INTRODUCTION

The liver has a pre-eminent position as the key organ in the abdomen. Focal hepatic disease constitutes a high percentage of hepatic diseases ***(Ros and Taylor, 1998)***.

Hepatic focal lesion could include benign liver lesions and malignant lesions. Benign liver lesions are probably frequent incidental finding at abdominal spiral CT. Benign liver lesions including hepatic cyst, hemangioma, hepatic adenoma, focal nodular hyperplasia, abscess, focal fatty infiltration. Malignant lesions include metastatic deposits and hepatocellular carcinoma ***(Hollet et al., 1995)***.

Many radiological imaging modalities are available for assessment of hepatic focal lesion, including, plain x-ray of the abdomen, ultrasound (US), angiography and isotope study. The revolution in imaging techniques over the past few years has created an advantage in investigating patients with suspected hepatic disease. In particular advances in US, CT scan, and MR imaging have led to improved detection and characterization of liver lesions such that a definitive diagnosis can often be achieved non-invasively ***(Ros and Taylor, 1998)***.

Spiral computed tomography (CT) has rapidly gained acceptance as the preferred CT technique for liver evaluation because it provides image acquisition at peak enhancement of the liver parenchyma during single breath hold ***(Bluemke et al., 1995)***.

CT technique should combine a high sensitivity for lesion detection with a good ability for lesion characterization, to differentiate lesions that do need further diagnostic tests or treatment from lesions that do not.

There are several requirements for obtaining high quality CT images using iodinated contrast agents. These include bolus administration of contrast agent, typically using a power injector, rapid scanning during the short interval of maximum hepatic enhancement, and scanning during suspended respiration ***(Hollet et al., 1995)***.

With spiral (Helical) CT scan, imaging of the whole liver during the same phase of enhancement became possible, in which the radiograph tube rotates continuaily while the patient moves on the table through the gantry, was made possible by development of the slip-ring technology and advances in radiograph tube heat dissipation. Three parameters important in helical CT are, duration of the scan slices, collimation, and table speed ***(Bonaldi et al., 1995)***.

Spiral CT offers a number of significant advantages as lack of respiratory misregistrations and obtaining overlapping axial reconstructions, improve the quality of three dimentional reconstructions facilitating presurgical planning.

In addition, the fast data acquisition with the absence of data gaps allows successive scanning of the entire liver at different moments of injection of contrast material, thus creating the possibility of multiphase liver CT ***(Kalender et al., 1992)***.