

Laparoscopic modified anterior RAMPS in well-selected left-sided pancreatic cancer: technical feasibility and interim results

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Abstract

Background Laparoscopic distal pancreatectomy with splenectomy is regarded as a safe and effective treatment for benign and borderline malignant pancreatic lesions [1, 2]. However, its application for left-sided pancreatic cancer is still debatable [3, 4]. No general consensus, no standardized technique, and no surgical indication exist in applying the laparoscopic approach to left-sided pancreatic cancer.

Methods According to our institutional experiences of treating left-sided pancreatic cancer, bloodless and margin-negative resection was found to be important. Bloodless and margin-negative laparoscopic distal pancreatectomy would be technically possible in suspicious pancreatic cancers with these tentative conditions: (1) pancreas-confined suspicious pancreatic cancer on preoperative image study (cT2), (2) intact fascia layer between the pancreas and left adrenal gland/left kidney, and (3) tumor more than 1 cm from the celiac axis. A 59-year-old female patient was found to have suspicious left-sided pancreatic cancer. Therefore, we performed laparoscopic anterior radical antegrade modular pancreatectomy (RAMPS) [5, 6] with a curative intent based on selection criteria.

Results The margin-negative (resectional and tangential) curative resection could be obtained by applying laparoscopic anterior RAMPS in well-selected left-sided pancreatic cancer. The operation time was 180 min and estimated blood loss was 100 ml. The diagnosis from pathology was that the tumor was ductal adenocarcinoma of the pancreas (pT3) with lymph node metastasis (pN1, 2 of 23 lymph nodes). The patient went home on the 7th postoperative day. Adjuvant chemotherapy began within 2 weeks after surgery. From June 2007 to August 2010, nine patients underwent minimally invasive (5 laparoscopic and 4 robot-assisted) anterior RAMPS based on the selection criteria. The perioperative outcomes and short-term oncologic results are summarized.

Conclusion Laparoscopic modified anterior RAMPS is thought to be technically feasible for curative resection in well-selected pancreatic cancer. The oncologic feasibility of this technique needs to be investigated based on long-term follow-up. More careful study is necessary.

Keywords Pancreatic cancer · Laparoscopy · RAMPS

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