بسم الله الرحمن الرحيم

صدق الله العظيم

DEDICATION

Every challenging work needs self efforts as well as guidance of some persons especially who are very

.close to our hearts

From the depth of my heart am dedicate this work to my lovely

.parent and family

To our friends whom we have unforgettable time with them during years of university, And to

.all people we love

Also dedicate this work to everyone taught us in this university.

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ABSTRACT

The foramen magnum (FM) is an important anatomical region of the skull base and is of significance for anatomy, anthropology and other .medical fields

This study aims to measure the foramen magnum and characterize the shape of it through the use of reconstructed helical CT images. For verify the morphological characteristics of the (FM) for gender determination in Sudanese individuals by measuring the saggital, transverse diameter and characterizing .its shape

A total of 100 Sudanese patients (52 males and 48 females) with mean ages were 49.69±15.53 were examined using reformatted axial CT and three dimensional CT referred to the Radiology Department in the **Dar Al Elaj Specialized Hospital**, Khartoum, Sudan The foramen magnum shapes were determined as a round shape in 17(17%) of the cases, oval in 53 (53%), irregular in 15(15%) and arrow head in 15(15%), the mean sagittal and transverse diameters of the foramen magnum were determined as 35.37±2.49 mm and28.57±2.48 mm respectively. knowledge of FM area‘s anatomy is of extreme importance for treating lesion and help the surgeon regarding selection best surgical approach

and expected changes in the anatomy of these critical structures and resection of tumors.

ملخص البحث

الثقبة العظمى هي المنطقة التشريحية الهامة في قاعدة الجمجمة و ذات أهمية لعلم التشريح وعلم الإنسان والمجالات الطبية الأخرى. وفي العمليات الجراحية يتم الوصول للآفات في المناطق القريبة من الثقبة العظمى مباشرة من خلال اللقمة القذاليه .

وتهدف هذه الدراسة إلى تحديد خصائص شكل الثقبة العظمى وتحديد الاختلافات التشريحية وذلك باستخدام تقنية إعادة بناء الصور ,بواسطة الأشعة المقطعية. للتحقق من خصائص شكل ألثقبه العظمى, وتوصيف الاختلافات التشريحية المتصلة بقياسات اللقمة القذاليه .وقد اشتملت الدراسة علي 100 مريض (52 ذكور و 48 اناث) مع متوسط الأعمار 49.69 ±15.53 .

وقد وجد الشكل الدائري في (17%) من الحالات, البيضاوي في (53%) , والشكل الغير منتظم في (15%) و ذو الرأس السهمي في (15%) ومتوسط طول وعرض الثقبه كما يلي 35.37±2.49 ملم و 28.57±2.48 ملم علي التوالي.

المعرفة التشريحية لمنطقة الثقبة العظمي ذو أهمية بالغة لعلاج الأورام ومساعدة الجراح بشأن اختيار أفضل نهج جراحي والتغيرات المتوقعة في تشريح الأجزاء الأساسية واستئصال الأورام.

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Abbreviations

FM foramen magnum

CT Coputed Tomography

LFM	Length of foramen magnum
WFM	Width of foramen magnum
VA	Vertebral arteries
CN	Cranial Nerve
CSF	Cerprospinal Fluid
MDCT	Multi Detector Computed Tomography
MRI	Magnetic Resonance Imaging
OC	Occipital Condyle
SFM	Shape of foramen magnum