







شبكة المعلومـــات الجامعية التوثيق الالكتروني والميكروفيا.



جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



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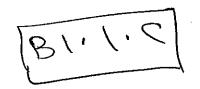








Benha Faculty of Medicine Zagazig University



ROLE OF MAGNETIC RESONANCE IMAGING IN EVALUATION OF RENAL NEOPLASMS

THESIS

Submitted in partial fulfillment of M.D. Degree in radiodiagnosis

BY

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M.B.B.ch, M.Sc. (Radiodiagnosis)

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To

My Parent, My Wife, And my Kids

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ABBREVIATION

3D : Three dimension

CT : Computed tomography

FFE : Fast field echo

FLASH: Fast Low angle shot

FS: Fat suppression

Gd-DTPA: Gadolinium diethy lene triamine penta-acetic acid.

Grass : Gradient recalled acquisition in steady state

GRE: Gradient

IVC : Inferior vena cava

IVU: Intravenous urography

LNs : Lymph nodes

MRA : Magnetic resonance angiography

MRI : Magnetic resonance imagingMRU : Magnetic resonance urography

RCC : Renal cell carcinoma

SE : Spin echo

SPGR : Spoiled gradient recalled acquisition in steady state

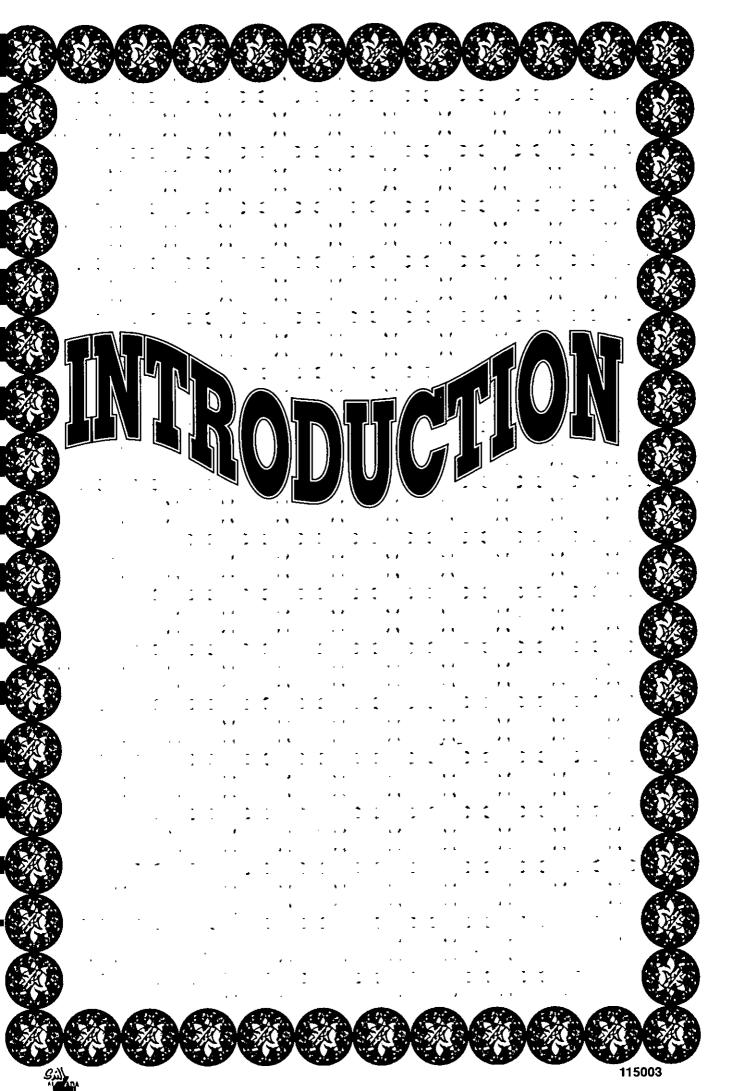
T: Tesla (magnetic MRI unit)

TE: Echo time

TR : Repition time

PCT : Pelvicalyceal tumour

SI : Signal intensity



INTRODUCTION

Magnetic resonance imaging plays an important role in detection and characterization of renal tumours and being safer undoubtedly than CT scan as it does not use ionizing radiation appears to be more suitable during child bearing period and its gadolinium contrast agent is essentially non nephrotoxxic. The various M.R features of a given lesion, such as location (including extension to adjacent structures), morphology (both external and internal), enhancement, and overall signal intensity. Although other imaging techniques, most notably computed tomography (CT), are effective tools to demonstrate many of these features, the multiplaner capability and tissue discrimination offered by MR may provide additional information when imaging certain lesions. Today with technologically improved system and therfrequent use of gadolinium contrast agents, MR is extermely effective in detecting renal masses. (Eilenberg et al., 1990; Hauser et al, 1995, Reminges et al., 1992, Semelka et al., 1991).

Multiplaner capability of MR imaging with favourable resolution compared to reconstruction of axial or coronal CT images. Thus sagittal and coronal images of MR are superior to axial reformated images on CT. Also, imaging in three planes minimize partial volume artifact that facilitate the detection and characterization of lesion, this has been of great value to the authors on several ocasions. The intrinsic soft contrast affored by MR imaging is generally recognised as being superior to that obtainable with CT or sonography. The use intravascular gadolinum chelates further accentuates these