Concept: Which Therapy for Chronic Pancreatitis

Pathogenesis
Chronic pancreatitis of the type severe enough to require surgery generally follows chronic alcohol abuse. It is rare after an attack of biliary pancreatitis if the biliary calculi are removed. Occasionally trauma to the pancreas or congenital abnormalities of the pancreatic ducts may produce chronic pancreatitis.

Objectives of Surgery
It is unlikely that any type of operation will significantly preserve pancreatic function. The only objective that surgery can be expected to accomplish is relief of pain. This can be achieved in some patients by an extensive pancreaticojejunostomy, an operation that presumably relieves the patient’s pain by decompressing the partially obstructed pancreatic ducts. Another method of alleviating intractable pain in chronic pancreatitis is resection of part or all of the diseased pancreas. The drawback to resection operations is that they may produce diabetes, which can be very difficult for the alcoholic patient to manage. A number of alcoholic patients, following extensive pancreatic resection, will die late in the postoperative course due to a complication of diabetes control.

Although another objective of pancreatic surgery is to preserve the exocrine function of the pancreas, there is no convincing data that pancreaticojejunostomy accomplishes this aim.

Choice of Operation
Sphincteroplasty
Even when sphincteroplasty is accompanied by a septotomy that enlarges the orifice of Wirsung’s duct, it is not an effective operation for the usual type of chronic pancreatitis seen in the alcoholic patient. Theoretically, if there is a localized obstruction at the orifice of Wirsung’s duct, sphincteroplasty combined with ductoplasty is a logical procedure to relieve this obstruction. Because an isolated obstruction of this type is quite rare, however, there is, in our opinion, scant indication for this operation in chronic pancreatitis.

Pancreaticojejunostomy, Roux-Y
Pancreateicojejunostomy is the operation of choice in patients with intractable pain from chronic pancreatitis only if the pancreatic duct is dilated to a diameter over 5 mm. Since there are multiple points of ductal obstruction in most patients with this disease, the pancreatic ductogram in the typical case will resemble a “chain of lakes.” When the indications for pancreaticojejunostomy are restricted to patients who have large ducts, 80% will experience satisfactory relief of pain following this operation according to Prinz and Greenlee. When the pancreatic duct is not enlarged, pancreaticojejunostomy is contraindicated. The diameter of the pancreatic duct can generally be determined preoperatively by endoscopic radiographic cholangiopancreatography (ERCP). Otherwise, it will be necessary to obtain a pancreatic ductogram in the operating room prior to performing a pancreaticojejunostomy.
Pancreatic Resection
(See Chaps. 59–61.)

Whipple Pancreatoduodenectomy
When the chronic pancreatitis appears to be located primarily in the head of the pancreas or the uncinate process, or when these areas are the site of a pseudoaneurysm, a resection of the head of the pancreas may be necessary. In this case the usual Whipple operation is modified by preserving the stomach and pylorus, as illustrated in Chap. 59. In performing this operation for chronic pancreatitis, it may be somewhat more difficult to free the portal vein from the pancreas than when one does a Whipple operation for ampullary carcinoma. However, anastomosing the cut end of the pancreatic duct to the jejunum will be more secure because the duct in chronic pancreatitis is fibrotic and holds sutures quite well with a low rate of postoperative pancreatic fistula. The mortality rate following pancreatoduodenectomy for chronic pancreatitis is probably no more than 3%, a figure lower than that which follows the same operation in patients with carcinoma. When the tail and body of the pancreas are preserved, the incidence of postoperative diabetes will be low.

Distal Pancreatectomy
When the primary location of the chronic pancreatitis appears to be localized in the body and tail of the pancreas, and when the pancreatic duct is too small for a successful side-to-side pancreaticojejunostomy, then resecting the distal portion of the pancreas may be indicated if the patient suffers intractable pain. If it is possible to dissect the fibrotic pancreas away from the splenic vein, it may occasionally be possible to perform a distal pancreatectomy with preservation of the spleen. Otherwise, this operation is done by the technique described in Chap. 61. Distal pancreatectomy for pancreatitis in the alcoholic patient is not generally effective in relieving pain according to White and Hart.

Subtotal and Total Pancreatectomy
Frey and Child performed an 80%–95% pancreatectomy with preservation of the duodenum. A 2-cm remnant of the pancreatic head was left on the duodenum and the pancreatoduodenal blood vessels were preserved to guarantee adequacy of the duodenal blood supply. Special attention must be devoted to avoiding trauma to the distal common bile duct. If the uncinate process is diseased, it must be resected or the patient’s pain may not be relieved. Although the technical details can be mastered, this has not proved to be a very satisfactory operation for a chronic alcoholic because of the difficulty that the alcoholic patient will experience in controlling the resulting diabetes. The same objection applies to a total pancreatectoduodenectomy for intractable chronic pancreatitis in the alcoholic patient.

Nonsurgical Treatment
Some internists believe that if they persist in conservative management of patients with intractable pain from chronic pancreatitis, the disease will “burn out” and pain will eventually be relieved. There is no evidence that this concept is valid. On the other hand, long-term survival of the alcoholic patient with chronic pancreatitis is not likely, whether or not he has undergone a successful operation for the pancreatitis. This is because most of the patients do not discontinue their consumption of alcohol, and the cause of death is generally some complication of alcoholism. Aside from encouraging the patient to change his drinking habits, medical management requires medication for pain and enzyme replacement therapy for malabsorption secondary to exocrine insufficiency.

A positive indication for continuing nonsurgical management of chronic pancreatitis is the presence of severe hepatic cirrhosis, especially with portal hypertension.