Sella Turcica Features and it's relation to Anterior Facial Skeleton In Iraqi Sample Aged 18-30 Years

(A LATERAL CEPHALOMETRIC STUDY)

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

By

Mohammed Khudher Abdulhammed Al-Ani

B.D.S.

Supervised By:

Assist. Prof. Dr. Dhia'a Ja'afar N. AL-Dabagh

B.D.S., MSc.

Baghdad-Iraq

1432 **2010**

Abstract

The sella turcica is a structure readily recognized on lateral cephalometric radiographs and routinely traced for cephalometric analysis. This makes it a good source of additional diagnostic information related to craniofacial deviations and /or to various syndromes that affect the craniofacial region.

The aims of this study were to assess the size and shape of sella turcica, and to find the relation of it to the anterior facial skeleton and the relation among anterior facial skeleton with each other in different skeletal patterns and in both gender and also to find the most valid equation for describing the relationship of the sella turcica into anterior facial skeleton to be applied practically in different skeletal patterns.

The sample consisted of **"138"** digital true lateral cephalometric radiographs with an age range **"18-30"** years, which was classified into three skeletal patterns and each classes was subdivided into male and female. Nine cephalometric parameters in addition to shape of Sella Turcica were measured and assessed for each individual radiograph using AutoCAD program 2008.

The following results were obtained: in all skeletal patterns the Sella turcica size showed no gender difference except in Sk. CL I, the **" S-Length "** in male higher than female, while among the three skeletal patterns non significant difference was found, however regarding the relation of sella turcica to anterior facial skeleton in all skeletal patterns, the linear measurement showed a very highly significant differences; they are larger in males than in females, while the angular measurement showed no gender difference, but among the three skeletal patterns only the **" S-B Length "** and the **" ASB angle "** showed a very highly significant difference.

The Pearson's correlation test in all skeletal patterns showed a very highly significant positive correlation between **" S-N, S-A & S-B Length "** and also between **" NSA, NSB & ASB angles "**, however highly predictable regression equation in the three skeletal patterns were found for the first time in Iraq between **" NSB & NSA angles "** and finally the shape of the sella turcica appeared to be normal in more than half of subjects **"57.2%",** regardless of gender, or skeletal type.