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Laparoscopic pancreatic surgery

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Abstract

Pancreatic surgery is related to a comparatively high morbidity and mortality compared with other abdominal surgeries. this is often a results of the complex nature of the organ, the difficult access as a results of the retroperitoneal position and also the number of technically challenging anastomoses required. Nevertheless, the past 20 years have witnessed a gentle improvement in morbidity and a decrease in mortality achieved through alterations of technique (particularly regarding the pancreatic anastomoses) along with hormonal manipulation to decrease pancreatic secretions. Recently minimally invasive or laparoscopic pancreatic surgery is now being performed in specialized HPB units round the world with results resembling open surgery and lesser morbidity. While practically all pancreatic surgeries is laparoscopically, the foremost common done procedure performed may be a laparoscopic distal pancreatectomy, thanks to the more straightforward nature of the resection and therefore the lack of a pancreatic ductal anastomosis.

Laparoscopic distal pancreatectomy is sometimes performed for tumors within the distal body and tail of thepancreas. Laparoscopic lateral pancreaticojejunostomy is additionally commonly finished patients with chronic pancreatitis with a epithelial duct. dilated main Laparoscopic pancreatoduodenectomy or Whipple???s procedure is additionally possible in experienced centers in selected group of patients with periampullary tumors. The results are equivalent or better than those related to a conventional approach. one among the areas where the minimally invasive approach has been found to be exceptionally useful is in patients with necrotizing pancreatitis who require necrosectomy. A laparoscopic approach for necrosectomy is far safer and carries far less morbidity that the standard open necrosectomy. The procedure may be done multiple times to clear the necrotic areas and drain the infection. this method has also been shown to cut back surgery related mortality during this group of patients. The talk will target the present evidence base for increasing the utilization of laparoscopic pancreatic resection and can highlights challenges and other aspects that has got to be considered before adapting to the present technique.

Pancreatic cancer could be a complex disease, whose optimal treatment depends heavily on careful accurate staging. Surgical resection continues to be the sole potentially curative therapy for carcinoma. However, pancreatic resection is technically challenging and a posh surgical operation. during this section, this laparoscopic surgical techniques for pancreatic surgery and their associated surgical outcomes are reviewed. so as to achieve more representative information, only studies published after 2010 and with quite 50 patients included, were taken into consideration. No limitation within the number of patients was set for the studies using LESS. Laparoscopic pancreaticoduodenectomy The first laparoscopic pancreaticoduodenectomy (LPD) was published by Gagner and Pomp in 1994. They concluded that, although technically feasible, this approach didn't confer significant benefit over the standard open approach in terms of postoperative outcomes or reduced postoperative recovery period. one in every of the most important barriers of this complex procedure is that the reconstruction phase because of the three separate anastomoses to be performed.

A summary of the outcomes reported for LPDs . the common operation time was 486.7 min (range 368-551 min), 8.5% (range 3-17%) conversions, 342.3 ml (range 195-592 ml) blood loss, 8.9 days (range 6-15 days) hospital stay, 32% (range 25-40%) morbidity, 2.6% (range 0-5%) mortality, 14.7% (range 6-28%) pancreatic fistulas, 21.1% (range 6-28%) harvested lymph nodes, and 89.7% (range 80-100%) R0 resection. the best rate of conversions reported was thanks to suspected hepatic portal vein involvement . Regarding morbidity rates, the very best rate was caused mainly by surgical site infection, postoperative pancreatic fistula, and intraabdominal access. Myocardial infarctions and positive margins were the most mortality causes . Comparing these results with the standard open approach, LPD results in a rise in operating time, rate of pancreatic fistulas, and R0 resections; a decrease in estimated blood loss and harvested lymph nodes: and similar leads to length of hospital stay, morbidity, and mortality rates. Most of the studies reported longer operation times using the laparoscopic approach compared to the open approach. Although some studies reported comparable outcomes between open and LPD, in general, reduction of blood loss and hospital stay are shown for LPD. In some studies, LPD was related to equivalent overall hospital cost compared with open pancreaticoduodenectomy . While operating time and provide costs were higher for LPD, it absolutely was balanced by reduced cost thanks to the shorter postoperative hospital stay. A steep learning curve is another aspect related to LDP and a few researchers stated that this procedure should be performed in centers by surgeons with substantial knowledge,

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and skills. Laparoscopic experience, distal pancreatectomy (LDP) was first reported in 1996 by Gagner and Cuschieri . During this intervention, the tail of the pancreas or the tail and some of the body of the pancreas are removed. In some cases, the spleen is additionally removed. This operation is employed more often to treat pancreatic NETs found within the tail and body of the pancreas. The determination of resectability is commonly supported the extent of involvement of the celiac axis.. In brief, the common operation time was 215.2 min, 12% conversion rate, 241.7 ml estimated blood loss, 7.6 days length of hospital stay, 32.5% morbidity rate, 0.3% mortality, 21.2% pancreatic fistulas, 10.2% harvested lymph nodes, 89.5% R0 resection, and 46.3% spleenpreserving rate. Comparing these results with the outcomes from conventional open surgery, there's a

decrease operating time, estimated blood loss, length of hospital stay, and mortality rate; similar morbidity rates; and an increased rate of pancreatic fistulas and spleen preservation.Satisfactory oncological outcomes are reported for LDP in patients with PDA and left-side pancreatic neoplasms. Although some studies reported similar outcomes as open distal pancreatectomy, most of the studies reported a transparent reduction of blood loss and hospital stay. a rise in quality of life is reported when put next to the approach. Similar costs for traditional the laparoscopic and open approaches are reported . The increased OR cost related to LDP is commonly offset by the shorter hospitalization and lower overall cost of postoperative care.

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