

# **THE MORPHOLOGY AND TEXTURE OF IRAQI SKELETAL CLASS II YOUNG ADULTS**

**(CEPHALOMETRIC STUDY)**

*A thesis submitted to  
The council of the Collage of Dentistry at the University  
of Baghdad, in partial fulfillment of the requirements for  
the Degree of Master in Science of Orthodontics*

*By*

**Raoof Rasheed Toma  
B.D.S**

*Supervised By*

**Prof. Dr. Nagham Al-Mothaffar  
B.D.S., MSc.**

*Baghdad-Iraq*

**January - 2011**

## **Abstract**

Different studies concerning craniofacial morphology of skeletal Class II have reported a lot of controversies in their results. The aim of the present study is to study the types of class II that can be found according to the position of maxilla and mandible in relation to the anterior cranial base and what are the skeletal characteristics and craniofacial growth pattern in each type rather than in the loose context of "Class II".

The skeletal class II sample included 104 pretreatment digital lateral cephalometric radiographs (18-30 years) who were selected on the basis of Beta angle [less than 27°] and divided into groups according to the location of maxilla and mandible in relation to the anterior cranial base (SNA and SNB angles). Another 30 radiographs were selected as a control group (normal SNA and SNB angles, Beta angle 27°-35°). Fourteen angular and nine linear measurements were digitized and recorded using AutoCAD **2010** computer program.

Five class II groups were identified with nearly equal percentage of each with no significant differences in **SN**, **SAr**, **RL**, **UAFH**, **LAFH**, **AFH**, **PFH** and **U1PP** in comparison with control group. These are:

- **Group one:** had normal maxilla with retruded mandible, individuals in this group had the highest **AFH** and **LAFH** with the least **MP**. The growth pattern was within normal range.
- **Group two:** had protruded maxilla combined with normal mandible, the highest **Go**, least **SArGo** and normal growth pattern was noted in this group.
- **Group three:** the more severe type of class II groups as it had combination of protruded maxilla and retruded mandible with a tendency for more vertical pattern of growth, it had the highest **SArGo**, **SNMP**, **PPMP** and **U1PP**, while the least were **SNAB**, **NAPog**, **RL** and **PFH**.
- **Group four:** it had retruded maxilla and mandible, it had highest **NSAr**, **SNPP** and **NAPog**, and the least **Go** and **U1PP**. The growth pattern was within normal.
- **Group five:** it had protruded maxilla and mandible with the most horizontal pattern of growth, individuals in this group had the highest **MP**, **RL** and **PFH**, and the least **SNPP**, **SNMP**, **PPMP** and **AFH**.