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The debate over minimally invasive pancreaticoduodenectomy: balancing innovation with patient safety

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Pancreaticoduodenectomy (PD) is one of the most complex and technically challenging surgical procedures for periampullary tumors [1]. With advancements in surgical technology and equipment, even the most complex surgeries are increasingly being performed using minimally invasive techniques. Recently, the rise of robotic surgery has led to a significant increase in cases of minimally invasive PD (MIPD) worldwide. However, the outcomes of MIPD remain debatable owing to a lack of well-designed, prospective randomized controlled trials demonstrating the advantages of this approach.

A recent study entitled "*Incidence of clinically relevant postoperative pancreatic fistula in patients undergoing open and minimally invasive pancreatoduodenectomy: a population-based study*" [2] compared the incidence of clinically relevant postoperative pancreatic fistula (POPF) between open PD and MIPD. This study employed propensity score matching, and the results indicated that after matching, patients who underwent MIPD experienced higher rates of postoperative morbidities compared to those who underwent open PD. These morbidities included clinically relevant POPF, reoperation, delayed gastric emptying, and readmission. A limitation of this study is the lack of detailed information regarding the surgeon's experience or the volume of procedures performed at the facilities. This omission suggests that some patients in this study may have been operated on by less experienced surgeons or at low-volume centers. The Miami International Evidence-Based Guidelines on Minimally Invasive Pancreas Resection state that MIPD should be performed only by experienced surgeons at high-volume centers, given the steep learning curve and the difficulty of the procedure [3].

In my opinion, we do not believe that MIPD should be contraindicated based solely on the results of this study, which showed worse surgical outcomes compared to open PD. However, additional research is needed to ensure patient safety, and it may be important to share the experiences of experts and educate young hepatobiliary pancreatic surgeons at the academic society level.

Notes

Conflict of interest

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