Clinical Implications of Pancreatic Duct Stent Placement: Prevention and Salvage of Post-ERCP Pancreatitis

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Introduction

Pancreatitis is the most common complication of diagnostic and therapeutic endoscopic retrograde cholangiopancreatography (ERCP). It can occur in 1-15% of patients undergoing the procedure. This complication can lead to severe morbidity and rarely mortality. Several patient and procedural risk factors have been identified and when present, should lead the endoscopist to consider prophylaxis against post-ERCP pancreatitis (PEP).

Risk factors for post-ERCP pancreatitis

There are two factors proven in randomized clinical trials to increase the risk for post-ERCP pancreatitis. They are sphincter of Oddi dysfunction s/p endoscopic sphincterotomy and endoscopic ampullectomy. In each instance, the use of an endoscopically placed pancreatic duct stent lead to substantial reduction in the incidence of post-ERCP pancreatitis. Other indications for pancreatic duct stent placement not proven in randomized clinical trials include 1) multiple or complete pancreatic duct contrast injections, 2) balloon dilation of an intact sphincter (sphincteroplasty), 3) needle knife precut sphincterotomy, and 4) a history of post-ERCP pancreatitis.

Management of post-ERCP pancreatitis

The management of post-ERCP pancreatitis begins with insertion of a guide wire into the main pancreatic duct. Selection of pancreatic duct stent configuration and caliber is patient and physician dependent although some data are available that indicate larger caliber may be more protective. In addition to the length and caliber of the device, a stent may be straight or pigtailed, and may include an internal flange. The endoscopist has the option to select a stent with our without an internal flange. In some centers, the physician may elect to remove the internal flange from a stent prior to insertion. The lack of internal flange increases the chance that the pancreatic duct stent may spontaneously migrate out of the duct and obviate the need for subsequent endoscopy (for stent removal). If a stent with an internal flange is used, the typical time to stent removal for this indication is 1-2 days.
Conclusions


References