CEPHALOMETRIC NORMS FOR A SAMPLE OF EMIRATES ADULTS

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Dedication

To

My

Parents

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Lateral cephalometric norms for a sample of emirates adults

The present study was carried out to establish cephalometric norms for lateral cephalometric measurements of the Emirates adults and to study sex differences.

A total selected sample of 176 Emirates adults (91 males and 85 females), selected from individuals who attended the Emirates health centers, high schools and colleges. Their ages ranged from 19 to 25 years old. They had normal skeletal and dental relationship (Angle Class I) with balanced and acceptable facial profiles and occlusions.

The routine orthodontic diagnostic records were taken for each subject; medical and dental histories, clinical examination, study models, and photographs. 88 linear and angular measurements were calculated on Lateral cephalometric radiographs using the Dolphin version 10.5 software package. Descriptive statistics were carried out for each parameter (minimum, maximum, means, standard deviations, standard error of the means) and Student *t*-test was used to test the significance of sex difference.

In view of the findings of the current study the following conclusions could be withdrawn:

The present study has produced normative lateral cephalometric data for an adult Emirates population that will aid in diagnosis and treatment planning.Emirates adult males demonstrated longer total, anterior, and posterior cranial base lengths, but smaller cranial base tipping than females, indicating their larger skull size.

Emirates adult males showed longer facial heights and depth. Greater vertical jaw relation measurements were found in males than females while males had slightly

more vertical growth pattern than females.Concerning maxillary measurements, Emirates adult males had a longer maxillary length than females, while Emirates females showed greater maxillary tipping than males. Regarding mandibular measurements, Emirates males had greater mandibular vertical position, length, and tipping than females. No sexual difference was found regarding the skeletal facial profile. But the bony chin in Emirates adult females was more prognathic than Emirates males. Dentally, Emirates adult males demonstrated more proclined upper and lower incisors than females for most of angular and linear dental measurements.

The results of the present study support the view that a single standard of facial esthetics should not be applied to all racial and ethnic groups.

Key words: lateral cephalometic, norms , emirates

INTRODUCTION

Cephalometric norms provide useful guidelines to orthodontists in their diagnosis and evaluation of orthodontic treatment outcomes. Moreover their importance exists to investigate the average values, shapes and variations among any population. However, it is possibly incorrect to make rigid applications of these values since they represent population averages that may be inappropriate as individual treatment goals. Furthermore, it has been suggested that an analysis is misused if it is applied to a patient of different age or race.

Orthodontic treatment is best when the facial and cephalometric characteristics of the ethnic background of patients are considered. The orthodontic literature contains many studies involving cephalometric and profile standards of Caucasian, European-American, African-American, Japanese, Korean, Nigerians, Filipinos, Chinese, and Turkish populations, but little for Arabs and non for Emirates in specific. This information is considered as a critical base which should be used for studying growth, diagnosis, treatment planning and prognosis of such population.

Since 1960s, cephalometric radiography has been widely used, where a number of analyses have been introduced by Downs, Steiner, Wylei, Tweed and others. They carried out cephalometric analysis manually by direct measurements of cephalometric lines and angles on a tracing paper, using a ruler and protractor.