EP02E-041
ROBOTIC VERSUS STANDARD OPEN PANCREATECTOMY: A CASE MATCHED ANALYSIS COMPARISON
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Background: Interest in robotic pancreatectomy has been greatly increasing over the last decade. However, evidence supporting the benefits of robotic over open pancreatectomy is still outstanding. This study aims to assess the safety and efficacy of robotic pancreatectomy compared with the conventional open surgical approach.

Methods: Propensity score matched (1:1) was used to balance age, sex, BMI, ASA, tumor size and malignancy of 17 robotic pancreaticoduodenectomies (PD), 12 pancreatic enucleations (PE) and 28 distal pancreatectomies (DP) and were compared with the open standard approach.

Results: Robotic PD was associated with longer operative time (594 vs 413 min; p = 0.03) and decreased blood loss (190 vs 394 ml; p = 0.001). Robotic PE showed a lower mean length of hospital stay (8.4 vs 12.8 days, p = 0.04) and, in addition robotic DP showed less blood loss (175 vs 375 ml; p = 0.01), less severe morbidities (7.14 vs 17.9%; p = 0.02), and a reduced mean length of hospital stay (8.9 vs 15.1; p = 0.001). Overall conversion rate was 4 (7%). The histopathology of specimen showed disease-free margins in all cases.

Conclusion: Robotic pancreatectomy is as safe and effective as the standard open surgical approach with reduced mean length of hospital stay (8.9 vs 15.1; p = 0.01), less severe morbidities (7.14 vs 17.9%; p = 0.02), and a reduced mean length of hospital stay (8.4 vs 12.8 days, p = 0.04) and, in addition robotic DP showed less blood loss (175 vs 375 ml; p = 0.01), less severe morbidities (7.14 vs 17.9%; p = 0.02), and a reduced mean length of hospital stay (8.9 vs 15.1; p = 0.001). Overall conversion rate was 4 (7%). The histopathology of specimen showed disease-free margins in all cases.

EP02E-042
ROBOTIC-ASSISTED Pancreatic surgery: Time-Trend From 65 Consecutive Resections At A High-HBP Single Center
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Background: Minimally invasive surgery has achieved worldwide acceptance in various fields, however, pancreatic surgery remains one of the most challenging abdominal procedures. In fact, the indication for robotic surgery in pancreatic disease has been controversial. The present study aimed to assess the safety and feasibility of robotic pancreatic resection.

Methods: We retrospectively reviewed our experience of robotic pancreatic resection done in Sanchinarro University Hospital. Clinicopathologic characteristics, and perioperative and postoperative outcomes were recorded and analyzed.

Results: From October 2010 to December 2017, 65 patients underwent robotic-assisted surgery for different pancreatic pathologies. All procedures were performed using the da Vinci robotic system. Of the 65 patients, 36 were male and 29 female. The average age of all patients was 65 years. Operative time was 350 minutes. Among the procedures performed were 22 pancreaticoduodenectomies (PD), 29 distal pancreatectomies (DP), 14 tumor enucleations (TE). The mean hospital stay was 16 days in PD group, 9 days in DP group and 8 days in TE group. Pancreatic fistula occurred in 13 cases (20%), 5 after PD, 3 after DP, and 5 after TE. Four patients had postoperative transfusion in PD group and one in DP group. Conversion to open laparotomy occurred in four patients (8%). No serious intraoperative complications were observed.

Conclusion: From our early experience, robotic pancreatic surgery is a safe and feasible procedure. Further experience and follow-up are required to confirm the role of robotic approach in pancreatic surgery.

EP02E-043
A NEW TECHNIQUE FOR LAPAROSCOPIC Pancreatic RECONSTRUCTION: Wrapping Double Mattress Reconstruction
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Introduction: The difficulty in laparoscopic reconstruction of the pancreatic anastomosis is one of the main risk factor of the pancreatic leakage in the Laparoscopic pancreaticoduodenectomy (LPD). To resolve this problem, we have developed a new technique: Wrapping double mattress reconstruction (Kiguchi-method) for laparoscopic pancreaticojejunostomy.

Methods: Kiguchi-method consists of three transpancreatic outer-layer sutures and four inner-layer sutures using horizontal mattress sutures. 3-cm-long seromuscular incision is made in the antimesenteric wall of the jejunal loop extracorporeally. Intracorporeally three transpancreatic outer-layer sutures are preset without tying for horizontal mattress sutures on the jejunal with the double needle polypropylene 3-0. For inner-layer sutures of the duct to submucosa anastomosis, two stiches are placed into the pancreatic duct on the both ventral and dorsal walls in the horizontal mattress fashion with the double needle polypropylene 5-0, and two interrupted stiches are placed on the cranial and caudal side of pancreatic duct. After pancreatic intraductal tube is placed into the pancreatic duct and fixed, all inner-layer stiches are tied. And then outer anterior horizontal mattress sutures on the jejunum are completed and tied.

Results: Since September 2016, we have performed 12 LPD with pancreatic reconstruction by Kiguchi-method. All cases had soft and nonfibrotic pancreatic tissue, average diameter of the pancreatic duct was 2.5mm. Average duration of the Kiguchi-method was 123 min. POPF grade A defined ISGF was only one case, there was no cases developed POPF grade B-C. Average hospital stay was 16.3 days.

Conclusion: Laparoscopic pancreatic reconstruction by Kiguchi-method seems to be safe and suitable technique for LPD.

EP02E-044
TRANSECTION USING A REINFORCED STAPLER REDUCES THE INCIDENCE OF Pancreatic Fistula After Distal Pancreatectomy
Introduction: Irreversible-electroporation (IRE) is an ablation technique that spares vessels and is therefore suitable for treatment of locally advanced pancreatic cancer. Our surgery planning software supports pre-operative simulation of possible needle configurations in 3D to prepare for the ablation treatment. We present herein the application of the proposed software tool to one out of five cases which we already planned within a proof of concept study.

Method: For planning of an open IRE treatment of a carcinoma located in the body of the pancreas, pre-operative CT image data was analyzed with a commercial surgery planning tool. The resulting 3D anatomy models as well as the original CT data were loaded into our tablet-based software. We then performed simulation of two different IRE needle configurations (Figure 1) and evaluated them with respect to vicinity to critical structures versus achieving the recommended needle spacing and parallelism for IRE.

Results: During the surgery the decision was to target according to plan # 1 as the superior mesenteric vein was not mobilizable enough to obtain a window for the inferior right needle in #2. The number and placement of the needles relative to each other did not significantly depart from the pre-operatively defined plan.

Conclusions: Our software gives to surgeon the possibility to pre-operatively verify the feasibility of needle placement strategies and enables a better orientation of the upcoming situs. Our next step is to enable intraoperative computer-assisted navigation to target according to the pre-operative plan.