

Endoscopic therapy of post-liver transplantation biliary stricture

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Liver transplantation has become the established means of treating patients with end stage liver disease. Despite remarkable improvement in the surgical technique, postoperative care, immunosuppression, and organ preservation resulting in improved survival rates for transplant recipients, biliary tract complications still remains the Achilles Heel of Liver transplantation. The incidence of biliary tract complication after orthotopic liver transplantation (OLT) varies from 11% to 34%. Because of the shortage of deceased donor organs especially in Asia, LDLT has become a widely accepted therapeutic option for patients with end-stage liver disease. Biliary complications are more frequent with transplants from living donor liver transplantation (LDLT) compared with those from OLT, and these complications occur with a higher frequency in right liver grafts than in left liver grafts. Biliary complications following liver transplantation include biliary stricture, bile leakage, and biliary obstruction (with stones, sludge, or casts). Among these, biliary stricture and bile leakage are the predominant complications. These complications can occasionally lead to repeating hospital admissions or to graft failure, which necessitates re-transplantation, and both of which increase the costs of treatment. Therefore, management of biliary complications plays an important role in improving the recipient's quality of life as well as graft survival.

Several approaches to treat biliary complications have been developed, including surgical, endoscopic, or percutaneous transhepatic techniques. Recently, endoscopic treatment has become the preferable first-line treatment for patients that have previously undergone duct-to-duct biliary reconstruction, as it is less invasive and more convenient for the patient. Percutaneous transhepatic biliary drainage is then subsequently considered in incidences when the endoscopic approach has failed. Surgical revision or reconstruction is reserved as a rescue therapy when all other modalities have proven unsuccessful. Nowadays, the SpyGlass system, which provides direct visual access to the biliary tract for guidance, may become an important assist device in the subset of patients who fail conventional ERCP, and may play some role in management of post-liver transplantation biliary complications. The purpose of this speech is to give an overview of various aspects of endoscopic procedures and discuss the diagnosis, management, and outcomes of biliary stricture following liver transplantation.