

## الآية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(اللَّهُ يَعْلَمُ مَا تَحْمِلُ كُلُّ أُنْثَىٰ وَمَا تَغِيضُ لِأَرْحَامٍ مَّا تَوَدَّوْنَ كُلُّ شَيْءٍ  
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صدق الله العظيم

|

## **Dedication**

*I dedicate this work to my father, my mother, my wife, my sisters, my brothers, my teachers and my friends.*

*Always you are sitting in mine and encourage me to do the best in my life.*

*Best regards for all*

## Knowledgegment

*I thank ALLAH for enabling me to complete this thesis. I sincerely thank Dr.Alsafi Ahmed, the supervisor of my thesis for his continuous help, supervision and guidance.*

*I greatly thank all those who supported and helped me to complete this thesis. I am very grateful to all my teachers in all educational levels.*

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### III

#### **Abstract**

This study was conducted to determine the role of Ultrasound in evaluating of renal stone in patients treated with lithotripsy, by assess the accuracy with which renal stones before ESWL, and the changes in the calculi after( ESWL) and evaluate the possibility of renal scan to detect the Complications of this procedure.

The place of this work was lithotripsy Unit of Military Hospital (Omdurman). The duration of study was 6 months from first October 2011 to April 2012,43 patients with renal calculus included in study for ultrasound scan, criteria have been identified.

Extracorporeal Shock Wave Lithotripsy(ESWL) application has been intuitively connected to complications.

These are related mostly to residual stone fragments, infections, and effects on tissues such as urinary, gastrointestinal, cardiovascular, genital, and reproductive systems. Recognition of ESWL limitations, use

of alternative therapies, correction of pre-existing renal or systemic disease, treatment of urinary tract infection, use of prophylactic antibiotics, and improvement of ESWL efficacy are the most important measures of prevention. Decrease of shock wave number, rate and energy, use of two shock-wave tubes simultaneously, and delivery of two shock waves at carefully timed close intervals improve ESWL efficacy and safety.

Conclusion: ESWL is a safe method to treat stones when proper indications are followed.

This study demonstrates that, use of sonography before ESWL in patients with nonopaque calculi may be helpful in detecting additional, unsuspected stones. Furthermore, the variable sonographic findings after ESWL as compared with findings of renal tomography indicate that the latter is more useful in evaluating the effectiveness of shock-wave therapy.

## IV

### مستخلص البحث

هذا البحث يعطى تقييم لوضى حصولى الكلى المعالجين واسطة تقنية تفتيت الحصولى، بحساب طول الحصولى قبل وبعد التفتيت و تقييم المضاعفات التى تحدث نتيجة لعملية التفتيت . مكان البحث مستشفى السلاح الطبى بامومان،مدة البحث 6اشهوفى الفتره من اكتوبر 2011 الى اويل 2012 .

عدد المرضى بحصى الكلى قيد الدراسة 43، ذكور 27 إناث 16، 19 وبيض تم تقنيت الحصى لهم بالكامل،  
 الاخرين 24 وبيض كانت لديهم 34 حصى وذلك بعد التقنيت مقسمة كالاتى واحد حصى عند 15 وبيض ،  
 حصى ثان عند 8 وبيض عدد ثلاثة حصى في وبيض واحد. تمرصد بعض المضاعفات الناتجة من عملية التقنيت  
 مثل قفل الحالب نتيجة لانقسام الحصى والالتهابات، زياده في ضغط الدم، فعملية التقنيت عمليه امنه ذلك عند  
 القيام بكل الاجراءات الوديه الي زيادة فعالية عملية التقنيت.

ملخص: هذه الدراسة وضحت فعالية الموجات فوق الصوتيه فى اكتشاف الحصى الغير وئيه بالاشعه

العاديه قبل التقنيت، كما انها اكثر فعاليه فى تقييم عملية التقنيت عند مقارنتها بطرق التشخيص الاخرى.

## V

### ABBREVIATIONS

Meaning	Abbreviation
adenine phosphoribosyl transferase	APRT
credible intervals	CI
Computed tomography	CT
European Association of Urology	EAU
extracorporeal shock wave lithotripsy	ESWL
grade of recommendation	GR
hydrochloric acid	HCl
Health Information Research Unit	HIRU
holmium: yttrium-aluminum-garnet [laser]	Ho : YAG

Hyperparathyroidism	HPT
Hounsfield Units	HU
international normalized ratio	INR
intravenous urography	IVU
joint expert speciation system	JESS
Kidney ureter bladder	KUB
level of evidence	LE
medical expulsive therapy	MET
magnetic resonance urography	MRU
Nephrocalcinosis	NC
contrast enhanced computed tomography	NCCT Non-
non-steroidal anti-inflammatory drugs	NSAIDs
partial thrombolastin time	PTT
Randomised controlled trial	RCT
Renal tubular acidosis	RTA
stone free rates	SFR
shockwave lithotripsy	SWL
Ureteropelvic junction	UPJ
Ureterorenoscopy	URS
Ultrasonography	US

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