

Title: VALIDATION OF TWO-STAGE PANCREATOJEJUNOSTOMY AFTER PANCREATODUODENECTOMY FOR PATIENTS WITH A SOFT PANCREATIC TEXTURE

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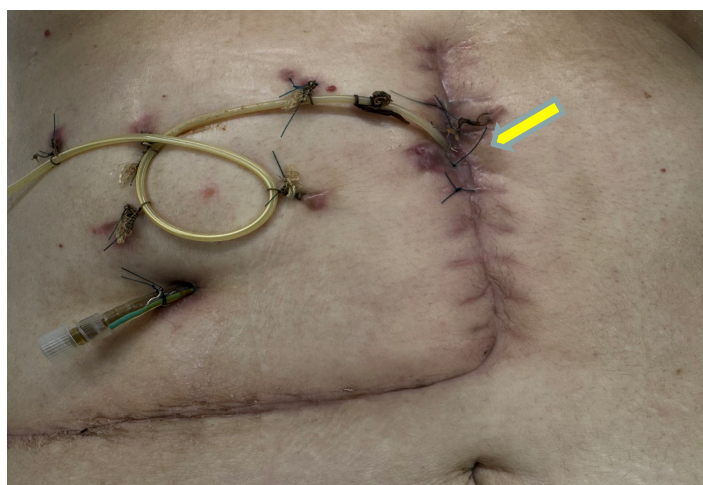
Background

Postoperative pancreatic fistula (POPF) remains a serious complication after pancreatoduodenectomy (PD) especially in patients with a soft pancreatic consistency. Although there have been no definite methods to conquer POPF, minimizing grade C POPF is the key to decreasing the number of in-hospital deaths. Two-stage pancreatojejunostomy (PJ) after PD is one of the methods for minimizing pancreatic juice-related adverse events, especially in patients with a soft pancreatic consistency.

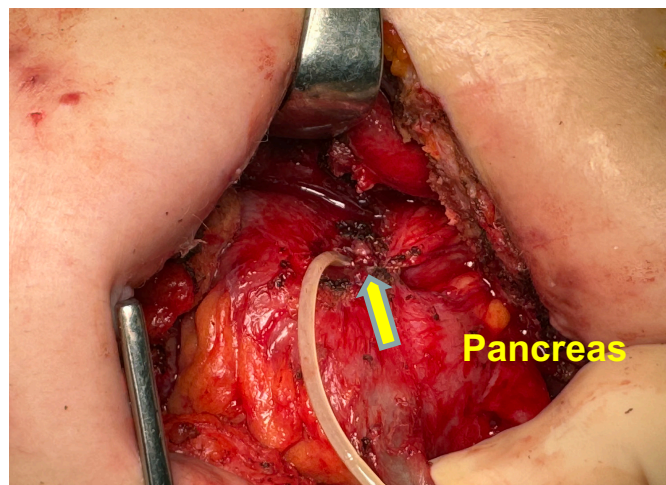
Study Design

409 PDs were carried out between Jan 2009 and April 2024. We adopted two-stage PJ for patients with a soft pancreatic texture. 133 such patients underwent PD in which, a PJ was not carried out. The pancreatic tube was exteriorized through the abdominal wall incision. About 3 months after the PD, we performed PJ. Four patients were unable to undergo the second operation due to rapid recurrence of their cancers. The remaining 129 patients underwent the two-stage PJ. This study was designed to review 129 patients who underwent two-stage PJ after PD.

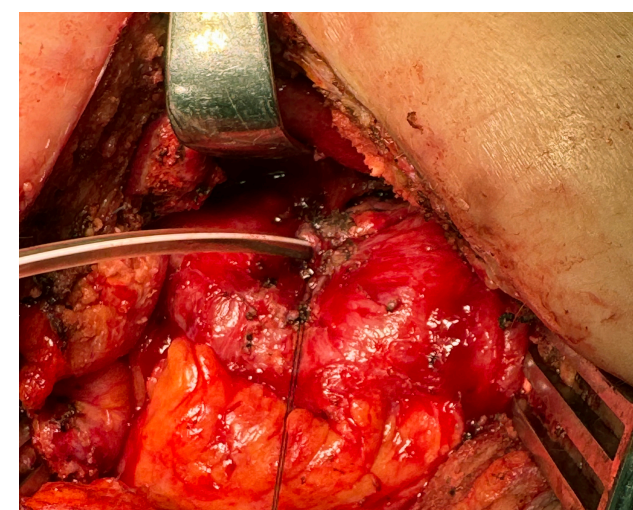
Two-stage PJ



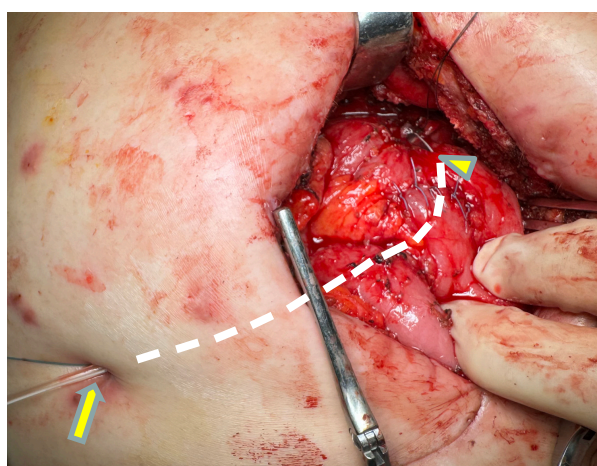
The pancreatic tube was exteriorized through the abdominal wall incision at the initial PD (arrow).



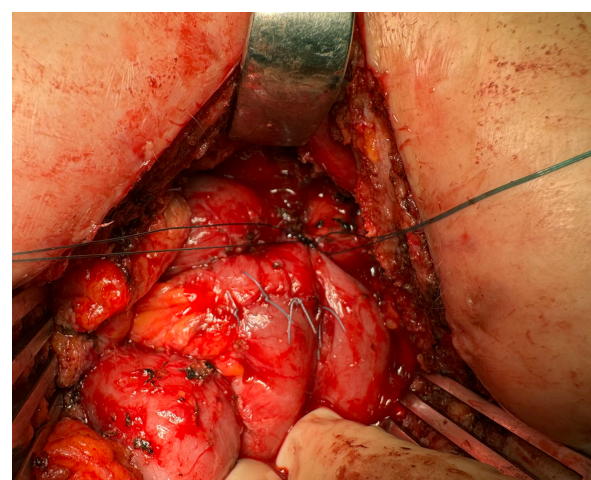
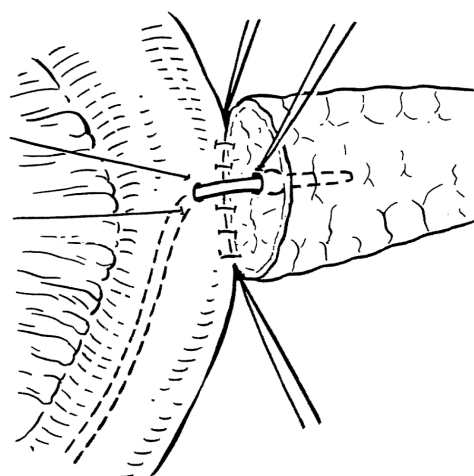
Careful dissection around the external drainage tube and exposure of the point of insertion in the cut surface of the pancreas.



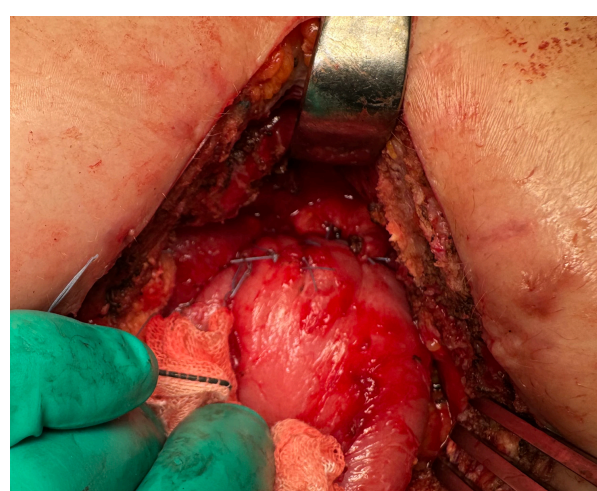
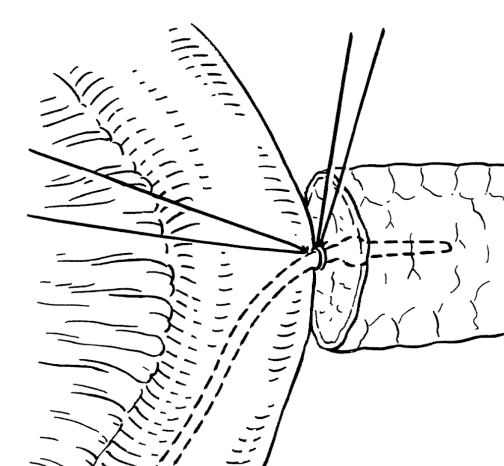
The tube was replaced by another that was one size thicker.



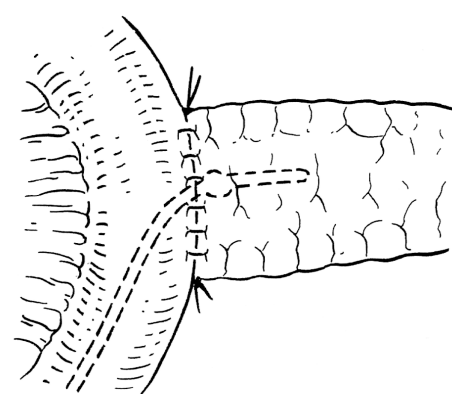
The stent tube was passed into the jejunal lumen and brought out externally through the jejunal loop.



The jejunal side of the tube was held in place with a purse-string suture. The stent tube was ligated with two stay sutures to approximate the pancreatic ductal cut end and the tiny hole in the jejunum.



Finally, a suture was added between the anterior parenchyma of the pancreas and the seromuscular layer of jejunum.



Results

Perioperative data of the patients undergoing two-stage PJ (n=129)

Duration between the two surgery (day)	100 (73-195)
Operation time (min)	143 (68-290)
Intraoperative bleeding (mL)	20 (5-320)
Need for red cell blood transfusion (Yes/No)	0/129
Hospital stay (day)	19 (8-67)
POPF	17(13%)
POPF Grade BL/B/C	25/17/0
Total number of patients who developed postoperative complications	30(23%)
Grade I,II	30(100%)
Grade III ≤	0(0%)

Conclusion

Although a patient must undergo the operation twice, in patients with a soft pancreatic consistency, a two-stage PJ could be considered in order to minimize the incidence of complications that would be worse than grade III and grade C POPF.