

Lateral Pancreatogastrostomy for Stenotic Pancreatojejunostomy After Pancreatoduodenectomy: A Case Report

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Abstract

There is a large body of literature that describes the short-term complications (e.g., pancreatic or biliary anastomotic leaks) that occur after PD, but little has been published regarding long-term anastomotic complications. Stenosis of the anastomosis is often asymptomatic but symptomatic and painful presentations are difficult to treat, and the optimal treatment is not currently defined. The aim of this work is to report case of pancreatojejunostomy stenosis. The Pancreatic enteric anastomosis stenosis was diagnosed following presentation with pancreatitis that developed following pancreatoduodenectomy. The patient was treated surgically by fashioning side to side pancreatogastrostomy.

Keywords: Pancreatojejunostomy; Pancreatogastrostomy; Periampullary tumor

Introduction

Over the last two decades, a dramatic improvement in operative mortality after pancreaticoduodenectomy (PD) and pylorus-preserving pancreaticoduodenectomy (PPPD) has been observed for pancreatic and periampullary adenocarcinomas, especially in high-volume centers [1,2]. Better choice of adjuvant therapy has also improved survival in small number of patients. Early complications after pancreaticoduodenectomy (PD) are well studied as well as well defined by International Study Group on Pancreatic Fistula [3-6].

Case Report

A 55-year-old man was admitted with pancreatitis evolving over 4 months. This was associated with a weight loss of six kg. He had previous history of pancreatoduodenectomy around 8 years back for periampullary tumor. The continuity of the digestive and pancreatic (Wirsung duct) ducts was re-established by the formation of an end-to-side pancreatico-jejunal anastomosis, as well as hepato-jejunal and gastro-jejunal anastomoses. The postoperative period was uneventful; following the surgery the patient was on regular follow up. He was asymptomatic until he developed acute onset abdominal pain 4 months back. There was no history of alcohol consumption or regular consumption of medication. He suffered from recurrent attacks of pancreatitis required two hospital admissions in last 4 months. He was evaluated using blood tests (full blood count, urea and electrolytes, liver function tests, triglycerides, carcinoembryonic antigen [CEA], and carbohydrate antigen ([CA] 19.9), C reactive protein) were within normal limits. No pancreatic necrosis was seen on computed tomography (CT) scan (Figure 1); however, a 7 mm dilatation of the pancreatic (Wirsung duct) duct, without parenchymal atrophy suggestive of chronic pancreatitis on MRCP. Imaging findings were suggestive of an anastomotic stenosis. PET CT scan was negative for local or metastatic recurrence. A surgical intervention was carried out

to treat the obstruction. Lesser sac entered from side of gastro-jejunostomy. Anterior surface of pancreas body exposed and pancreatic duct identified using needle aspiration technique. Pancreatic duct was opened for a length of 5 cm. Pancreas body and posterior wall of stomach were in close apposition, so pancreatojejunostomy was not taken down. Pancreatic ductal drainage achieved by a side-to-side anastomosis pancreato-gastrostomy. The postoperative period was without incident. Fourteen months after the intervention the patient remains asymptomatic.



Figure 1: CT scan showing dilated pancreatic duct of remnant pancreas.

Discussion

PEA stenosis is a late complication, and data for which is not available in abundance. Scarce data possibly due to poor longevity associated with patients undergoing the procedure for malignancy [7]. However, with PD being increasingly performed for even benign or low-grade tumors, a larger number of patients with this long-term complication may be studied [4].

Following pancreatoduodenectomy, stenosis of a pancreaticogastrostomy may not occur until many years later. In a significant percentage of patients it is without clinical signs [7,8]. It may be discovered only after systematic explorations of patients following pancreaticogastrostomy or pancreaticojejunostomy (occurrence in 60% and 29% of cases respectively) [8]. Currently, pancreatic-MRI, possibly coupled with an injection of secretin, seems to be the best examination to evaluate the permeability and the functionality of pancreatico-digestive anastomoses [9]. PET CT scan is now becoming essential part of evaluation to rule out recurrence as well as metastatic disease [10].

Stenosis of a pancreaticojejunostomy may be treated by a refashioning of the pancreaticojejunostomy [11,12]. Endoscopic dilatation is a possible treatment option for stenosis of pancreaticogastrostomy [13]. However, we deed here side to side (lateral) pancreato gastrostomy without dismantling pancreatojejunostomy. We felt that re pancreatojejunal anastomosis require extensive dissection. Over and above jejunal limb vascular insult may lead to higher chances to leak. After pancreatoduodenectomy, In lesser sac anatomy, stomach usually directly lying on remnant pancreas. This makes lateral pancreatogastrostomy relatively easy option. As seen in CT scan, greatly enlarged Wirsung duct allowed to perform a good anastomosis with the stomach.

There was a lot of variability in the treatment offered to patients with PJ strictures; but because of small number of reports, we cannot make a definitive recommendation on how to manage these patients. Surgical repair of PEA stenosis is technically challenging due to dense fibrosis and adhesions [10]. Intraoperative ERCP and/ or IOUS can also be used. Wagle et al [10] resected a portion of the remnant pancreas is also to achieve a dilated pancreatic duct for a new PEA. He also deed tranjejunal stricturoplasty, when visualization of the stricture site is not possible [3,4]. A conventional lateral pancreatico-jejunosotomy also reported, if the pancreatic duct is widely dilated due to obstruction. Above all procedures require extensive dissection and may result in high morbidity. We located pancreatic duct and opened longitudinally from tail to pancreato jejunal anastomosis. As stomach lies just above remnant pancreas, single layer side to side pancreatogastrostomy fashioned. Patient has uneventful postoperative recovery. At 6 months of follow up, patient is pain free.

Conclusion

Pancreatic enteric anastomosis stenosis is now surfacing problem of long term survivals after pancreato- duodenectomy. Proper evaluation

using relevant imaging is necessary before offering surgical treatment. Surgery for PEA stenosis is challenging and should be planned carefully to achieve durable subjective and objective results.

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