

International Journal of Research in Health and Allied Sciences

Journal home page: www.ijrhas.com

Official Publication of "Society for Scientific Research and Studies" [Regd.]

ISSN: 2455-7803

ORIGINAL RESEARCH

Mandibular Third Molar Impaction in Adult Population- A Clinical Study

Siddharth Rawat¹, Tejas Sehrawat², Monalisa³, Anmol Bagaria⁴, Gagandeep Kaur⁵

¹Assistant professor, ^{2,3}Post graduate student, Dept of Oral and Maxillofacial Surgery, Sharda University, Greater Noida, Uttar Pradesh, India

⁴BDS (Bharati Vidyapeeth Deemed to be University's Dental College & Hospital, Navi Mumbai), Private practitioner, Mumbai, Maharashtra, India

⁵BDS final year, ITS Dental College, Murad Nagar, Ghaziabad, U.P., India

ABSTRACT:

Background: Impacted tooth is a tooth which is completely or partially unerupted and is positioned against another tooth. The present study was conducted to assess mandibular third molar impaction in adult population. **Materials & Methods:** This study was conducted in department of Oral and Maxillofacial Surgery. It comprised of 68 patients with impacted mandibular third molar. A thorough clinical examination was done. Type of impaction was recorded in all patients. **Results:** Out of 68 patients, males were 32 and females were 36. Common type of impaction was mesio- angular seen in 65%, disto- angular in 12%, horizontal in 15% and vertical in 8%. The difference was significant ($P < 0.05$). **Conclusion:** Authors found that most common type of impaction was mesio- angular and females were predominantly involved.

Key words: impaction, third molar, mesio- angular

Received: 2 June, 2019

Revised: 22 June, 2019

Accepted: 25 June, 2019

Corresponding author: Dr. Anmol Bagaria, BDS (Bharati Vidyapeeth Deemed to be University's Dental College & Hospital, Navi Mumbai) Private practitioners, Mumbai, Maharashtra, India;

This article may be cited as: Rawat S, Sehrawat T, Monalisa, Bagaria A, Kaur G. Mandibular Third Molar Impaction in Adult Population- A Clinical Study. Int J Res Health Allied Sci 2019; 5(4):29-31.

INTRODUCTION

Impacted tooth is a tooth which is completely or partially unerupted and is positioned against another tooth, bone or soft tissue so that its further eruption is unlikely, described according to its anatomic position. The third molar impaction is occurring in about 73% of the young adults in Europe, these teeth generally erupt between the ages of 17 and 21 years. It has also been reported that the third molar eruption varies with races, such as in Nigeria mandibular third molars may erupt as early as 14 years and in Europe it may erupt up to the age of 26 years. Factors such as the nature of the diet that may lead to attrition, reduced mesiodistal crown diameter, degree of use of the masticatory apparatus and genetic inheritance also affect the timing of third molar eruption.¹

Mandibular third molars are the most frequently impacted teeth. The reason is probably that they are the last teeth

erupting into dental arch, therefore, the chance of space deficiency for their eruption is high. Third molar eruption and continuous positional changes after an eruption can be related to race, nature of the diet, the intensity of the use of masticatory apparatus, and genetic background.²

According to Pell and Gregory classification, Class I was labeled to a tooth which was present anterior to the anterior border of the mandible. Class II was labeled when tooth was half covered by the anterior border of mandible. When the crown was fully covered by the anterior border of mandible, it was labeled as Class III.³ The present study was conducted to assess mandibular third molar impaction in adult population.

MATERIALS & METHODS

This study was conducted in department of Oral and Maxillofacial Surgery. It comprised of 68 patients with

impacted mandibular third molar. All were informed regarding the study and written consent was obtained. Ethical clearance was obtained prior to the study. Patient’s information such as name, age, gender, etc. were recorded. A thorough clinical examination was done. Type

of impaction was recorded in all patients. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 68		
Gender	Males	Females
Number	32	36

Table I shows that out of 68 patients, males were 32 and females were 36.

Graph I Distribution of patients

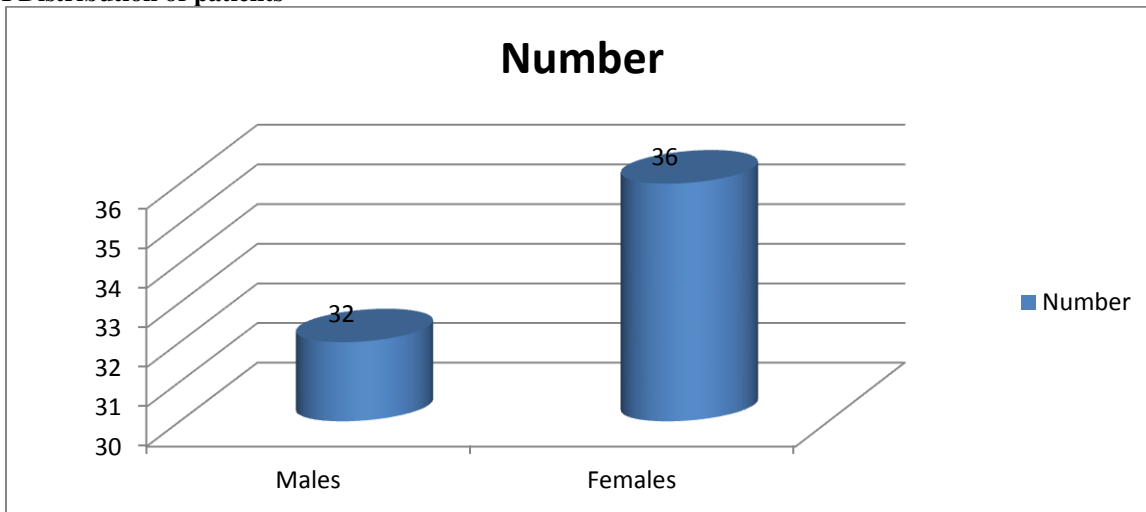
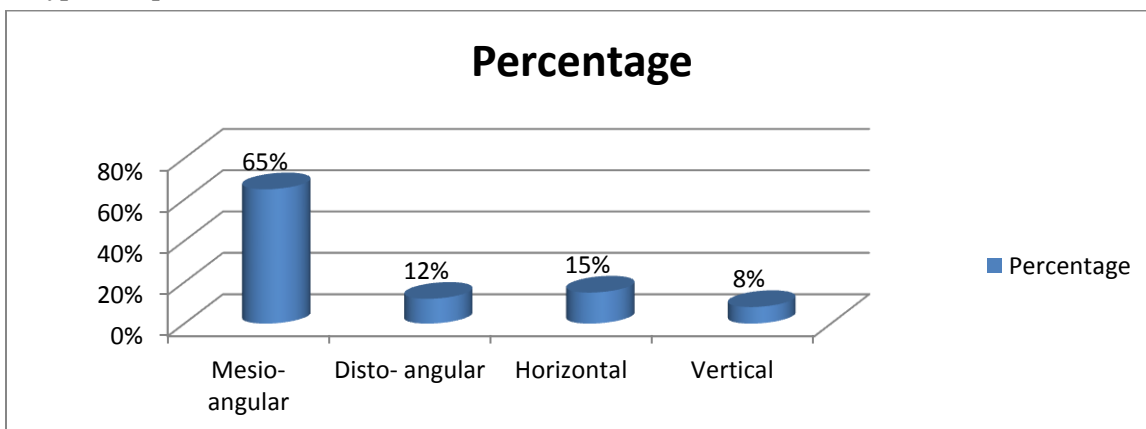


Table II Type of impaction

Type	Percentage	P value
Mesio- angular	65%	0.01
Disto- angular	12%	
Horizontal	15%	
Vertical	8%	

Table II, graph I shows that common type of impaction was mesio- angular seen in 65%, disto- angular in 12%, horizontal in 15% and vertical in 8%. The difference was significant (P< 0.05).

Graph II Type of impaction



DISCUSSION

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. Only a small minority of adults age 65 years or older maintain the teeth without caries or periodontal disease and 13% maintain unimpacted wisdom teeth without caries or periodontal disease.⁴ Impacted wisdom teeth are classified by the direction and depth of impaction, the amount of available space for tooth eruption, and the amount soft tissue or bone (or both) that covers them. The classification structure allows clinicians to estimate the probabilities of impaction, infections and complications associated with wisdom teeth removal. Wisdom teeth are also classified by the presence (or absence) of symptoms and disease. Treatment of an erupted wisdom tooth is the same as any other tooth in the mouth. If impacted, treatment can be localized to the infected tissue overlying the impaction, extraction or coronectomy.⁵ The present study was conducted to assess mandibular third molar impaction in adult population.

In this study, out of 68 patients, males were 32 and females were 36. Prajapati et al⁶ conducted a study in which clinical findings related to impaction and its association with angular position and depth of impacted third molar were evaluated. Teeth positions were analyzed by Pell and Gregory and Winter classification. A total of 200 patients were included in the study between age group 17- 45 years. Majority of the Patients reported to the hospital with complaints of decayed tooth (66%) and pain (59%). The most common third molar impaction was mesioangular followed by distoangular. A statistically highly significant difference ($P = 0.001$) was obtained with the presence of caries in second molar adjacent to mesioangular third molar in class I and level B.

We found that common type of impaction was mesio-angular seen in 65%, disto- angular in 12%, horizontal in 15% and vertical in 8%. The difference was significant ($P < 0.05$). Allen et al⁷ reported the incidence of 42% of the distal second molar caries associated with partially or completely impacted mandibular third molars.

One of the most commonly reported pathologies is an association of pain directly related to the presence of a third molar. The prevalence of this condition varies greatly from 5% to 53%. The incidence of cellulitis and osteomyelitis has been reported to be around 5%. Few other conditions which are also believed to be associated with impacted third molars include functional disorders such as occlusal interference, cheek biting, mastication disorders, trismus and temporomandibular joint problems. These pathologies and symptoms may result in distress and pain, but their correlation with third molars is not yet well-established due to lack of supporting evidence from the current literature.^{8,9}

According to the recommendations of National Institute of Health (NIH) both impacted and erupted mandibular third molars with evidence of follicular enlargement should be

removed electively and that the associated soft tissue should be submitted for microscopic examination. Impacted teeth with pericoronitis should also be extracted electively because of their known potential for repetitive infection and morbidity. Furthermore, third molars with non-restorable carious lesions and third molars contributing to resorption of adjacent teeth should be also extracted.^{10,11}

CONCLUSION

Authors found that most common type of impaction was mesio- angular and females were predominantly involved.

REFERENCES

1. Hellman M. Our third molar teeth: Their eruption, presence and absence. *Dent Cosm* 1936;7:750-62.
2. Hup EE Jr., Tucker MR. Peterson: Contemporary Oral and Maxillofacial Surgery. 9th ed. St. Louis: Mosby; 2002.
3. Abu Alhaila ES, AlBhairan HM, AlKhateeb SN. Mandibular third molar space in different antero-posterior skeletal patterns. *Eur J Orthod* 2011;33:570-6.
4. Breik O, Grubor D. The incidence of mandibular third molar impactions in different skeletal face types. *Aust Dent J* 2008;53:320-4.
5. Sadeta Sesis SP, Komsic S, Vukovic A. Incidence of impacted mandibular third molars in population of Bosnia and Herzegovina: A retrospective radiographic study. *J Health Sci* 2013;3:151-8.
6. Prajapati VK, Mitra R, Vinayak KM. Pattern of mandibular third molar impaction and its association to caries in mandibular second molar: A clinical variant. *Dent Res J* 2017;14:137-42.
7. Allen, Legovic M, Legovic I, Brumini G, Vandura I, Cabov T, Ovesnik M, *et al.* Correlation between the pattern of facial growth and the position of the mandibular third molar. *J Oral Maxillofac Surg* 2008;66:1218-24.
8. Hassan H. Pattern of third molar impaction in a Saudi population. *Dove Press J Clin Cosmet Investig Dent* 2010;2:109-13.
9. Knutsson K, Brehmer B, Lysell L, Rohlin M. Pathoses associated with mandibular third molars subjected to removal. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1996;82:10-7.
10. Bataineh AB, Albashaireh ZS, Hazza'a AM. The surgical removal of mandibular third molars: A study in decision making. *Quintessence Int* 2002;33:613-7.
11. Bains SK, Bhatia A. Classifying impacted mandibular third molar & its relation with inferior alveolar canal- A clinical study. *J Adv Med Dent Sci Res* 2018; 6(3): 77-81.