

Evolving Role of Biliary Stenting in Iatrogenic Jaundice

Dear Madam, Post-operative obstructive jaundice occurs 1 to 10 days post operatively and may be multifactorial in origin. The elevated bilirubin is predominantly of the conjugated variety with a raised alkaline phosphatase and minimally abnormal transaminase levels. Whereas, most of the cases are caused by biliary stricture and fistulas, which almost always result from an injury to the bile duct, a ligature or a suture placed inadvertently around the bile duct is a rare cause. Percutaneous transhepatic biliary stenting could be used to relieve the obstruction without the need for re-exploration.

We report the case of a 45 years old man who presented to the Oncology clinic with a history of prior cholecystectomy, the histology of which had revealed a moderately differentiated adenocarcinoma involving the full thickness of the gall bladder wall and reaching upto the serosa. Although the tumor had been removed macroscopically, the microscopic margin of resection showed tumor infiltration into the liver tissue. General examination was remarkable for anemia and jaundice. Systemic examination revealed tenderness in the right hypochondrium but no visceromegaly. The laboratory examination revealed a normal CBC, electrolytes and renal functions. Liver function test showed a serum total bilirubin of 2.4 mg/dl, gamma glutamyl transferase (GGT) 172 IU/L, alkaline phosphatase 560 IU/L and alanine amino transferase (ALT) 98 IU/L. A CT scan of abdomen showed intrahepatic biliary dilatation. An ERCP was attempted to dilate the bile ducts in order to relieve the obstructive jaundice however the procedure was unsuccessful. A percutaneous transhepatic cholangiogram (PTC) was performed and a biliary wall stent was placed across the biliary stricture. The stricture was markedly tight and difficult to dilate by an angiography balloon catheter. External drainage was left in place. A repeat cholangiogram showed the wall stent in place and the collapsed biliary system could be outlined. Percutaneous radiologically guided balloon dilatation has become an increasingly important and widely used method of non-operative management of benign biliary strictures^{1,2}. The procedure is a direct derivative of radiological stone extraction and percutaneous biliary drainage. It allows dilatation of a stricture with specifically designed angiography balloon catheters that can be inflated to several French sizes larger than the originally placed biliary catheter. Balloon dilatation may be done in patients who have had many previous operations on their tract or who are debilitated from other medical conditions obviating the need for a difficult and complicated operation. Although percutaneous radiologically-guided balloon dilatation has been done in patients with malignant obstruction, it is most successful in patients who have benign biliary stricture from a previous surgical cholecystojejunal anastomosis, iatrogenic strictures or less often sclerosing cholangitis. The role of stenting after the balloon dilatation is evolving. Some authors suggest that stenting is important not only because it reduces the restenosis rate but also because it is important to provide an access to the biliary tree if restenosis occurs³.

The primary morbidity after the procedure is due to the biliary drainage and dilatation³. This procedure itself has low morbidity and no reported deaths. Major complications involve sepsis and bleeding, which are self-limiting but occasionally may require supportive measures. Thus the role of the radiologist in the percutaneous management of biliary stricture by balloon is evolving with acceptable success rate and low morbidity making this an alternative approach to surgery. The procedure of stenting requires only a short hospitalization and in most cases is completed in one session.

In conclusion, we report the case of an obstructive jaundice secondary to iatrogenic ligature of the bile duct relieved by a PTC guided biliary stenting.

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