

**Nasopharyngeal dimensions in relation
to some dento-cranium variables of
class I and II skeletal patterns
(A cephalometric comparative study in adults)**

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 of Science in Orthodontics

By

Ammar Abbas Fadel

B.D.S

Supervised By:

Prof. Dr. Fakhri Abid Ali

B.D.S, M.Sc. (Orthodontics)

Iraq-Baghdad

2014 A.D.

1435 A.H.

Abstract

The size of the nasopharyngeal airway was believed to have an important role in the development of the dentofacial structure. Therefore, this study was done on 60 subjects (30 males and 30 females) at age range 18-25 years. Cephalometric radiograph has been taken to each subject and the measurements were recorded. The sample was divided into two groups, class I skeletal relationship (15 males and 15 females) and class II skeletal relationship (15 males and 15 females). Comparisons between the different study groups were undertaken and the following results were obtained.

In class I skeletal relationship, all the nasopharyngeal liner measurements and all the dento-cranium linear measurements are significantly higher in males than females, except lower airway thickness (PNS-ad1) and upper airway thickness (PNS-ad2) showed no significant gender difference. While all the angular measurements showed no significant gender difference.

In class II skeletal relationship, most of the nasopharyngeal liner measurements have no significant gender difference, while all the dento-cranium linear measurements are significantly higher in males than females.

In comparison for class difference between class I and class II skeletal relations in total sample, all the nasopharyngeal linear measurements have no significant class difference, except lower airway thickness showed significant difference which were higher in class II than class I and upper airway thickness showed significant difference which were higher in class I than class II.

In the whole sample of the study, positive correlation was found between lower airway thickness and upper airway thickness.