

الآية

قال تعالى:

{ إقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (1)
خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (2)

إقْرَأْ وَرَبُّكَ الْأَكْرَمُ (3) الَّذِي عَلَّمَ
بِالْقَلَمِ (4) عَلَّمَ الْإِنْسَانَ مَا لَمْ

يَعْلَمُ (5) }
صدق الله العظيم

سورة العلق الآيات (1-5)

Dedication

To my family

To my friends

To my teachers

...

Acknowledgment

First of all, I Thank Allah the almighty for helping me to complete this project. I Thank Dr.Asama Ibrahim ahmed my supervisor for her help and guidance .finally I would like to thank Mohmed Abdalmonem , Mohmed Abdalwhab Alhassn , Ahmed Saco , and everybody who helped me in this project

Abstract

This is a descriptive, cross sectional study which was done during August to November 2016 and was carried out at Antalya medical center , Khartoum- Sudan. The study discusses determining normal ventricular size in Khartoum state population using computed tomography . The study aimed to establish baseline reference values for the lateral, third and fourth ventricular dimensions on normal brain, standardized for sex and age. the study found that normal CT scans of 80 adult participant (male and female) aged between 10 – 90 years, having no brain disorders that affect the ventricular system .

The study found the results showed that the average fourth ventricle height and width , third ventricle height and width, anterior horn of lateral ventricles height and width, and posterior horn of lateral ventricles height and width 9.25+/-18.30mm ,10.15+/-1.78mm,17.35+/-3.28mm, 10.20+/-2.81mm 27.04+/-3.28mm , 5.67+/-2.56mm,and 29.45+/-6.66mm,9.27+/-2.57mm respectively.

The study conducted to of the age have direct effect on the ventricular size and noted that increase in age lead to decrease in ventricular dimensions, and ventricular system of the male higher than female

It is important to know the reference value of the ventricle size in Sudanese population, to state the pathology easily. Further studies should be done using a larger sample size.

مستخلص البحث

هذه دراسة وصفية مقطعية تم القيام بها خلال الفترة من اغسطس حتى نوفمبر 2016 وأجريت في مركز انطاليا الطبي بالخرطوم- السودان. الدراسة تتناول تحديد احجام البطينات الدماغيه لسكان ولاية الخرطوم باستخدام التصوير بالاشعه المقطعيه المحوسبه. لي مرضى سوادنيين, الذين كان عددهم 80 مريض بالغ (ذكور واناث) تتراوح اعمارهم من 10 الي 90 سنه ليس لديهم اي اضطرابات في الدماغ بامكانها ان تؤثر على الجهاز البطني هدفت هذه الدراسه لتحديد القيم المرجعيه الاساسيه لابعاد البطينين الجانبيان والبطين الثالث والرابع على صور الاشعه المقطعيه المحوسبه الطبي .

وجدت الدراسه ان ومتوسط اطوال البطين الرابع وعرضه ومتوسط اطوال البطين الثالث وعرضه متوسط اطوال القرن الامامي للبطينات الجانبيه وعرضها والقرن الخلفي للبطينات الجانبيه وعرضها كانت كالاتي

و 2.65 -/+ 9.25 مم و 10.15 +/- 1.78 مم 17.35 +/- 3.28 مم و 2.81 -/+ 10.20 مم و 27.04 +/- 3.28 مم و 5.67 +/- 2.56 مم و 29.45 +/- 6.66 مم و 9.27 +/- 2.57 مم على التوالي.

خلصت هذه الدراسه ان العمر له تاثير مباشر على حجم البطينات و اشارت ان مع زايدة العمر ينقص حجم البطينات و ايضا وجدنا ان حجم البطينات كانت اكبر عند الذكور منه عند الانااث.

من المهم ان تحدد قيمة مرجعية لقياس احجام البطينات الدماغيه لدي الشعب السوداني، لمعرفة الأمراض بسهولة. وينبغي أن يتم إجراء المزيد من الدراسات باستخدام حجم عينة أكبر.

List of contents

Topic	Page NO)
الايه	I
Abstract English	II
Abstract Arabic	III
Acknowledgment	V
List of content	VI-VII
List of figures	VIII
List of tables	X
Chapter one	
Introduction	1
Problem of study	2
Objectives	2
Chapter two	
Theoretical back ground: Anatomy	3
Previous studies	13
Chapter three	
Material and methods	15
Chapter four	

Results	18
Chapter five	
Discussion	29
Conclusion	31
Recommendations	31
References	32

List of figures:

Figures(No)	Title	Page(No)
2.1	lobes of the brain	4
2.2	Sagittal section of the brain	5
2.3	Ventricles of the brain	5
2.4	Showing blood supply of the brain.	7
2.5	Showing circle of wills.	7
2.6	Cerebral ventricles including relative position in the brain	8
4.1	Comparison between males and females in Age.	20
4.2	Comparison between males and females in Fourth Ventricle Height	20
4.3	Comparison between males and females in Fourth Ventricle Width.	21
4.4	Comparison between males and females in Third Ventricle Height.	21
4.5	Comparison between males and females in Third Ventricle Width.	22
4.6	\ Comparison between males and females in Height of Anterior Horn of Lateral Ventricle	22
4.7	Comparison between males and females in	23

	Width of Anterior Horn of Lateral Ventricle.	
4.8	Comparison between males and females in Height of Posterior Horn of Lateral Ventricle.	23
4.9	Comparison between males and females in Width of Posterior Horn of Lateral Ventricle.	24
4.10	A scatter plot diagram shows a linear relationship between the Age and the Fourth Ventricular Height of the subjects, $R^2 = -0.031$.	24
4.11	A scatter plot diagram shows a linear relationship between the Age and the Width of the Fourth Ventricle of the subjects, $R^2 = 0.005$.	25
4.12	A scatter plot diagram shows a linear relationship between the Age and the Height of the Third Ventricle of the subjects, $R^2 = 0.068$.	25
4.13	A scatter plot diagram shows a linear relationship between the Age and the Width of the Third Ventricle of the subjects, $R^2 = 0.001$.	26
4.14	A scatter plot diagram shows a linear relationship between the Age and the Height of Anterior Horn of Lateral Ventricle of the subjects, $R^2 = 0.181$.	26
4.15	A scatter plot diagram shows a linear relationship between the Age and the Width of Anterior Horn of Lateral Ventricle of the subjects, $R^2 = 0.181$.	27
4.16	scatter plot diagram shows a linear relationship between the Age and the Height of Posterior Horn of Lateral Ventricle of the subjects, $R^2 = 0.001$.	27

4.17	A scatter plot diagram shows a linear relationship between the Age and the Width of Posterior Horn of Lateral Ventricle of the subjects, $R^2 = 0.080$.	28
5.1	axial CT brain (slice thickness: 5/7.5mm) of male patient (17 Y) showing measurement high and width of 4 th ventricle	35
5.2	axial CT brain (slice thickness: 5/7.5mm) of male patient (17 Y) showing measurement high and width of lateral ventricle anterior horn and 3th ventricle	35
5.3	axial CT brain (slice thickness: 5/7.5mm) of male patient (17 Y) showing measurement high and width of lateral ventricle anterior horn and 3th ventricle	36

List of tables:

Table(No)	Title	Page
4.1	Characteristics of subjects enrolled in computed tomography imaging studies of the Ventricles	18
4.2	Characteristics of subjects enrolled in Magnetic Resonance Imaging studies of the Corpus Callosum according to age group	19
4.3	comparison between males and females:	19