

: قال تعالى

﴿ شَهِدَ اللَّهُ أَنَّهُ لَا إِلَهَ إِلَّا هُوَ وَالْمَلَائِكَةُ وَأُولُو الْعِلْمِ قَائِمًا ﴾

﴿ بِالْقِسْطِ ^ج لَا إِلَهَ إِلَّا هُوَ الْعَزِيزُ الْحَكِيمُ ﴾

﴿سورة آل عمران الآية ١٨﴾

Dedication

To the soul of my parents To my wife (Ameera) my
support To my sons (Mohammed , Baraa and
Mogtaba) the light of my way To my teachers and
collogues To all people who help me.

Acknowledgment

First and foremost , I would like to express my
deepest gratitude to

Dr. Mohamed Elfadil , without his help this work
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Deep thanks to my family for their consistent
mental support finally ,

I would like to thanks my friend .

Abstract

Thyroid gland is one of the major glands of the body and plays a vital role in metabolic process. The main objective of this study was to measure the thyroid dimensions for normal Sudanese in Port-Sudan and Kordofan for normative data. The study conducted in Alneelain university Almogran teaching hospital Medical College, in the period from June 2016 to September 2016. This study consisted of 100 normal patients 50 from each region (Port-Sudan and Kordofan). The data of this study collected using Toshiba ultrasound machine with 7.5 MHz linear transducer. The results of this study showed that there is no significance differences between male and female at $p = 0.05$ using t-test. The results also showed that there is a significance differences between thyroid volumes in Port-Sudan and Kordofan sample using t-test at $p = 0.05$ where for Port-Sudan the volume equal 5.74 ± 1.7 ml and 7.22 ± 2.2 for Kordofan. As well as the width, depth, isthmus and lobe volume, where thyroid length did not showed a significance difference. The results also showed that for Port-Sudan sample concerning thyroid Rt lobe volume, it showed a direct linear

relationship with body weight, age and BMI; the volume increased by 0.049ml/Kg, 0.064ml/years and 0.156ml/Kg/m² respectively. While for Kordofan sample showed a direct linear relationship of Rt lobe volume with body weight and age; the volume increased by 0.061ml/Kg and 0.087ml/year.. The volume of the Lt lobe for Port-Sudan sample follow the same pattern as the Rt one where it showed a direct linear relationship with body weight, age and BMI and hence the volume increased by 0.042ml/Kg, 0.058ml/year and 0.132ml/Kg/m² respectively. While for Kordofan sample the volume of the Lt lobe showed a direct linear association with body height and age where the volume increased by 0.041ml/cm and 0.07ml/year respectively.

المستخلص

الغدة الدرقية هي واحدة من الغدد الرئيسية في الجسم وتلعب دورا حيويا في عملية التمثيل الغذائي. وكان الهدف الرئيسي من هذه الدراسة هو قياس أبعاد الغدة الدرقية للسودانيين العادية في بورتسودان وكردفان البيانات المعيارية. الدراسة التي أجريت في كلية الطب جامعة النيلين بمستشفى المقرن التعليمي ، في الفترة من يونيو 2016 إلى سبتمبر 2016. اشتملت هذه الدراسة علي 100 شخص بغدة درقية سليمة, 50 من كل منطقة (بورتسودان وكردفان). بيانات هذه الدراسة التي تم جمعها باستخدام جهاز توشيبا للموجات فوق الصوتية مع جهاز مسبار خطي بقوة تردد تساوي 7.5 ميغاهيرتز. وأظهرت نتائج هذه الدراسة أنه لا توجد فروق ذات دلالة بين الذكور والإناث بدرجة احتمال = 0.05 باستخدام اختبار (ت). كما أظهرت النتائج أن هناك فروق ذات دلالة بين حجم الغدة الدرقية في بورتسودان وعينة كردفان باستخدام اختبار (ت) بدرجة احتمال

= 0.05 متوسط حجم الغدة لعينة بورتسودان كانت تساوي 5.74 ± 1.7 مل و 7.22 ± 2.2 مل لعينة كردفان. وكذلك عرض وعمق، الفص الايمن والايسر وحجم الفص، حيث طول الغدة الدرقية (الفص الايمن والايسر) لم تظهر فرق ذات دلالة. أظهرت النتائج أيضا (لعينة بورتسودان) بشأن حجم الفص الايمن للغدة الدرقية، أظهرت وجود علاقة خطية مباشرة مع وزن الجسم والعمر ومؤشر كتلة الجسم. يزيد حجم الفص الايمن بمعدل 0.049 مل/كغ، 0.064 مل/سنة، و 0.156 مل / كغ / مترمربع على التوالي. في حين أظهرت لعينة كردفان وجود علاقة خطية مباشرة لحجم الفص الايمن مع وزن الجسم والعمر؛ وذلك بزيادة الحجم بمعدل 0.061 مل / كغ و 0.087 مل / سنة. حجم الفص الايسر لعينة بورتسودان اظهر نفس النمط كما هو في الفص الايمن وذلك بوجود علاقة خطية مباشرة مع وزن الجسم والعمر ومؤشر كتلة الجسم وبالتالي يزيد معدل حجم الفص بمعدل 0.042 مل / كغ، 0.058 مل / سنة و 0.132 مل / كغ / متر مربع على التوالي. أما بالنسبة لعينة كردفان وجد ان حجم الفص الايسر أظهرت وجود ارتباط خطي مباشرة مع ارتفاع الجسم والعمر حيث يزيد معدل الحجم بمعدل 0.041 مل / سم و 0.07 مل / سنة على التوالي.

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Abbreviations:

CT	Computed Tomography
MRI	Magnetic Resonance Imaging
WHO	World Health Organization
ICCIDD	International Council for the Control of Iodine Deficiency Disorders

CTA	Computed Tomography Angiography
T4	L-thyroxine
T3	Tri iodothyronine
TPO	Thyropoxidase
TRH	Thyrotropin Releasing Hormone
TSH	Thyroid-Stimulating Hormone
TBG	Thyroxine-binding globulin
AACE	American Association of Clinical Endocrinologists

