

Dedication

To;

My parents...

My wife and kids

and my brothers

Acknowledgment

I would like to express my deepest gratitude to my supervisor Dr.BabikerAbdelwhab for giving opportunity to carry out my work for trusting me with assignment of this very interesting subject, I would like to thank my collage of Medical diagnostic collage especially patch 19, 20.

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Abstract

The portal vein (PV) and hepatic artery forms the liver's dual blood supply. Sonography is a valuable tool in the assessment of porto-systemic pathologies. This study aimed at determining the mean portal vein diameter based on age, gender and weight. This was a cross-sectional prospective study carried out among apparently healthy adult subjects in Khartoum Hospitals; the data were collected from Khartoum stated hospitals in period from December, 2018 to April, 2019. The result showed no significant difference of PV wit gender at $p=0.772$ and the mean value was 1.175 ± 0.1559 cm. The mean age founded was (43.4 ± 18.7) while the most affected study groups was three groups having the same frequency which are $(21.5-32.8, 32.9-44.2, 44.3-55.6)$ having 21% form study population for each groups. Also female was most affected by this type of measurement having more than 57% from the data. This study found the mean values of PV diameter in apparently healthy adults in our environment to be 0.155 ± 0.157 mm and that PV diameter positively correlates with anthropometric variables.

ملخص الدراسة

ان الاوردة والشرابين في الكبد تمثل النائي الغزائي للكبد. وان الموجات الصوتية هي احدي الطرق الحيوية لتتقيم وتشخيص امراض الكبد واوردتها وشرابينها. كان الهدف الرئيس من هذه الدراسة هو قياس الوريد...لدي السودانين البالغين الطبيعيين ومقارنته بعمر وزن وجنس الافراد.

اجريت هت هذه الدراسة في عدد من مستشفيات الخرطوم بحيث تم جمع البيانات في الفترة من ديسمبر 2018 والي ابريل 2019 وهي دراسة تحليلية تمت بواسطة جهاز الموجات الصوتية بتردد 3.5مقا هيرتز.

خلصت النتائج ان قياس قطرالوريد الرئيسي يساوي 0.1559 ± 1.175 وان متوسط الاعمار يساوي 18.7 ± 43.4 وان اكثر الفئات العمرية التي تم التعامل معها كانت 32.9-44.3 والتي تليها بحيث بحيث مثلت النسبة حوالي 21% وكانت اكثر العينات من النساء بحيث مثلت حوالي 57% من عينات الدراسة.

هذا وخلصنا الي انه من المهم استخدام الموجات في القياس كما ان العلاقات الموجودة مع العمر والوزن مهمة .

List of abbreviations

DM	Diabetes Mellitus
FWW	Flow Velocity Waveform
SPSS	Statistical Package for Social Sciences
SYS	Systole
TNF	TumourNecrosis Factor
US	Ultrasound
WKS	Weeks