

Endoscopic Approach to the Post Liver Transplant Patient

John Y. Nasr, MD, Adam Slivka, MD, PhD*

KEYWORDS

- Endoscopic Retrograde Cholangiography (ERCP) • Liver transplant
- Biliary complications • Bile Leak • Choledocholithiasis

KEY POINTS

- Management of biliary complications following liver transplant.
- Methods of stone extraction following liver transplant.
- Management of bile leak following liver transplant.

INTRODUCTION

Liver transplant has evolved as the treatment of choice for selected patients with end-stage liver disease, fulminant hepatic failure, and early stage hepatoma.

As the number of liver transplants has increased, so has the number of postoperative biliary complications requiring endoscopic treatment and management using endoscopic retrograde cholangiopancreatography (ERCP).

Biliary complications occur in up to 5%–25% of patients after liver transplant and can be categorized based on time of onset as early, occurring within 30 days of transplant, or late, occurring more than 30 days after transplant.^{1–4}

Although some postoperative biliary complications require surgical reintervention or percutaneous transhepatic cholangiography, the advancement of endoscopic techniques has made endoscopic therapy a safe and effective first approach to managing postoperative biliary complications in most patients.

This review focuses on the endoscopic diagnosis and treatment of post-liver transplant complications.

TYPES OF BILIARY COMPLICATIONS AFTER TRANSPLANT

Biliary complications after liver transplant commonly include biliary strictures, biliary leaks, choledocholithiasis, ischemic biliary injury, biliary cast syndrome, and sphincter

Division of Gastroenterology, Hepatology, and Nutrition, University of Pittsburgh Medical Center, 200 Lothrop street, Pittsburgh, PA 15213, USA

* Corresponding author.

E-mail address: slivax@upmc.edu

Gastrointest Endoscopy Clin N Am 23 (2013) 473–481

<http://dx.doi.org/10.1016/j.giec.2012.12.014>

giendo.theclinics.com

1052-5157/13\$ – see front matter © 2013 Elsevier Inc. All rights reserved.

of Oddi dysfunction (SOD). Hemobilia, mucocele formation, and bactobilia are less commonly seen.

LIVER TRANSPLANT ANATOMY

Liver transplant success and graft survival are highly dependent on adequate blood flow through both the hepatic artery and the portal vein. Any injury to the vasculature will result in ischemic injury and potential graft failure.

Knowledge of the biliary reconstruction after transplant is critical when considering posttransplant endoscopic therapy. Around 75%–88% of transplants are performed using a choledochocholedochostomy. The remaining 12%–25% of reconstructions are performed using a Roux-en-Y choledochojejunostomy.^{5–8} The benefits of creating a choledochocholedochostomy may include shorter operating times, use of a T-tube for access, maintenance of intestinal integrity and continuity, sterility of the biliary tract, and ease of access for ERCP.^{5,9–14} As recipient sphincter of Oddi function is preserved, the incidence of reflux-associated biliary injury and disease are less compared with Roux-en-Y choledochojejunostomy reconstruction.¹² In cases in which the donor bile duct is inadequate to perform a choledochocholedochostomy, or when the native common bile duct is diseased or absent (eg, primary sclerosing cholangitis, biliary atresia), a Roux-en-Y choledochojejunostomy is performed.

Biliary tract complications after liver transplant depend on the type of biliary reconstruction, injury during donor harvesting, cold ischemic time, surgical technique, and the integrity of the portal vein and hepatic artery anastomosis.

BILIARY STRICTURES

One of the most common complications is a biliary stricture (**Fig. 1**). Biliary strictures constitute around 40%–45% of posttransplant biliary complications.^{12,15} Strictures occur in around 5%–15% of deceased donor liver transplants^{16–19} and have been reported in up to 32% of live-donor-related transplants.¹⁸ Biliary strictures are divided into early biliary strictures, which are usually secondary to technical surgical complications, and late biliary strictures, which are usually secondary to ischemic injury.

Posttransplant biliary strictures can occur at the anastomotic site or at nonanastomotic regions. Anastomotic strictures are defined as strictures that occur at the site of the anastomosis between the donor and recipient bile duct. Anastomotic strictures

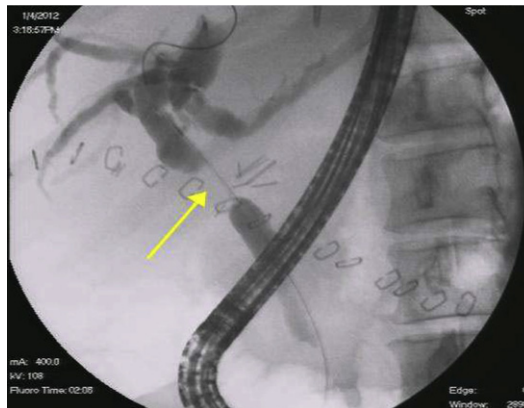


Fig. 1. Post duct to duct liver transplant, anastomotic stricture (arrow points to stricture).

Download English Version:

<https://daneshyari.com/en/article/3310238>

Download Persian Version:

<https://daneshyari.com/article/3310238>

[Daneshyari.com](https://daneshyari.com)