

# **The Relationship between Mandibular Antegonial Notch Depth and Craniofacial Morphology in Iraqi Sample Aged 18 – 25 Years**

**A Thesis**

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## *Abstract*

This retrospective study was performed to assess the relationship of mandibular antegonial notch depth with craniofacial morphology.

The sample of the study composed of 100 lateral cephalometric radiograph (50 male & 50 female) collected from postgraduate orthodontic student in College of Dentistry, Baghdad university . The sample was divided into two groups according to depth of mandibular antegonial notch: shallow antegonial notch depth group ( notch depth less than 1 mm) and deep antegonial notch depth group ( notch depth more than 3 mm ); each group composed of 50 subject ( 25 male and 25 female).

Fourteen angular and fifteen linear measurements were recorded to assess craniofacial morphology using special software program (auto cad 2006).

Statistical analysis was done for the data include ; mean , standard deviation , minimum and maximum for each examined group ; student t-test was used to detect the significant differences between groups and between gender ; Pearson correlation coefficient was used to evaluate the relation between antegonial notch depth and craniofacial measurements .

It was found that subjects with shallow antegonial notch depth have large saddle and cranial base angle. Have tendency toward horizontal growth particularly the mandibule

manifested by short anterior and lower facial height ; small articular, mandibular plane and lower gonial angles. Have longed mandibular body length. Less prominent mandibular incisors. Shallow ramus notch depth .

While subjects with deep antegonial notch depth demonstrated more of the morphological characteristics usually associated with vertical mandibular growth manifested by long anterior and lower facial heights; large articular, mandibular plane and lower gonial angles. Have short mandibular body length. More prominent mandibular incisors .Deep ramus notch depth.

The differences in antegonial notch depth among genders was affected by the direction of mandibular rotation rather than gender variations .

The relation between antegonial notch depth and other craniofacial measurements was statistically significant in deep notch group subjects, while this relation was statistically not significant in shallow notch group subjects .

According to the results of this study antegonial notch depth can be used as an aid in orthodontic diagnosis and treatment plane.