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Research Article

**PREVALENCE OF MANDIBULAR THIRD MOLAR
IMPACTION IN PEOPLE HAVING VARIOUS FACIAL
SYMMETRY**¹Dr. Iqra Awais, ²Dr. Zara Khan, ³Dr. Asma Bibi¹De'Montmorency College of Dentistry, Lahore²Rural Health Centre Khalaspur, Jhelum³Women Medical & Dental College, Abbottabad**Abstract:**

Objective: To determine the frequency of mandibular third molar impaction in brachyfacial and dolico-facial face type.

Study design: A Descriptive cross-sectional study.

Place and Duration: In the Oral and Maxillofacial Surgery Department of Jinnah Hospital Lahore for one year duration from December 2016 to December 2017.

Methods: Sixty (60) patients (type brachyfacial facial 30) (type dolico-facial facial 30) and different types of malocclusions and age between 16 and 35 years of age were included.

Results: Most of the patients were 16 to 25 years of age and both had a statistically significant effect on the type of dolico-facial face of the female (n = 14), while the facial types revealed a 63.33% of the impaction frequency, including 46.67% (n = 19), more In the dolico-facial 16.67% (n = 5), which is dialed against the brachyfacial type showing a high proportion. We also group our results by gender, which has a higher impact than women.

Conclusion: The cases with dolico-facial facial type and female sex are more prone to be affected.

Key words: Mandibular third molar impaction, dolico-facial facial type, brachial facial type.

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INTRODUCTION:

Dental impaction is a pathological condition in which a tooth cannot enter or expose to normal working position as long as it facilitates treatment. The third molar was the most commonly affected. The prevalence of third molar impaction varies between 16.7% and 68.6%. Studies have been more common in European white women and Singaporean women. Although these data are insufficient in our country, especially in southern Punjab. Various reasons have been suggested because of the lack of space between the front edge of the ramus and the second molar distal. Multiplication due to the lack of mandible development, lack of proximal wear (does not allow the tooth to progress) or exclusion of the belt, can cause problems. A cause of weak growth in the retromolar area is also the type of mandible rotations, which determines the type of face either brachyfacial or dolico-facial. The mandibular ramus is increased in size due to back absorption on the anterior surface and accumulation on the posterior surface. If resorption is limited, the mandibular molar may be affected. Variation in ramus reabsorption is associated with the direction of condylar growth. While condylar growth in the condyle will be associated with increased condensation growth in a substantially vertical direction, the growth of the ramus and mandible is associated with reduced absorption to the front of the forward rotation, followed by absorption and subsequent rotation of growth. Lower molar may partially tend to burst further in the operating stage in patients with previous growth rotation that is partially offset by a limited amount of absorption at the anterior edge of the ramus. The brachyfacial face type is cephalotomically shown with a facial axis angle of $>93^\circ$ or a smooth lower angle of 26° . The type dolico-facial face (long) is cephalotomically with a $<90^\circ$ facial axis or $>26^\circ$ mandibular plane. The purpose of the study is to assess the frequency of burying of OCCs in the types of long / short face, so that such issues can be identified at risk of burying OCDs, so for their timely management can do accordingly.

MATERIALS AND METHODS:

This Descriptive cross-sectional study was conducted in the Oral and Maxillofacial Surgery Department of Jinnah Hospital Lahore for one year duration from December 2016 to December 2017. 60 total subjects (30 with Brachyfacial face type) and (30 with Dolico-facial face type) with either gender and 16-35 years of age with different type of malocclusion coming to Orthodontic Department were included while asymmetric malocclusions, syndromic, already under treatment of impaction and oral deformities were not selected for the study. The impaction was classified according to the Pell and Gregory classification system. This classification system includes two classes: 1, 2, 3 and A, B, C. Class 1, 2 and 3 relate to the relationship between the third molar and the leading edge of the ramus. Class 3 when the mesiodistal width (MD) of the tooth is precisely in the first class when impacted in the ramus complete, when the ramus is partially occluded in Class 2 and completely in the ramus. Class A, B and C classes are related to occlusal elevation compared to adjacent second molar. The occlusal cervical margin follows between the edge of the occlusal and adjacent tooth, when the cervix and Class C are aligned with the class B, then the occlusion will be below the cervical margins. The face type was determined by a measure of the angle of the facial axis. The qualitative variables, ie, sex and compression, were calculated and expressed in frequency and percentage, the data collected were recorded in SPSS 16.0, quantitative variable, ie age, mean \pm SD calculated in the form of the table. Chi square test was applied to determine the importance of impaction in both face types. P value of 0.05 was considered significant.

RESULTS:

The mean age distribution of patients in both groups was patients 16 to 25 years, for example, 18 (60%) dolico-facial type face and 21 (70%), dolico-facial 12 (40,%) and 9 (30%) In the group of brachyfacial face type), the mean age of patients was calculated as 22.43 ± 3.16 years (Table 1).

Table 1: Age distribution (n=60)

Age in years	Dolico-facial face type (n=30)	Brachyfacial face type (n=30)
16-25	18(60%)	21(70%)
26-35	12(40%)	9(30%)

Mean \pm SD: 22.43 \pm 3.16

The cases were distributed according to gender, 11% (36.67%) were Dolico-facial and 17% (56.67%) were male

Brachyfacial facial type, 19 (63.33%) were Dolichofacial and 13 (43.33%) were brachyfacial face women (Table 2).

Table 2: Gender distribution (n=60)

Gender	Dolichofacial face type (n=30)	Brachyfacial face type (n=30)
Male	11(36.67%)	17(56.67%)
Female	19(63.33%)	13(43.33%)

The frequency of impaction of both facial types were recorded in 14 (46.67%) of the type dolichofacial face against the type brachyfacial was noted in 5 (16.67%) and 19 (63.33%) were recorded with both types, revealing the frequency of a statistically significant effect on the dolichofacial facial type. The P value was 0.02 (table 3).

Table 3: Frequency of impaction in both facial types (n=60)

Impaction	Dolichofacial face type (n=30)	Brachyfacial face type (n=30)
Yes	14(46.47%)	5(16.67%)
No	16(53.33%)	25(83.33%)

In addition, the dolichofacial facial 6 (42.86%) were male, 8 (57.14%) female were male, 8 (57.14%) were female in brachyfacial face type. (Table 4).

Table 4: Impaction according to gender (n=19)

Gender	Dolichofacial face type (n=14)	Brachyfacial face type (n=5)
Male	6(42.86%)	2(40%)
Female	8(57.14%)	3(60%)

DISCUSSION:

The implant can cause tooth decay, localized periodontal problems, root resorption, pericoronitis, infected cysts and neoplastic lesions. In order to avoid these complications, timely treatment can be made by evaluating the facial types. The frequency of international morbidity data shows a wide range, that is, from 16.7% to 68.6%, in our population, the frequency has not yet been defined. In our study, the majority of the patients were between 16 and 25 years of age and the majority of them were female, with a frequency of 19 (63.33%) compression in both facial types, 14 of them (46.67%) in the type of brachyfacial with a statistically significant effect on the type of Dolichofacial facial type, surface and face (16.67%) was found. We also group our results by gender, which has a higher impact than women. The findings of this study are consistent with Breik O, which is almost twice the risk of collision in Dolichofacial subjects. Unlike dolichofacial, the reason for the increased incidence of dolichofacial type

between the face of the face can be prolonged in brachyfacial patients, the growth of face accepts this hypothesis Nanda et al. Similarly, a potential for higher impact factor was the shorter chin length, which was more inclined to the dolichofacial type faces, and increased compression OCCs, as seen in a study by erosion and colleagues. In terms of the greater impact on women, according to Quek SL, as well as colleagues who had the highest impact on women.

CONCLUSION:

We concluded, however, that dolichofacial facial type and female sexuality issues were more likely to be affected. Although the results of the study are consistent with other studies, but the limitation of the study was sample size, however, it can be considered as a pilot study, and there may be other studies with a larger size to validate even more results.

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