Dedication

To my family who always support me all time, encourage and want me to be the best

To my teachers, friends whom always I find them beside me and support me in anything.

To any person who help me to complete this work

Acknowledgement

Firstly , great thank to allah to let me reaching this agreat place .

and great thank to my supervisor DR/ **AsmaIbrahim** for her effort and support me to complete this work.

Also I want to thanks my colleagues in all CT center especially in Alamal diagnostic center and Sudan advanced center ,Alzaytouna hospital for their help.

Very special thanks to my parent for their effort, patient with me to finish this work.

Abstract

This study was carried out to evaluate and diagnosis renal arteries using multidetector computed tomography angiography for the donors.

The staudy was carried out in Alamal diagnostic centre and Alzaytouna hospital ,and Sudan advanced centre , where 50 patients were collected randomly from different ages and different genders 30 male , 20 female , this study has been carried out in 3-4 months.

The general objective ofthis study is the evaluation the role of multi-detector computed tomography angiography in diagnosis of renal vascular of the renal system in donors

The data of this study was collected by data collecting sheet and analysis using Microsoft Excel and software package for statistical analysis(SPSS).

All donors underwent to multidetector computed tomography angiography of renal, the study conclude thatmultidetector computed tomography angiography could evaluate renal arteries in 44 donors by 88 % of is normal and free from any anamolies, 4 donors 8% had double renal arteries in RT kidney and , 2 donors 4%

had Arteriovenous malformation , so that the multidetector computed tomography angiography secceeded to exclude 6 subjects from donation, donor with Arteriovenous malformationand the other had double renal arteries.

images and decreased the time and radiation dose.

ملخص البحث

اجريت هذه الدراسه لتقويم وتشخيص الشرايين الكلويه لمتبرعي الكلي باستخدام الاشعه المقطعية متعددة الكواشف .

حيث اجريت هذه الدراسه بمركز الامل التشخيصي , وايضا بمستشفي الزيتونه , و مركز السودان المتطور,حيث تم جمع 50 عينه عشوائيا من مختلف الاعمار والاجناس ,و استغرقت الدراسه من 3-4 شهور.

الهدف الرئيسي لهذه الدراسه هو تقييم دور الاشعة المقطعية في تشخيص اوعية الكلي الدمويه للمتبرعين .

و قد تم جمع بيانات هذه الدراسه بواسطة ورقه تجميع بيانات وقد تم تحليلها بواسطه برنامج مايكروسفت اكسل وبرنامج التحليل الاحصائي .

حيث أخضع كل المتبرعين وعددهم 50 متبرع لفحص الشرايين الكلويه بواسطه الاشعه المقطعيه متعددة الكواشف . عليه توصلت الدراسه انه يمكن تقويم الشرايين الكلوية لمتبرعي الكلي بالأشعة المقطعيه متعددة الكواشف بنسبة 88% في 44 متبرع كانو طبيعيين و 8 % في 4 متبرعين لديهم شريانين في الكله اليمني , و 2 متبرعين بنسبة 3 % لديه تشوة شرياني وريدي

. بهذ نجحت الأشعة المقطعيه متعددة الكواشف من استبعاد 6 متبرعين من التبرع بالكلي لأن منهم من يعاني من تشوة شرياني وريدي والبعض الاخر لديهم شريانين في الكلي اليمني. ايضا استخدام الاشعه المقطعيه متعددة الكواشف مكننا من الحصول علي صور ة بجوده عالية وايضا تقليل الزمن وتقليل الجرعه الاشعاعية.

Abbreviations

Abbreviations	Words
2D	2Dimension
3D	3 Dimension
ADH	Antidiuretic hormone
AVMs	Arteriovenous Malformations
CKD	Chronic kidney disease
Cm	Centimeter
CPR	Curved Planar Reformatting
CTA	Computed tomography angiography
DSA	Digital subtraction angiography
FIG	Figure
HU	Hounsfield unit
IVC	Inverior vena cava
KVB	Killovoltagepeak
MAS	Milliampair second
MDCT	Multidetecor computed tomography
MDCTA	Multidetecor computed tomography angiography
Mg	Milligram
Min	Minute
MIP	Maximum Intensity projection
ML	Milliliter
Mm	Millimeter
MPR	Multiplanar Reformatting

MRA	Magnatic resonance angiography
PRA	Plasma renin activity
Pt	Patient
RAA	Renal Artery Aneurysm
RAD	Renal artery disease
RAS	Renal artery stenosis
RVHT	Renovascular hypertension
Sec	Second
SMA	Superior mesenteric artery
T	Time
VRT	Volume rendering technique

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