

DEDICATION

To my family who have always been my nearest and have been so close to me that I found them with me whenever I needed. It is their unconditional loves that motivate me to set higher targets.

الآية

قال تعالى:

بسم الله الرحمن الرحيم

﴿اللَّهُ نُورُ السَّمَاوَاتِ وَالْأَرْضِ ۚ مَثَلُ نُورِهِ كَمِشْكَاةٍ فِيهَا مِصْبَاحٌ ۚ الْمِصْبَاحُ فِي زُجَاجَةٍ ۚ

الزُّجَاجَةُ كَأَنَّهَا كَوْكَبٌ دُرِّيٌّ يُوقَدُ مِنْ شَجَرَةٍ مُبَارَكَةٍ زَيْتُونَةٍ لَا شَرْقِيَّةٍ وَلَا غَرْبِيَّةٍ يَكَادُ زَيْتُهَا يُضِيءُ وَلَوْ لَمْ تَمْسَسْهُ نَارٌ ۚ نُورٌ عَلَى نُورٍ ۗ يَهْدِي اللَّهُ لِنُورِهِ مَنْ يَشَاءُ ۚ وَيَضْرِبُ اللَّهُ الْأَمْثَالَ

لِلنَّاسِ ۚ وَاللَّهُ بِكُلِّ شَيْءٍ عَلِيمٌ ﴿٣٥﴾﴾

صدق الله العظيم

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ABSTRACT

The main aim of this study was to compare the value of renal ultrasonography and cortical scintigraphy with technetium-99m dimercaptosuccinic acid (DMSA) in detecting renal cortical scars in urinary tract infection (UTI) patients .

Renal Scintigraphy (Tc99m - DMSA scan) and Ultrasonography studies were done in 60 children who were referred to the nuclear medicine department in Fujairah hospital between Jun 2014 and May 2015 because of documented urinary tract infection (UTI). Outcomes of both modalities were compared, with focus on renal scarring. Renal scarring detection rates of Tc-DMSA scan and Ultrasonography were compared.

In total, 60 patients underwent both renal scintigraphy and ultrasonography; more scars were seen on DMSA scintigraphy than on ultrasonography: 55% versus 15% of patients. The ultrasonography was difficult to interpret, which mean many more scars were missed on ultrasonography compared with easily interpretable DMSA scintigraphy images.

In children with urinary tract infection (UTI), ultrasonography compared with DMSA scintigraphy, renal scars are often missed, especially when the ultrasound is difficult to interpret. In this study, Tc-DMSA scan detected scars in 30% of kidneys reported to be normal on ultrasound. Ultrasonography was found to be an inappropriate study in the detection of renal parenchymal scars.

الخلاصة

الهدف الرئيسي لهذا البحث هو عمل مقارنة بين فحصي الموجات فوق صوتية وفحص الطب النووي باستخدام التكنشيوم الموسوم بال DMSA لمرضي- مصابين بالتهابات مجري البول.

تم عمل الفحصين لمجموع 60 مريض متوسط اعمارهم 2 سنة كان قد تم تحويلهم من قسم الاطفال لقسم الطب النووي بالفجير في الفتره من شهر يونيو 2014 الي شهر مايو 2015 مصابين بالتهابات في مجري البول وقورن بين- النتائج مع التركيز علي الندوب بالكلية.

اظهرفحص الطب النووي 55% من المرضى- لديهم ندوب بالكلية بينما اظهر فحص الموجات فوق الصوتيه فقط 15% من المرضى- لديه ندوب بالكلية, كان من الصعب تشخيص صور الموجات فوق صوتيه مما يعني- ان مزيد من الندبات قد لا تلاحظ مقارنة بصور فحص الطب النووي والتي كان من السهل تشخيصها.

عند تصوير الاطفال المصابين بالتهاب في مجري البول قد لا تلاحظ كثير من الندوب عند التصوير بجهاز الموجات فوق الصوتيه مقارنة بفحص الطب النووي للكلية. في هذه الدراسة فحص الطب النووي اكتشف 30% ندوب اكثر من فحص الموجات فوق الصوتية والتي اعتبرها طبيعیه. وعليه نجد ان فحص الموجات فوق الصوتيه غير مناسب لفحص ندوب الكلية.

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List of Abbreviations

CT Computed tomography

DMSA dimercaptosuccinic acid
 scintigraphy

IVU	Intravenous urography
PET	Positron Emission Tomography
SPECT	Single photon emission tomography
US	Ultrasonography
USG	Ultrasonography
UTI	Urinary Tract Infection
VUR	vesicoureteric reflex