Topic : Biliary & Pancreas

COMPARISON OF ROBOTIC AND OPEN PANCREATICODUODENECTOMY WITH PORTAL-SUPERIOR MESENTERIC VEIN RESECTION FOR ADVANCED PERI-AMPULLARY TUMORS

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Background : Pancreatic ductal adenocarcinoma (PDAC) is a highly lethal cancer with limited treatment options and poor survival rates, particularly in advanced cases. Open pancreaticoduodenectomy (OPD) with portal vein-superior mesenteric vein (PV-SMV) resection offers a curative option but is associated with significant risks. Minimally invasive approaches, including robotic-assisted pancreaticoduodenectomy (RPD), have emerged as alternatives, potentially improving recovery and outcomes.

Methods : This retrospective study compared outcomes between OPD with PV-SMV resection and RPD with PV-SMV resection, analyzing 40 cases from a single center in Taiwan. Short-term outcomes, operative times, and blood loss were evaluated. The study also examined the learning curve for RPD, focusing on improvements in surgical efficiency with experience.

Results : RPD with PV-SMV resection was technically demanding and involved longer operative times but yielded shortterm outcomes comparable to OPD. Subgroup analysis showed trends of reduced blood loss and improved operative times with increasing surgical experience, highlighting the impact of proficiency development. RPD demonstrated potential benefits, including reduced invasiveness and better recovery.

Conclusions : RPD with PV-SMV resection is a promising alternative to OPD in managing PDAC. While outcomes are comparable, RPD requires significant technical expertise, emphasizing the importance of surgical proficiency. Further multicenter studies are needed to validate these findings, optimize patient selection, and improve outcomes in PDAC surgical management. The learning curve associated with RPD underscores its potential for broader adoption in clinical practice.

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