

Technical Approaches to Digestive Tract Reconstruction in Laparoscopic Pancreaticoduodenectomy - A Technical Note

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Abstract

Pancreaticoduodenectomy is one of the most technically demanding procedures in digestive surgery. Historically, laparoscopy in pancreatic surgery was limited to staging and palliative interventions. Since the first laparoscopic pancreaticoduodenectomy was completed in 1994, significant advances have improved perioperative safety, operative time, and lowered postoperative morbidity. Nevertheless, the complexity of pancreatic surgery paired with the technical challenges of pancreatic minimally invasive approach have restricted laparoscopic pancreatoduodenectomy to high-volume centers until recent times. The aim of this technical note presentation is to describe novel laparoscopic techniques of performing the three anastomoses - pancreaticojejunostomy and pancreaticogastrostomy, hepaticojejunostomy, and gastrojejunostomy- in an intracorporeal fashion, highlighting methods of facilitating the reconstructive process. This technical note's purpose is to also present new training models for surgeons, meant to reduce post-operative complications, such as pancreatic fistula or biliary leakage, to shorten operating times, and, ultimately, to increase the availability of laparoscopic pancreatico-duodenectomy as a safe and efficient treatment option.

Keywords: laparoscopic surgery, pancreaticoduodenectomy, reconstruction