

الآية

:قال تعالى



صدق الله العظيم

(النحل 53)

Dedication

To my beloved parents for their moral support and all the work they did to get me where I am today.

To my lovely parents.

To my lovely sisters for their kind support.

To my friends who stood beside me and supported me.

**To my supervisors and
teachers.**

Thanks for all

Acknowledgement

I thank almighty God for giving me the strength, courage and determination in conducting this study, despite all difficulties.

Phrases may not cover what I mean to show, but a word must be penned to those who helped me and guided me through the way and to those who intended to help me accomplish this work ,It's because of their patience and splendid character I reached this far.

I would like to thank gratefully Dr. Asma Ebrahim
Ahmed my supervisor

Abstract

This study was conducted to find out the mean portal vein diameter in Sudanese population.

Abdominal ultrasound was performed for 100 Sudanese patients in Khartoum state aged between 18-65 yrs. The age grouped to six groups as flow ([18-25], [26-33], [34-41], [42-49], [50-57] and [58-60]) female 53 and male 47, with commercially available real time ultrasound machine using a 3.5 MHz transducer.

The result after data analysis was found: [in 23 patient aged (18-25) yr, 9 patient aged (26-33) yr, 17 patient aged (34-41) yr, 20

patient aged (42-49) yr, 17 patient aged (50-57) yr and 14 patient aged (58-65) yr] the mean diameter of main portal vein was ($[8.47 \pm 0.68]$ mm, $[9.53 \pm 0.73]$ mm, $[10.51 \pm 1.06]$ mm, $[10.67 \pm 0.80]$ mm, $[11.57 \pm 0.87]$ mm and $[13.14 \pm 0.40]$ mm) respectively.

The overall mean diameter of main portal vein in 100 pt was $[10.53 \pm 1.68]$ mm. with minimum diameter [7.20 mm] and maximum diameter [13.70 mm].

The mean portal vein diameter for male $[10.99 \pm 1.67]$ mm and mean diameter for female $[10.13 \pm 1.60]$ mm.

There is a strong correlation between main portal vein diameter and age, as age increase the portal vein diameter increase. ($R^2 = 0.76$)

ملخص الدراسة

لقد أجريت هذه الدراسة لمعرفة متوسط قطر الوريد البابي في الشعب السوداني.

تم إجراء فحص موجات فوق الصوتية للبطن لعدد مريض سودانيين في ولاية الخرطوم في الفترة من شهر يونيو الي اغسطس للعام 2016 ، تتراوح أعمارهم بين 18-65 عاما.

قسمت لعدد 6 مجموعات علي النحو التالي ([25-18]، [33-26]، [41-34]، [49-42]، [57-50] و [60-58]) كان عدد النساء 53 والرجال 47 ، مع إستخدام جهاز موجات فوق الصوتية (مع خاصية الزمن الحقيقي) المتاح تجاريا باستخدام محول 3.5 ميغاهيرتز.

وقد تحصلت الدراسة على النتائج الآتية بعد تحليل البيانات: (في 23 مريض بين- (25-18) سنة، 9 مرضى بين (33-26) سنة، 17 مريض بين (41-34) سنة، 20 مريض بين (49-42) سنة، 17 مريض بين (57-50) سنة و 14 مريض بين (65-58) سنة) كان متوسط قطر الوريد البابي الرئيسي [0.68 ± 8.47] ملم، [0.73 ± 9.53] ملم، [1.06 ± 10.51] ملم، [0.80 ± 10.67] ملم، [0.87 ± 11.57] ملم و [0.40 ± 13.14] ملم) علي التوالي.

كان متوسط قطر الوريد البابي الرئيسي- في عدد 100 مريض [1.68 ± 10.53] ملم. مع الحد الأدنى [7.20] مم و الأقصى [13.70] مم.

متوسط قطر الوريد البابي للذكور [1.67 ± 10.99] مم ومتوسط قطر الوريد البابي للإناث [1.60 ± 10.13] ملم.

و لخصت الدراسة بأن هنالك علاقة قوية بين قطر الوريد البابي الرئيسي والعمر (علاقة طردية) ($R^2 = 0.76$)

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List of abbreviations

Abbreviation	Full meaning
GI	Gastro-intestinal
PV	Portal vein
CT	Computed tomography
IVC	Inferior vena cava
KHz	kilohertz

2D	Two dimensional
PW	Pulse waves
CLD	Chronic liver disease

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