460. Feasibility and safety of the robotic system applied in pancreatic surgery
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Background: To describe our initial experience in the surgical treatment of pancreatic disease using the robotic system and determine its safety.

Material and methods: This is a descriptive study of a series of cases collected prospectively including all patients undergoing pancreatic disease using the Da Vinci robotic system in a period of 3 years. In most cases an hybrid approach was used. Demographic, intraoperative and histological data were collected, as well as morbidity and mortality and hospital stay.

Results: 13 patients (7 women and 6 men) were treated with a mean age of 53 years (22–71 years). The surgeries performed were: 7 distal pancreatectomies (DP) all with splenic preservation, but one case the Warshaw technique (ligation of the splenic vessels) was performed; 3 cephalic pancreaticoduodenectomies (DPD) and 3 Total pancreatectomies (TP) (2 splenectomies). The histological results were: 5 adenocarcinoma, 3 cystadenoma (1 borderline), 1 metastatic renal clear cell carcinoma, 1 papillary tumor, 1 insulinoma and 1 schwannoma. The malignant tumors were staged: in three cases T3N1, one case T3N1 and one case pT1N0. Mean lymph nodes studied were 13 (9–16). The average docking time was 12 minutes. Three patients were converted to open surgery (2 DPC and 1 TP). The mean blood loss was 180.7 cc. (25–600 cc) requiring red blood cell transfusion in 2 cases (TP and DPC). The mean operating time was 300 minutes in PD, 380 minutes in TP and 420 minutes in DPC. Morbidity and mortality were: 1 pancreatic fistula grade A, 1 sepsis due to central venous catheter, 1 transient ischemic attack and 1 death due to an acute myocardial infarction. The average stay was 4 days in the PD group and 9 days in DPC and TP.

Conclusions: Robotic-assisted pancreatic surgery is feasible and safe providing comparable results to conventional surgery, but with the advantages of the minimally invasive approach. Future efforts should be aimed at evaluating the long-term oncological results with the application of robotic systems when it comes to treat pancreatic cancer.

No conflict of interest.

461. Robotic assisted versus laparoscopic resection for rectal cancer: Short-term outcomes from early experience from consecutive patients
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Purpose: Robotic surgery has been advocated for the radical excision of rectal cancer. The aim of this study is to compare short-term outcomes and surgical quality of robot-assisted and laparoscopic total mesorectal excision (TME) in patients with rectal cancer.

Methods: A retrospective review was conducted of consecutive patients who underwent TME by robot-assisted procedures (RAP) during a 3 year period from July 2010 to Oct 2013. All operations were performed by 1 surgeon experienced in advanced laparoscopy at a tertiary institution. Once robotic surgery was introduced, all cases were performed robotically. Short-term outcome included intraoperative results and postoperative measures including macroscopic quality of the specimens, complications, length of stay, and re-operative rate. Statistical comparison was performed using Fisher’s exact test and t test.

Results: The patient characteristics were not significantly different between the two groups except higher male patient and preop chemoradiation in RAP group. Mean operation time was 260 ± 43 min for LAP and 321.5 ± 516 min for RAP group (P = 0.002). No difference was noted in blood loss, transfusion rate, intraoperative complications, or conversion rate. In RAP, there was no open conversion but one case was converted to laparoscopy in patient with preop chemoradiation. The median number of lymph nodes was similar in both groups (18 vs.17 nodes, P = 0.09). There was no difference in distal or radial margin positivity between groups (P = 1.00). Median length of stay was shorter in Group LAP compared to Group RAP (16 vs. 111.5 days, p = 0.03). The 90 day major complication rate was similar in both groups (25 vs. 25.8%, P = 1.00). The overall complication rates were similar (RAP, 12.9% vs. LAP, 12.5%; P = 0.7).

Conclusion: Early experience with robotic rectal cancer excision demonstrated longer operative time but was ontologically safe and effective for patients with rectal cancer. The TME specimen quality of the RAP group was acceptable. Larger randomized studies are needed to confirm these findings and explain which aspects of robotic surgery may contribute to lower anastomotic complications.

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462. Robotic splenic flexure mobilization is not difficult anymore: ‘Inferior penetration method’
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Background: During minimally invasive surgery for rectal cancer, splenic flexure mobilization is difficult procedure to perform. Therefore, during robotic surgery, there are many debates about whether splenic flexure mobilization is performed by robotic or laparoscopic surgery. We introduce ‘inferior penetration method’ which can easily perform splenic flexure mobilization.

Material and methods: From December 2010 to April 2014, 43 patients (26 males and 17 females) who had rectal cancer underwent robotic splenic flexure mobilization (23 low anterior resections; 20 ultra-low anterior resections). Robotic low or ultra-low anterior resection consists of three phases. Phase I is the left lateral setup including initial exposure, primary vascular control of the inferior mesenteric artery and vein, and medial to lateral mobilization of sigmoid and descending colon. The procedure is performed in a 4-arm set-up with arms 1, 2, and 3 docked. Phase II is the splenic flexure set-up. Splenic mobilization is performed in a 3-arm set-up after de-docking of the arm 2 to decrease external collisions of the robotic arms. If there are no external collisions, the arm 2 is used for retraction. Phase III is the pelvic set-up. The procedure is performed in a 4-arm set-up again with arms 2 and 3 re-docked in the lower and upper left ports. ‘Inferior penetration method’ is the procedure, during phase II, that medial to lateral mobilization is performed as far laterally as possible: division of pancreatomesocolic ligament and line of Toldt, splenocolic and phrenocolic ligament. Therefore, window of inferior portion of splenic flexure colon is created.

Results: Nineteen patients (44.2%) received preoperative chemoradiotherapy. Patients were classified into two groups: A (16 patients underwent ‘inferior penetration method’) and B (27 patients did not undergo ‘inferior penetration method’). There were no significant differences in clinicopathologic variables between two groups including age, preoperative CEA level, docking time, free proximal and distal margins, tumor size, intraoperative blood loss, number of harvested and positive lymph nodes, time to flatus and diet. There were significant differences in BMI (25.3 vs 24.4 kg/m², p < 0.05) and length of stay (8.3 vs 7.7 days, p < 0.05) for group A vs group B patients. There were no significant differences of