

Craniofacial Morphological Characteristics of a Sample of Cameroonian Subjects in the Yaounde Central Hospital

Duraïd Hamid Naji*

Introduction

The reference values used in Cephalometry to determine the orthodontic treatment to be realized are mostly of Caucasian origin. In Cameroon, the need for care is growing; but little information is available in Cephalometry. Should we treat with imported cephalometric standards? To answer this question, we conducted this study in order to determine the craniofacial morphological characteristics of a sample of Cameroonian subjects in the Yaounde Central hospital having high health standard in Cameroon.

Methodology

We carried out an analytical study at the Yaoundé Central Hospital from January to March 2016, on scout view scanographic images of patients, aged 20 to 50 years. 15 cephalometric variables were measured and their mean values and standard deviation calculated. To determine the reference values, we used indicator means with their 95% confidence interval as the best estimator of our population measures.

Result

We included 80 subjects with an average age was 32.3years. Cameroonian subjects have sex differences only for SNB and SND measures that were higher in men. Compared with Caucasian values according to Steiner, the Cameroonian population had a protrusive dento-alveolar structure with higher average values except for inter-incisal angles 119.3° and SND 78.8° which showed a lower value against 1310 and 790 for Steiner.

Differences between Cameroonian men and women were in SNB and SND measurements that were higher in men. The averages of the Cameroonian sample are significantly different from the Caucasian averages in most measurements. Considering these differences, this work enabled us to propose a charter of cephalometric values, thus providing clear indications as to the type of Cameroonian.

Background The mandibular foramen (MF) is an important anatomical structure during procedures such as anesthesia of the inferior alveolar nerve and surgical acts, including mandibular osteotomies. Many authors have shown that it is essential to know the morphometric characteristics of the MF because the inferior alveolar nerve which passes through it could be damaged in dental practice or explain a failure of anesthesia. Our objective is to determine the morphometric characteristics of the mandibular foramen as a function of sex in a population of Cameroonian individuals. A retrospective study of CT scans of the craniofacial mass was carried out at the Yaoundé central hospital and at the Yaoundé cathedral medical center. We collected socio-demographic data and 05 dependent variables on 210 hemi mandibles (distance from the MF to the anterior edge, to the posterior edge, to the mandibular notch, to the basilar rim and to the molar occlusal plane). Student's t test was used for data analysis with a significance level $P < 0.05$. **Results** In total, it was 105 CT of the craniofacial mass of Cameroonian subjects, ie 74.2% of men and 25.8% of women. The MF was bilateral in all of our participants in our survey and positioned 19.4mm from the anterior edge of the mandible in men and 19.2mm in women. In our sample, 25.8% of subjects presented a left accessory mandibular foramen. **Conclusion** the MF delivers passage to the inferior alveolar nerve which is called upon during anesthesia by trunk block. This study showed differences in the location of the mandibular foramen with measurements taken in Caucasian individuals.

We carried out a single-center, cross-sectional, descriptive, and analytical study at the Yaounde Central Hospital, Cameroon. Files of all patients who underwent CLP surgery whether it was primary or a redo, between January 2014 and December 2018 were reviewed.

Children aged 4–18 years old at the time of the study were selected regardless of their gender ("patients group"). The parents were summoned with their children to the hospital by phone call on June, July, and August 2019, corresponding to school holidays. After obtaining the informed consent from parents, we filled out for each of the children a form including items capturing age, gender, type of cleft at birth, associated malformation or chronic condition (such patients were excluded), and prior history of surgical intervention. Participants

Corresponding Author: Naji. HD, Professor of Orthodontics, Huazhong University of Science and Technology, China. **Tel:** +96422536824, **Email:** duraid.nh@gmail.com.

Received Date: October 21, 2021; **Accepted Date:** November 05, 2021; **Published Date:** November 21, 2021.

Copyright: © 2021 Dr. Naji. HD. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

were then classified as having either a visible facial difference (lip or nose or orthognathic involvement in the cleft issue) or a nonvisible facial difference (only palate involvement in the cleft issue).

After selecting patients, controls were consecutively and non-randomly selected according to their age (4-18 years) and as many girls as boys. These controls were selected among children and teenagers, free from any chronic condition or malformation, attending usual ear nose and throat consultation for acute diseases not related to the oral sphere and for which an informed consent from their parents had been obtained.

The OHRQoL of patients and controls was measured using the Child Oral Health Impact Profile (COHIP) questionnaire. This instrument has demonstrated excellent psychometric properties. [6] The COHIP assesses self-reported (patients and control) and proxy-reported (parents) with five discrete domains and an overall score range of 5-10: Oral Health (specific oral symptoms; ten items; range of 10-50); Functional Well-being (ability to carry out specific everyday tasks; six items; range of 6-30); Emotional Well-being (peer interactions and mood states; eight

items; range of 8-40); School (tasks associated with the school environment; four items; range of 4-20); Self-esteem (positive feelings about self; six items; range of 6-136). Both patients and parents answered the questionnaire, but parents intervened only when the patient did not give a precise answer had difficulty answering.

Conclusion

Children with repaired CLP at the Yaoundé Central Hospital seems to be lower than that of their healthy peers. This quality of life is mainly negatively influenced by the visible nature of the CLP and redo surgeries. Specifically, functional well-being, emotional well-being, and self-esteem are the most affected domains of the OHRQoL. Psychosocial care and functional rehabilitation (orthodontics and speech therapy) in a framework of a multidisciplinary team-based comprehensive cleft clinic, therefore, appear as the further priority interventions to consider in these patients aimed at improving their quality of life.