis/caries of the 3rd/2nd molar (31%).Orthodontic reasons (2%) and cysts/tumours (5%) were among the other indications recorded. Pain and tenderness was recorded as the most common symptom. The relative absence of prophylactic removal as an indication could be attributed to socioeconomic and logistic reasons.

We found that most common reason for removal of mandibular third molar was pericoronitis in 160, pulpitis in 45, periodontitis in 40, caries 2nd molar in 30, cysts/tumors in 20, root resorption in 10, orthodontics in 5 and unknown in 2.

Krishna et al[9] found that recurrent pericoronitis was the most common indication recorded for the removal of the third molars. Current trends support a more conservative approach in patients with a single episode of pericoronitis with emphasis on the management of the acute infection and review when symptoms have subsided. This philosophy is followed in our dental school, with the surgical removal considered only in cases with multiple episodes of pericoronitis. The shortcoming of the study is small sample size and type of impaction was not recorded.

CONCLUSION

Authors found that most common reason for removal of mandibular third molar was pericoronitis, pulpitis, periodontitis, caries 2nd molar, cysts/tumors, root resorption, orthodontics and unknown.

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