



بسم الله الرحمن الرحيم

(إنما يخشى الله من عباده العلماء إن الله عزيزٌ غفورٌ)

صدق الله العظيم ،،،

فاطر 28

DEDICATION

To my dears mother & Father

To my dear husband

And my eldest son

Who are supported

And encouraged me.

ACKNOWLEDGMENT

*Thankful for Allah, and then great doctors and teachers and special thanks to my supervisor **Dr. Mohamed Mohamed Omer** for his supporting and encouraging to carry-out this study. I would like to acknowledge to **Dr. Al Safi Ahmed** and **Dr. Ahmed Mustafa Abu kuna** who paved the way for me during data collection. Great thanks to all of my colleagues in Khartoum state hospitals and clinics.*

ABSTRACT

Gallbladder is part of the biliary system which stores, concentrates and regulates the bile that helps in the process of digestion.

This study aimed to study of gallbladder lesion in Sudan using U/S ,included 100 patients with deferent age, residences, tribe and occupations with different abdominal symptoms and signs who were who refereed for gall bladder ultrasonography in different hospitals and clinics in Khartoum state (Military hospital ,Omdurman teaching hospital , Khartoum hospital , Omdurman diagnostic clinic , Dr.Alsafi clinic and Sudan university college of medical radiological sciences clinic) Duration the period from March 2015 to December 2015.

This study found that majority of patient 66% were normal gallbladder and remain 34% showed different type of gallbladder diseases(cholelithiasis 16%, the most gallstone cases in females especially the housewives and farmers and age group(40-60 years). cholecystitis 12% , wall thickening polyp and gallbladder carcinoma1%.

It concluded that ultrasound played main role in study of gall bladder disease so that patient with symptoms and sign of gallbladder should be investigated carefully .

ملخص البحث

المرارة هي جزء من نظام الصفراوي الذي يخزن، يركز وينظم الصفراء التي تساعد في عملية الهضم.

هدفت هذه الدراسة إلى دراسة امراض المرارة في السودان باستخدام الموجات فوق الصوتية، وشملت الدراسة 100 مريض تم تحويلهم لفحص الموجات فوق الصوتية للمرارة في المستشفيات والعيادات المختلفة في ولاية الخرطوم شملت مستشفى السلاح الطبي ومستشفى امدرمان التعليمي ومستشفى الخرطوم وعيادة امدرمان التشخيصية وعيادة الدكتور الصافي وعيادة كلية الأشعة جامعة السودان.

تمت الدراسة في الفترة من مارس 2015 وحتى ديسمبر 2015. وظهرت نتائج الدراسة ان معظم المرضى 66% حوصلتهم الصفراوية سليمة . 34% مصابين بامراض حويصلة صفراوية مختلفة لكن السائدة كانت حصاوى المرارة التي مثلت 16% من الامراض . معظمهم ربات المنازل ، المزارعين ، واكثر الفئة العمريه اصابة (40-60)سنة ببقية امراض الحويصلة الصفراوية تراوحت بين 12%-01%معظمها نتيجة لوجود حصاوي المرارة مثل إتهاب المرارة الحصوي 12% وزيادة سمك جدار الحويصلة الصفراوية وسرطان الحويصلة الصفراوية 01%.

وخلصت إلى أن الموجات فوق الصوتية تلعب الدور الرئيسي في دراسة أمراض المرارة لذلك ينبغي أن يتم فحص المريض بأعراض وعلامة امراض المرارة بدقة.

List of contents

NO	Subject	Page
	الإية	I
	Dedication	II
	Acknowledgement	III
	Abstract (English)	IV
	Abstract (Arabic)	V
	Table of contents	VI
	List of Tables	VIII
	List of Figures	IX-X
	List of Abbreviations	XI
1	Chapter one	1
1.1	Introduction	1
1.2	General objective of study	1
1.3	Specific objectives of the study	1
1.4	Problem of study	1
1.5	Over view of study	2
2	Chapter two (literature reviews)	3
2.1	Anatomy of the gallbladder	3
2.1.1	Blood supply of the gallbladder	6
2-2	Physiology of the gallbladder	7
2.2.1	Neutralization of acid chime	8
2.2.2	Control of discharge of bile into the intestine	8

2.3	Gallbladder pathology	10
2-3-1	Gallstones (cholelithiasis)	10
2-3-2	Cholecystitis	13
2-3-3	Sludge	18
2-3-4	Cholesterolosis	19
2-3-5	Adenomyomatosis	20
2-3-6	Benign tumor	21
2-3-7	Malegnant tumor	21
2-3-8	Congenital disorders	22
3	Chapter three	24
3.1	Materials	24
3.2	Methods	25
4	Chapter four	26
4-1	Table of results	26
5	Chapter five (Discussion)	46
5.1	Discussion	46
5.2	Conclusion	48
5.3	Recommendations	49
	References	50
	Appendices	51

List of Tables

Table no	Table contents	Page no
2-1	Composition of human bile (mm0l/liter).	7
4-1	Shows gender of the patients	26
4-2	Male & females frequencies	27
4-3	Site of tribes	29
4-4	Occupations frequency	31
4-5	Symptoms and/or Sign of 100 patients	33
4-6	The Ultrasound findings to show the gallbladder lesions	35
4-7	The gallstone frequency among males & females	37
4-8	The Gallstone in relation to sex and age .	39
4-9	The Gallstone in relation to sex and occupation .	41
4-10	The Gallstone in relation to sex and residence	45
4-11	THE GALLSTONE IN RELATION TO SEX AND SUDANESE TRIBES.	

List of figure

No of Figure	Figure repression	Page of figure
Fig. (2-1)	Anatomy of the gallbladder	3
Fig. (2-2)	Variations in the anatomy of the gallbladder and biliary tree.	5
Fig(2-3)	Gall stones appearance	12
Fig(2-4)	Ultrasound appearance of acute cholecystitis	16
Fig(2-5)	Acute cholecystitis	16
Fig(2-6)	Empyema and Gangrenous cholecystitis	17
Fig (2-8)	A calculus cholecystitis	18
Fig(2-9)	Sonographic appearance of Sludge	19
Fig (2-10)	Sonographic appearance of adenomyomatosis	21
Fig (2-11)	Sonographic appearance of adenomyomatosis	18
Fig(2-10)	Sonographic appearance of the cholangiocarcinoma	19
Fig (2-11)	Sonographic appearance of the cholangiocarcinoma	21
Fig (4-1)	shows gender of the patients	26
Fig (4-2)	Male & females frequencies	28
Fig. (4-3)	Show site of tribe	30
Fig. (4-4)	Occupations frequency	32
Fig. (4-5)	Clinical signs &symtoms	34
Fig (4-6)	Show Percentage of lesions in in 100 patients	36

Fig (4-7)	Gallstone among male and female	38
Fig (4-8)	The Gallstone in relation to sex and age .	40
Fig (4-9)	The Gallstone in relation to sex and occupation .	42
Fig (4-10)	The Gallstone in relation to sex and residence .	44

List of Abbreviations

US	Ultrasound
GB	Gallbladder
MRI	Magnetic resonal image
CCC	circumscribed cholangiocellular carcinomas
CT	Computerize tomography
W.E.S	Wall echo shadowing
CCK	Cholecystokinin.
EDUS	extraductal (endoscopic) ultrasound,)
RUQ	Right upper quadric