

059. Comparison of Surgical Outcomes Between Robot-Assisted Versus Laparoscopic Distal Pancreatectomy for Resectable Pancreatic Cancer: A Systematic Review and Meta-Analysis

I Kadek Dwi Putra Diatmika¹, I Made Mulyawan²

¹General Surgery Resident, Medical Faculty of Udayana University, Prof IGNG Ngoerah General Hospital, Denpasar, Bali, Indonesia

²Digestive Surgery Division, Department of Surgery, Medical Faculty of Udayana University, Prof IGNG Ngoerah General Hospital, Denpasar, Bali, Indonesia

ABSTRACT

Background: Background: Distal pancreatectomy is the conventional intervention for neoplasms located in the body and tail of the pancreas. In recent years, robot-assisted distal pancreatectomy (RDP) and laparoscopic distal pancreatectomy (LDP) have gained traction, nevertheless, comparative multicenter studies validating the safety and efficacy of RDP are insufficient. This systematic review and meta-analysis seeks to compare the surgical outcomes of robot-assisted distal pancreatectomy (RPD versus laparoscopic distal pancreatectomy (LPD)). **Methods:** We conducted a search of PubMed, Embase, and the Cochrane Library to discover papers and trials published between 2019 and 2024. The findings of this study encompassed operation duration, intraoperative bleeding and postoperative pancreatic fistula. We utilized Revman 5.4.2 to do the meta-analysis. **Results:** Eight studies were analyzed, involving 1,085 patients, with 436 getting robot-assisted distal pancreatectomy and 649 undergoing laparoscopic distal pancreatectomy. Our data indicate that robot-assisted distal pancreatectomy is linked with a reduction in operative time, with a mean difference (MD) of 20.67 (95% CI [4.73, 36.61], $p = 0.01$), and a decrease in intra-operative blood loss, with an MD of -23.43 (95% CI [-36.14, -10.73], $p = 0.0003$). Our findings indicate that robot-assisted distal pancreatectomy is related with an increased risk of postoperative pancreatic fistula formation, with a relative risk of 1.16 (95% CI [0.84, 1.61], $p = 0.36$). **Conclusion:** This study indicated that robot-assisted distal pancreatectomy was associated with decreased operational duration and intraoperative hemorrhage. Further research is needed to corroborate these findings.

Keywords: Pancreatic Cancer, Robod-Assisted Sugery, Laparocopic, Distal Pancreatctomy, Surgical Approach

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