Introduction

Liver transplantation is currently accepted as a first line treatment for patients with end-stage acute or chronic liver diseases ***(Angela et al., 2007).***

Graft survival and overall patient survival have steadily improved since the first transplants were performed in the early 1960s, but a significant percentage of transplants develop complications related to vascular and biliary insufficiency. Graft ischemia after liver transplantation is associated with a high incidence of morbidity and mortality ***(Hong et al., 2006).***

Biliary and vascular complications and rejection of the transplanted liver are the main causes of malfunction and loss of the hepatic graft. Advances in medical therapy over the last few years have led to a more efficient diagnosis and treatment of postoperative complications after orthotopic liver transplantation (OLT), thereby increasing the survival rate after liver transplantation ***(Horrow et al., 2007).***

Vascular complications include; hepatic artery stenosis and thrombosis, portal vein stenosis and thrombosis, caval and hepatic veins obstruction, arterial pseudo aneurysm. Biliary complications include; biliary leakage, stricture and obstruction ***(Quiroga et al., 2001).***

A multimodality approach including ultrasonography and cross-sectional imaging studies often is most effective for diagnosis. Each imaging modality has specific strengths and weaknesses, and the diagnostic usefulness of a modality depends mainly on the patient's characteristics, the clinical purpose of the imaging evaluation, and the expertise of imaging professionals ***(Angela et al., 2007).***

Ultrasound is the initial imaging modality of choice for detection and follow-up of early and delayed complications from all types of liver transplantation. Knowledge of the surgical technique of liver transplantation permits early detection of complications and prevents misdiagnosis ***(Jane et al., 2003).***

Doppler study in the postoperative period is a safe, accurate and non invasive method of demonstrating, evaluating non vascular complications in the hepatic parenchyma and bile duct abnormalities and extra hepatic tissue in the recipient (***Quiroga et al., 2001*).**

Color Doppler flow and pulsed Doppler U.S. evaluate vessel patancy, and are frequently used to distinguish dilated bile ducts and blood vessels and also can evaluate the extrahepatic portal venous system ***(Jonathan et al., 2004).***