الاية

بسم لله الرحمن الرحيم

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ{1} خَلَقَ الْإِنسَانَ مِنْ عَلَقٍ{2} اقْرَأْ وَرَبُّكَ الْأَكْرَمُ{3} الَّذِي عَلَّمَ بِالْقَلَمِ{4} عَلَّمَ الْإِنسَانَ مَا لَمْ يَعْلَمْ{5}

صدق لله العظيم

سورة العلق

الآيات من (1) الى (5)

Dedication

To my father ...

To my husband …

To my teachers……..

Acknowledgment

Firstly I thank my GOD for his help to finish this work successfully.

I present my great thanks to everyone who render a service to me and had a favor for success in my work

Full regards to my supervisor Dr. Caroline Edward Ayad who gave perfect advices and ideas, in such a way that she motivated me to complete the work in success.

Special thanks to Dr. Mohammed Fadul Morsi, for his help, and finally Dr. Ahmed Sulieman for his guidance and advices…

List of abbreviations:

IMC inferior mandibular canal

OPG orthopantomography

IAN inferior alveolar nerve

IANB inferior alveolar neurovascular bundle

MC Mandibular canal

CT computed tomography

KV kilo voltage

mAs mille ampere second

SD standard deviation

Abstract

Radiography plays an important role in dentistry especially in localization of the inferior alveolar canal (IAC) where the mandibular nerve bundle passes. it may be damaged during treatment and implants procedure. the importance of the canal measurement arises from many factors where it may be positioned at different locations in the mandible.

The researcher studied, localized and assessed the IAC in order to avoid injury during the maxillofacial surgery or during dental implant procedures in both sides of the mandible and in both genders and compared the variables in the Sudanese population with those reported in other nations (Asians) the study was done in the period from November2010 to April 2011.

The study consisted 202 OPGs which were collected and analyzed using computer, five measures were selected and studied for right and left side of the jaw for male and female. The distances were measured in millimeters: D1=distance between superior border of MC and 2nd molar,D2= distance between superior border of MC and 2nd premolar,D3= distance from superior border of MC to alveolar bone,D4= height of MC,D5=distance between MC to mandible border. The collected data then correlated with age and gender so as to find the variable with highest correlation coefficient.

The results showed that the D1,D 2, D3,D4,D5 were correlated linearly with the age in both gender, and no significant difference were detected when comparing both sides of the mandibles in both gender . Significant differences between males and females measurements were detected and also in the Sudanese and other Asian populations.

ملخص الدراسة

يلعب التصوير الإشعاعي دوراً مهماً في مجال الأسنان، خاصة فيما يتعلق بقياس القناة الفكية السفلية حيث تمر حزمة أعصاب الفك السفلي خلالها وبالتالي يمكن أن تتعرض للتلف إثناء فترة العلاج او زراعة الاسنان .وتنبع اهمية القياسات من عدة عوامل ، اهمها وجود القناة في أوضاع مختلفة في الفك الأسفل .

وقد قامت الباحثة بدراسة وتحديد وتقويم القناة الفكية السفلية حتى يمكن تجنب أي جروح إثناء العملية الجراحية لمنطقة الفك الوجهي السفلي أو إثناء عملية زراعة الأسنان في كلا جانبي الفك وكلا الجنسين وتمت مقارنة المتغيرات للسودانيين مع الأمم الأخرى "الآسيويين" .

اشتملت الدراسة علي عدد 202 صورة للفكين حيث تم جمعها وتحليلها باستخدام الحاسوب. تم اختيار ودراسة خمسة قياسات بالنسبة للفكين الأيمن والأيسر لكلا الجنسين. تم قياس المسافات بالمليمتر علي النحو الآتي :-

م 1 = المسافة بين الطرف العلوي للقناة الفكية السفلية والضرس الثاني ، م 2= المسافة بين الطرف العلوي للقناة الفكية السفلية والضرس الناجز .م 3= المسافة بين الطرف العلوي للقناة الفكية السفلية والعظم السنخي .م 4= ارتفاع القناة الفكية السفلية ، م 5 = المسافة بين القناة الفكية السفلي وطرف الفك السفلي .ومن ثم تم إيجاد ارتباط من خلال البيانات بين العمر والنوع لكي يتم إيجاد المتغير الذي يتمتع بأعلى معامل ارتباط .

أوضحت النتائج أن م 1،م 2،م 3،م 4،م 5 لها ارتباطات فكية مع العمر في كلا الجنسين، ولم تظهر النتائج أي علاقة ذات أهمية عند مقارنة كلا جانبي الفكين السفليين لكلا الجنسين .

ظهر وجود فروقات مهمة بين الجنسين من حيث القياسات المذكورة لدى السودانيين تماماً كما هو لدى الآسيويين .

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