

Dedication

To my parent

To my husband

To my son

To my brothers

To my teachers

Acknowledgement

Firstly, I would like to thank my supervisor **Dr. MONA AHMED** for bringing this research to its final form

To my colleague in Yastbshiron Hospital radiologist, technologist, and staff of reception.

I wish to thank all those who helped me without them I could not have completed this project

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Abstract

The study aimed to determine the accuracy of computed tomography and ultrasound in measuring of pelvicalyceal system stone.

This study was explained from May 2017 to December 2017, in yastbshiron hospital random samples of 50 patient, 33 males (66%) and 17 females (34%), their age from 20 to 65 years, where chosen for CT-KUB and renal US.

CT KUB was obtained for the stone length, width, computed tomography (CT) number, and measured by using computer.

Renal ultrasound was obtained for stone length, width and measured by using computer.

CT- KUB was done by using Toshiba (16slices) machine with slice thickness 8mm, collimation 0.8*16 mm, 120 KVP and 150 MAs.

The result showed the male were more affected than female, and there is linear relationship between the stone length, width, CT number with age

There was significant correlation between age of the patient and stone size (correlation significant 0.943) as well as between size and stone density (correlation significant 0.920).

Ct number can characterize the stone type and CT-KUB has accuracy 100%, sensetvity 100% and specificity equal zero.

CT-KUB has great value in detection of calculus more than renal ultrasound as it is accurate without magnification.

ملخص الدراسة

الهدف من هذه الدراسة هو تحديد دقة الأشعة المقطعية والموجات فوق الصوتية في اكتشاف حصوي حوض الجهاز البولي

اجريت هذه الدراسة في مستشفى يستبشرون في الفتره بين مايو 2017 الي ديسمبر 2017

عينه من 50 مريض وكان عدد الذكور 33 (66%) وعدد الاناث 17 (34%) وكان عمر المرضى بين 20-65 سنه .

وتم عمل اشعه مقطعيه لكل المرضى وتم الحصول علي طول وعرض ورقم الأشعه المقطعيه للحصوه وتم قياسه بالكمبيوتر.

وتم عمل موجات صوتيه لكل المرضى وتم الحصول علي طول وعرض الحصوه وتم قياسه بالكمبيوتر.

تم استخدام جهاز مقطعيه 16 شريحه بسمك شريحه 8 مل ومحدد 0.8*16 مل و120 كيلوفولت و 150 مللي امبير.

النتائج اظهرت ان الذكور اكثر اصابه بالحصوي من الاناث وهناك علاقه خطيه بين طول وعرض ورقم الأشعه المقطعيه مع العمر.

كما بينت الدراسة وجود ارتباط ذو دلالة معنويه بين العمر وحجم الحصوه وبين كثافه الجسم وحجم الحصوه.

الأشعه المقطعيه ذات قيمه ابر من الموجات فوق الصوتيه في الكشف عن حصي حوض الجهاز البولي ولها دقه كبيره بدون تكبير.