The relation of the maxillary central incisor, nasal bone, anterior cranial base lengths and the body height in different skeletal patterns

A thesis
submitted to the council of the college of Dentistry University of Baghdad, in partial fulfillment of the requirements for the degree of master in science in Orthodontics.

By:

Hussein Abid Ali Muhsin Al-Najar

B.D.S

supervised by

Prof. Dr. Nidhal H. Ghaib

B.D.S, M.Sc.

Baghdad-Iraq

2010 ١٤٣١

Abstract

The frontonasal field forms the lower part of the frontal bone, the external and internal nose and the four maxillary incisors with surrounding alveolar bone and soft tissue. The neural crest cells form the external and internal nose and the anterior part of the maxilla. They also form the dentin and pulp tissue in the incisor region.

Maxillary central incisor, nasal bone and anterior cranial base lengths were measured by cephalometric analysis of 122 lateral cephalometric radiographs using autocad 2008 program, also body height was assessed by height measuring standard for adult patients with different skeletal patterns , including CLI (n= 48), CLII (n= 45), CLIII (n= 29), normal MP-SN angle (n= 70),low angle (n= 28) and high angle (n= 24) . The following results were found:

Maxillary central incisor

1. Males had longer maxillary central incisor in all anteroposterior classes and vertical skeletal groups than females.

2. The maxillary central incisor was longer in high angle males group compared with normal angle group.

3. There was a direct significant correlation between maxillary central incisor length and the body height in CLII,CLIII, and high angle male groups .

Nasal bone

1. Males had longer nasal bone in CLII,CLIII, and normal angle groups.
2. short nasal bone was found in CLII males and females and in low angle males group.
3. There was a direct significant correlation between the nasal bone lenght and the body height in CLI males and in normal angle males and females .

Anterior cranial base

1. Males had longer anterior cranial base in all sagittal classes and in normal angle group.
2. Longer anterior cranial base was found in low angle males compared with normal and high angle groups, while the anterior cranial base was shorter in high angle males .
3. There was a direct significant correlation between the nasal bone length and anterior cranial base in high angle females.

Body height

1. Males were taller than females in all anteroposterior and vertical skeletal classes.

2. there was no significant difference in the body height in all anteroposterior and vertical skeletal groups.