

## **Dedication**

*To my mother*

*To my father*

*To my sisters*

*To my Wife and my kids saber*

*To my teachers*

*To all those who help me in preparation study*

## **Acknowledgement**

*My deeply grateful to God who gave me patience and power to complete this study; then to My Supervisor:Dr.Muna Ahmed Mohamed Ahmed*

*My thanks to everyone who helped, supported and provided any type of help through this study.*

*Finally special thanks to my family and friends who were of helpful during the whole study period.*

## Abstract

This descriptive study was conducted during the period from October 2017 to January 2018 in Khartoum state at Ribat universal hospital.

The aim of this study was to measurement of ureteric stones using CT.

This study carried out in a sample of 50 patients (42 males (84%) and 8 females (16%)) who underwent to CTKUB examination for ureteric stones by using CT scan machine (Neusoft: Neuviz16), Multi-Slice CT Scanner System using laser printer with Agfa film.

The main results of this study were that mean  $\pm$  STD of all samples of ureteric stones, the ages ( $36.62 \pm 19.5154$ ) years, ureteric stones size ( $8.6 \pm 3.200$ ) mm, width of ureter above ureteric stones ( $13.05 \pm 6.84180$ ) mm, width of ureter below ureteric stones ( $5.6 \pm 2.14641$ ) mm and HU ( $376.9 \pm 266.102$ ) at P value 0,01.

The concluded of this study were that the ureteric stones size measurement increased with age, and the width of ureter above and below ureteric stones increased with ureteric stones size (the width of ureter above ureteric stones more increased), also the study showed that the ureteric stones more affected the males than females.

The study showed that the HU increased with ureteric stone size, and type of ureteric stones depends on HU.

The study recommended the future studies should be done with other modalities (magnetic resonance imaging (MRI))\ultra sound (US)).

## ملخص البحث

هذه الدراسة الوصفية اجريت في الفترة من اكتوبر 2017 الي يناير 2018 في ولاية الخرطوم  
بمستشفى الرباط الجامعي .

الهدف من هذه الدراسة هو قياس حساوي الحالب باستخدام تقنية الاشعه المقطعيه .

اجريت هذه الدراسة علي عينه من 50 مريض (42 زكور(84%) و 8 اناث(16%)) اخضعوا لفحص  
الاشعه المقطعيه للكليتين والحالبين والمثانه بسبب حساوي الحالب باستخدام جهاز اشعه مقطعيه  
(نيوسفت:نيوسفت 16) يعمل بنظام مسح الاشعه المقطعيه متعدد المقاطع وباستخدام طابعه ليزر مع افلام اكفا.

كانت نتائج الدراسة ان المتوسط والانحراف المعياري لكل العينات بالنسبه لحساوي الحالب ، الاعمار

(36.62/+19.5154)سنين، حجم حساوي الحالب (8.6/+3.200) مم، عرض الحالب اعلي حساوي

الحالب (13.05/+6,84180) مم، عرض الحالب اسفل حساوي الحالب (5.6/+2.14641)مم ووحده

هونسيفيل(376.9/+266.102)عند نقطه احتمال 0,01.

خلصت الدراسة ان قياس حجم حساوي الحالب يزيد مع العمر، وكذلك عرض الحالب اعلي واسفل  
حساويالحالب يزداد بزيادة حجم حساوي الحالب(عرض الحالب اعلي حساوي الحالب يزداد اكثر )،  
وايضا اظهرت الدراسة ان حساوي الحالب تصيب الزكور اكثر من الاناث.

كما اظهرت الدراسة ان وحدة هونسيفيل تزيد بزيادة حجم حصوه الحالب ,ونوع حساوي الحالب يعتمد علي  
وحدة هونسيفيل.

توصي الدراسة الدراسات المستقبلية ان تجري باجهزه اخري(التصوير بالرنين المغناطيسي\الموجات فوق  
الصوتيه).

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## Abbreviations

CT	Computed Tomography
KUB	Kidneys Ureters Bladder
HU	Hounsfield Units
IVC	Inferior Vena Cava
L2	Second Lumbar Vertebrae
US	Ultra Sound
L5	Five Lumbar Vertebrae
IVU	Intra Venous Urography
KV	Kilo Volt
MRI	Magnetic Resonance Imaging
MA	Milli Amber
DAS	Data Acquisition System
3 D	Three dimensional
CPU	Central Processing Unit
NCHCT	Non Contrast Helical CT
FOV	Field Of View
WW	Window Width
WL	Window Level
AP	Anterior Posterior
SPSS	Statistics Package for Social Studies
STD	Standard Deviation

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