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 offored 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

differences and also effective for renal imaging because the kidney receive a large blood supply and are the primary means of excretion of this agent ***(Mukamel et al., 1988)***. Many cystic renal masses are incidentally detected at intravenous urography, in such cases, additional CT or MR evaluation should be undertaken to acurately stage the lesions. MR imaging preferable to CT in patient with renal impairement or allergy to iodinate contrast media ***(Marotti et al., 1987)***.

M.R. imaging has demonestrated increased detection of tumour thrombus in renal vein and I.V.C. visualization of the tumour extension to the liver, spleen and psaos muscle is also improved with MR imaging, increasing the staging accuracy. Contrast enhanced MR imaging remains the study of choice for patient who can not tolerate iodinated contrast agents. The use of such techrologically improved imaging system lead to earlier detection and treatment of malignant renal neoplasm ***(Balfe et al., 1982)***, improving survival ***(Thompson and Peek,1988)*** and affording a greatest likelihood of renal sparing surgery ***(Provet et al., 1991)***. MR plays an important role in detection of renal masses. Gadolinum chelates behave in a manner exactly analogous to iodinated contrast media because they are primarly excreted by glomerular infiltration. Thus, they can be used to detect enhancement within renal lesion ***(Chogke et al., 1992)***. Renal tumours in particular are often composed of neovascular tissue that readily enhances. Non enhanced T1 and T2 weighted imaging are also useful because they can detect fatty masses such as angiomyolipomas, capsular leomyomas and polypoid masses within cysts ***(Yamashita et al., 1995)***.

When an incidental small renal mass is encountered, accurate characterization can separate lesions into different management categories. The goal of an imaging examination is to separate carcinomas from all other masses that do not require surgery, thus, it is desirable to make a distination of renal cysts (simple and complicated), abscess, hematoma, infarct, lymphoma, metastatic and pseudotumour from renal cell carcinoma. Gadolinium chelates with MR can separate enhancing from non enhanceing masses, and therapy provide this most critical distinctom ***(Bosniak et al., 1993)***.