Acute and chronic pancreatitis can develop complications within the first few days or weeks of the illness, or be delayed by weeks to months. Acute pancreatitis can lead to peripancreatic fluid collections, which then may resolve, or organize into cystic fluid collections. Most fluid collections that have organized into pseudocysts will spontaneously resolve over time, they are typically followed by serial CT scans to prove resolution. Some cysts may not resolve, or may even increase in size, and require intervention. A subset of these non-resolving pseudocysts may be amenable to endoscopic management.

Biliary obstruction also may occur with acute or chronic pancreatitis. Early in the course of acute pancreatitis, pancreatic head inflammation can lead to a temporary biliary stenosis. A subtype of acute pancreatitis called “groove pancreatitis” can occur in the groove between the duodenum and pancreatic head and can lead to biliary and even duodenal obstruction (Balakrishnan et al. 2007). Later in the course of an acute episode of pancreatitis, biliary obstruction may be related to a pseudocyst in the head of the pancreas. Vigilance must be maintained in cases of biliary obstruction that arise after acute pancreatitis, because some of these cases may turn out to be a pancreatic neoplasm that presents initially with acute pancreatitis and then later with biliary obstruction.

The role of endoscopic retrograde pancreatography (ERCP) in the management of chronic pancreatitis and pancreatic strictures is discussed elsewhere in this issue (Chap. 13). The role of ERCP in the initial management of acute pancreatitis is also covered elsewhere.
Biliary obstruction in Acute and Chronic Pancreatitis

Biliary obstruction can occur in the setting of chronic pancreatitis. Cholangiography reveals a smooth distal bile duct stricture as it passes through the pancreatic head (Fig. 19.1). Most of these strictures only mildly elevate the serum alkaline phosphatase, but jaundice can occur in a minority of patients. Because of the risk of cholangitis or secondary biliary cirrhosis, patients with jaundice are typically referred for biliary drainage.

Successful biliary drainage is rather easily accomplished with endoscopic methods of plastic stent placement. However, permanent resolution of the biliary strictures of chronic pancreatitis is not easily accomplished with a standard approach to endoscopic stent placement. While benign biliary strictures due to other causes can be typically resolved with a regimen of stent changes over a period of months, this does not seem to be the case with biliary strictures due to chronic pancreatitis.

Smits et al. (1996) carried out a retrospective review of 58 patients with chronic pancreatitis and biliary stricture who received endoscopic insertion of a plastic 10-Fr biliary endoprosthesis. About 80% of the patients were jaundiced, with the remainder having persistent cholestasis without jaundice. The majority (71%) had calcific pancreatitis. The patients underwent repeat ERCPs every 3–9 months. Patients underwent a median of three ERCPs over the follow-up period (median 14 months).

All patients had relief of jaundice or cholestasis from the stent placement. There was a 9% complication rate associated with the procedure. The temporary stent placement resulted in regression of the stricture in 28%. However, 37 out of 58 patients (64%) had stent related complications, mainly due to stent clogging. A total of 28% of the patients eventually underwent surgical drainage procedures.

Kahl et al. (2003) analyzed reasons for failure of biliary stenting to resolve benign biliary strictures in chronic pancreatitis. The presence of calcifications in the head of the pancreas was predictive of a poor response. Only 8% of the patients with this finding showed resolution of the common bile duct (CBD) stricture even after 1 year of serial stenting, compared to 59% stricture resolution in the absence of head calcifications.

Similar results were demonstrated by Draganov et al. (2002) in a review of their experience with retention of two or three 10-Fr biliary stents over a period of about 1 year to try to achieve permanent dilation of benign biliary strictures. Their series of 29 patients included nine with biliary strictures due to chronic pancreatitis (three were noncalcific and...