LATERAL CEPHALOMETRIC GROWTH CHANGES IN YEMENIS (CROSS SECTIONAL STUDY)

A Thesis submitted to the Faculty of Oral and Dental Medicine,
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DEDICATION

To my family for their continuous

Help,

Love,

Support

And for being there whenever I needed

them.

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INTRODUCTION

Introduction

In orthodontic diagnosis and treatment planning, a cephalometric radiograph is an essential tool to relate patients with different malocclusions to their associated norms.

When Broadbent introduced his cephalometer in 1931, a new era began in orthodontics. More stable relationships among teeth, jaws, faces, and head structures as well as more successful treatments were deemed possible. Since that time, cephalometric analyses have been routinely used to determine the relationships of the dentofacial complex. Cephalograms can also helps the orthodontist to determine the changes associated with growth and orthodontic treatment.

The cephalometric norms of different ethnic and racial groups established in various studies showed that normal measurements for one group are not necessarily normal for another group; each racial group must be treated according to its own characteristics. Since a number of standards have been developed for various racial and ethnic groups, it is important to compare a patient's cephalometric findings with the norms for his or her ethnic group for an accurate diagnostic evaluation.

Awareness of the normal dentofacial pattern of different ethnic groups of various ages will undoubtedly ensure greater success in orthodontic treatment.

Orthodontics is still a young branch of dentistry in Yemen. However, the numbers of Yemeni patients seeking orthodontic treatment and orthognathic surgery have been increasing. Nevertheless, little cephalometric studies have been conducted for Yemenis.

Harmonious facial esthetics and optimal functional occlusion have long been recognized as the most important goals of orthodontic treatment. To accomplish these goals, knowledge of normal craniofacial growth and the effects of orthodontic treatment on the soft and hard tissue profile are essential.

It is well known that knowledge of the normal craniofacial growth and dentofacial patterns of various ethnic and age groups is very important for clinical diagnosis, treatment planning and research. Since these knowledge were deficient for Yemenis, the idea of the present study was brought up

REVIEW OF LITERATURE

Review of Literature

Half a century ago or even more men in the field of orthodontics have been searching for an aiding tool for diagnosis and treatment plane, until Roentgen discovered the x-rays in 1895 providing the answers to questions that other relatively limited technique were unable to answer. Since that time a host of others have left their finger prints on the cephalograme by their attempt to posture the head in a standardized position, developing measurements, formulating norms (according to age, sex, and race), and even studying lateral cephalometric growth changes, as it is going to be clarified below.

Pacini. A (1922)[1], introduced the first oriented lateral skull radiograph by aligning the subject's head by inspection so that the median sagittal plane was parallel to the film, the head was supported by a vertical head rest and immobilized by means of gauze bandage used to strap it to the film holder. A constant target film distance of 2½ feet was employed and the central rays were directed one inch above and in front of the external auditory meatus. He defined certain landmarks on the lateral skull radiograph including the gonion, pogonion, nasion and the anterior nasal spine.

Broadbent. B (1931)[2], developed a cephalostat with two ear rods inserted in the external auditory meatus as a head holder so that the Frankfort horizontal plane was parallel to the floor, and the median plane of the head was maintained parallel to the film at fixed distance (10cm).