

## MINI REVIEW

# Minimally Invasive Pancreatic Surgery: Prevention in Surgical Techniques and Postoperative Management

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### ABSTRACT

As surgeons cautiously examine the application of this type of technology to illnesses of the pancreas, robotic surgery is still in its infancy, with little experience documented. Despite the fact that it is difficult and controversial, Doctors to encourage further research in pancreatic surgical procedures that can only improve our patients' outcomes. The surgeon can access the abdomen through a series of small "keyhole" incisions during laparoscopic surgery. Many patients with pancreatic cysts who need surgery are good candidates for this procedure, which has smaller incisions, a shorter hospital stay, less pain, and a quicker return to work and life.

### INTRODUCTION

Over the last two decades, the usage of a minimally invasive approach to pancreatic surgery has rapidly increased. Distal pancreatectomy is the most common procedure because there is no repair phase. On the other hand, middle pancreatectomy and pancreatoduodenectomy have been proved to be safe and successful. Laparoscopic distal pancreatectomy, which has substantial advantages over the traditional open approach in terms of patient recovery, is the gold standard therapy for small tumours of the pancreatic body-tail. Because of the difficult resection and complex anastomoses, minimally invasive surgical treatment of pancreatic head lesions is still limited to a few highly skilled surgeons. The minimally invasive distal pancreatectomy procedure appears to be gaining popularity, with evident advantages over the open procedure. On the other hand, minimally invasive proximal (right-sided) pancreatectomy appears to be limited to a few locations that have shown encouraging results despite the obstacles. In addition, as experience with laparoscopic and robotic pancreatic resection grows, minimally invasive central pancreatectomy and enucleation look to be viable [1].

### Surgical Techniques

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advantages over the open procedure. On the other hand, minimally invasive proximal (right-sided) pancreatectomy appears to be limited to a few locations that have shown encouraging results despite the obstacles. In addition, as experience with laparoscopic and robotic pancreatic resection grows, minimally invasive central pancreatectomy and enucleation look to be viable. One of the most serious consequences of pancreatic surgery is postoperative pancreatic fistula (POPF). POPF results from pancreatic juice leakage from a surgically exfoliated surface and/or anastomotic stump, which can result in intraperitoneal abscesses and fatal bleeding. Various surgical and perioperative methods to minimise the occurrence of POPF have been investigated in recent years. After pancreatoduodenectomy and distal pancreatectomy, we reviewed several well-designed studies addressing POPF-related factors such as reconstruction methods, anastomotic techniques, stent usage, prophylactic intra-abdominal drainage, and somatostatin analogues, and we assessed the current status of POPF. POPF's current status in minimally invasive operations, laparoscopic surgeries, and robotic procedures was also highlighted [2].

The use of minimally invasive techniques in infected pancreatic necrosis has evolved over time, although it is still fraught with debate and problems. The advantages, scheduling, combination of multi-video-assisted debridement, and post-operative treatment of minimally invasive surgery are also discussed in this research. The greatest benefit of minimally invasive surgery is that it can avoid unnecessary harm and complications while also promoting gut function recovery. The concept of delayed operation is divisive. Both early PCD and minimally invasive laparoscopic debridement and drainage have shown to be effective. Patients with difficult infected pancreatic necrosis may benefit from a combination of multi-video-

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assisted minimally invasive techniques, which can reduce operation time and enhance debridement efficiency while also providing fresh debridement ideas [3].

### Detection and Management

Bile Duct Damage (BDI) is a serious complication of cholecystectomy, with significant postoperative morbidity, mortality, and long-term quality of life consequences for the patient. BDIs have an estimated occurrence, but surgeons must be prepared to tackle this surgical difficulty given the number of cholecystectomies performed worldwide, mostly via laparoscopy. The majority of BDIs are identified either during the surgery or shortly afterward. Some BDIs, on the other hand, may only be found later in the postoperative period, resulting in delayed or ineffective treatment. Giving a precise diagnosis and description of the BDI will speed up the decision-making process and increase the likelihood of treatment success. As a result, the right reconstructive strategy's selection and timing play a vital influence in long-term prognosis. For BDI management, a variety of interdisciplinary approaches with varying degrees of invasiveness are now recommended. The goal of these guidelines was to provide evidence-based recommendations to facilitate and standardise the detection and management of BDIs after cholecystectomy after an extensive evaluation of the current literature and an international expert panel debate [4].

The current minimally invasive therapy options for Pancreatic Pseudocysts (PP) are laparoscopic and endoscopic techniques to internal drainage. The indications for endoscopic and laparoscopic techniques, as well as early and late results, are discussed. To compare the results, feasibility, and safety of Laparoscopic Pseudocystogastrostomy (LPGS) with Endoscopic Pseudocystogastrostomy (EPGS) for the treatment of PP [5].

### CONCLUSION

Both minimally invasive procedures are equally safe and successful for certain people. Prospective trials are required for a thorough evaluation of procedures.

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