COMMENTARY

Reflecting on Middle Segment Pancreatectomy and Its Prospects: A Commentary

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DESCRIPTION

Pancreatic surgeries carry a significant morbidity and mortality rate. These risks are accepted if an oncological cure is the primary goal, but in cases of benign and borderline lesions, priority should be given to parenchyma preserving resections. The aim of these surgeries is to reduce endocrine and exocrine insufficiencies in the long term. Central Pancreatectomy (CP) is a pancreas preserving surgery for lesions located in the neck and body that are approximate to the main duct of the pancreas [1].

The most common indications for central pancreatectomy are pancreatic neuroendocrine tumors, serous cystadenomas, intraductal papillary mucinous neoplasm, mucinous cystadenoma, and solid pseudopapillary neoplasm [2]. However, due to limited lymphadenectomy, extending the indications to malignant tumors such as adenocarcinomas is not recommended.

While minimally invasive CP is by far more technically demanding than Distal Pancreatectomy (DP), the applicability of the laparoscopic approach for CP is very high primarily due to the absence of vascular and oncological contraindications. In a recent meta-analysis, the laparoscopic approach is linked with a significantly shorter hospital stay and neither the robotic nor the laparoscopic approach had an impact on lowering the rate of postoperative complications such as fistulas [3].

Regarding the long-term outcomes, a meta-analysis reveals significantly lower rates of overall endocrine insufficiency, new-onset diabetes, and worsening diabetes in the CP group, these improved functioning results are correlated with the significantly higher remnant pancreatic parenchyma volume, which is a strong predictor of exocrine insufficiency after pancreatectomy [4]. Moreover, pancreatic parenchyma preservation enabled by CP prevents more than 95% of endocrine insufficiencies that can cause insulin-requiring diabetes, and more than 92% of exocrine insufficiency [5].

Only two studies specifically compared the outcomes of patients that underwent DP with or without splenectomy, they found that the splenectomy may potentially increase the risk of pancreatic fistula [6]. Although spleen preservation is easier in CP, it is recommended due its significant immune function. Furthermore, splenic vessel conservation prevents the pancreatojejunal anastomosis ischemic complications and the tail of the pancreas infarction [7].

In two large series, CP is related to a substantial morbidity rate (62%-72% vs. 15% in DP), and the pancreatic fistula rate was higher in the CP group [8,9]. This is partly due to the fact that CP implies the presence of two pancreatic stumps, and at least one pancreatic-digestive anastomosis, which can be a potential source of complications. Although notably, an operative mortality of 3% was reported in one of these series of CP. In other studies, the central pancreatectomy has a mortality rate lower than 1% which is comparable to the distal pancreatectomy [7]. According to our experience, morbidity rate did not exceed 33%, with zero mortality [7].

CP is currently a well codified pancreatic parenchyma preserving intervention that allows an improved long term endocrine and exocrine function; it also avoids adverse post-splenectomy effects. This technique's only drawback is the high risk of pancreatic fistulas compared to other pancreatic excisions, without increasing the mortality rate which remains very low. This procedure demands meticulousness and some experience in surgical practice. Proper selection of patients for CP is crucial not only to maximize the functional benefits but also to mitigate the effects of potential complications.

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