



## RADIOGRAPHIC EVALUATION OF ANATOMIC VARIATIONS OF IMPACTED MANDIBULAR THIRD MOLAR IN WESTERN RAJASTHAN POPULATION

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### ABSTRACT

**Introduction-** The aim of this study is to evaluate the morphology of the impacted mandibular third molar based on the winter's classification in western Rajasthan population in. The data including age, sex, morphology of mandibular third molar according to winter

**Material and methods-** In this study up to 200 orthopantomogram(OPG) or intra oral periapical radiograph (IOPA) were taken which show only impacted mandibular third molar.

**Result-** In this study out of 200 radiographs, the mesioangular impaction 106(53%), distoangular 20 (10%), vertical 42 (21%), Horizontal 20 (10%), other 12 (6%)

**Conclusion-** Data analysis shows that the most common impaction is mesio-angular. This morphological evaluation is important for the surgical removal of mandibular third molar

**Key Words-** mandibular third molar, radiographs, impaction

### INTRODUCTION

The mandibular third molar is most common impacted teeth that can be found in human. The tooth impaction is pathological condition in which tooth cannot or will not erupt into its normal functioning position. According to many researches the impacted mandibular third molar make weakens the mandible and more susceptible to fracture of mandible and developed lower arch crowding, orofacial pain, temporomandibular disorders and neuralgia. In relation to second molar mesioangular should be  $60^{\circ}$ , distoangular  $120^{\circ}$ , vertical  $90^{\circ}$  and horizontal  $0^{\circ}$ .

### CLASSIFICATION OF IMPACTED MANDIBULAR THIRD MOLAR

**WINTER'S CLASSIFICATION-** Based on inclination of impacted wisdom tooth third molar to the long axis of second molar.

- A. MESIO-ANGULAR-The impacted tooth is tilted toward the second molar in mesial direction.  
 B. DISTO-ANGULAR-The long axis of third molar is tilted away from second molar/distally.  
 C. HORIZONTAL-The long axis of third molar is horizontal.  
 D. VERTICAL-The long axis of third molar is parallel to long axis of second molar.  
 E. BUCCAL/LINGUAL OBLIQUITY-Tooth can be tilted buccally or lingually.  
 F. TRANSEVERSE-When the tooth is in effect horizontally impacted but in bucco-lingual direction.

## AIMS AND OBJECTIVES

1. To evaluate the morphology of impacted mandibular third molar.
2. To evaluate the position of impacted mandibular third molar to assist in surgical removal.
3. To evaluate the incidence of impacted third molar in western Rajasthan population.

## MATERIAL AND METHOD

This study was conducted in department of anatomy in Dr.S.N.Medical college jodhpur(Rajasthan). In this study 200 orthopantomogram(OPG) and intra oral periapical radiographs(IOPA) were taken by the help of department of oral and maxillofacial surgery and radiology. All radiographs were showing impacted mandibular third molar. All the patients were between the age group of 18 to 30 years.

## DISCUSSION

**Hattab F et al (1995)**<sup>5</sup> observed Impaction status of third molars in Jordanian students. The results showed that 9.1% of third molars were congenitally missing. Approximately 73% of the subjects had all four third molars, 12% had three third molars and 11% had two third molars. Only 1.7% had agenesis of all third molars. **Scherstén E, et al (1998)**<sup>11</sup> studied on Prevalence of impacted third molars in dental students. **Obiechina AE, et al (2001)**<sup>9</sup> observed Third molar impaction: evaluation of the symptoms and pattern of impaction of mandibular third molar teeth in Nigerians. **Unwerawattana W. (2006)**<sup>13</sup> Common symptoms and type of impacted molar tooth in King Chulalongkorn Memorial Hospital. Result shows Out of 502 impacted mandibular third molar there was a mesioangular (402 cases), horizontal (125 cases), vertical (116 cases), distoangular (30 cases) and linguoversion or buccoversion impacted tooth (7 cases). There was a significant difference of type of impacted tooth, **Sisk AL et al (1986)**<sup>12</sup> Complications following removal of impacted third molars: the role of the experience of the surgeon.

**RESULT**-Shows in tabulated form

**TABLE 1.**

ANATOMICAL VARIATIONS	TOTAL NUMBER(n=200)	IN PERCENTAGE(%)
	106	53%
DISTOANGULAR	20	10%
VERTICAL	42	21%
HORIZONTAL	20	10%
OTHER	12	6%

## CONCLUSION

In this study out of 200 radiographs, the mesioangular impaction 106(53%), distoangular 20(10%), vertical 42(21%), Horizontal 20(10%), other 12(6%).The most common mandibular impaction is mesioangular.



**Figure 1- Showing the horizontal impaction in left mandibular third molar**



**Figure2-showing the mesioangular impaction in right mandibular third molar**

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