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Surgical treatment of complicated pseudocysts of the pancreas

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Introduction: Minimally invasive procedures (MIPs) in the treatment of complicated pancreatic pseudocysts (PS) have done priority nowadays.

Aims: The aim is to improve the results of surgical treatment of patients with various types of complicated PS.

Materials and Methods: The study was based on the results of surgical treatment of 505 patients with complicated PS in 2006–2020. Patients were classified according to the classification of A. D'Egidio and M. Schein (1991): in 81 (16.04%) was type I, in 247 (48.91%) - type II and in 177 (35.05%) patients - type III of PS.

Results: Suppurations, gastric and duodenal compressions, jaundice, bleeding into the PS cavity, rupture of PS and fistulas were analyzed. MIPs using US-guided and laparoscopy-guided drainage, endoscopic procedure through the stomach walls were used which reduced the number laparotomy interventions in the 1st group to 18.75% (one patient died). Patients with PS by type II and SOFA > 8 points MIPs using US-guided were done; in patients with SOFA before 8 points laparoscopy or laparotomy were done (mortality 0.4%). In PS by type III (36) MIPs used as the 1st step. In others primary open surgery in 141 included internal (85) and external (8) drainage, procedures such as Frey (33), Whipple (4) and Traverso-Longmeier (4), distal pancreatectomy (7), X-ray endovascular occlusion of the splenic (2) and gastroduodenal (1) arteries after surgery (mortality 0.56%).

Conclusion: Improved treatment outcomes of complicated PS have been achieved through modern and accurate diagnosis of disease types and complications and used of MIPs as a component tactic of step-up approach.

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Performance with robotic surgery versus 3D- and 2D-laparoscopy during pancreatic and biliary anastomoses in a biotissue model: Pooled analysis of two randomized trials

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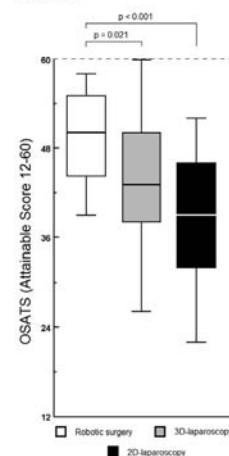
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Introduction: Robotic surgery may improve surgical performance during minimally invasive pancreatoduodenectomy as compared to 3D- and 2D-laparoscopy but comparative studies are lacking.

FIGURE 1. Objective Structured Assessment of Technical Skill (OSATS) for robotic surgery, 3D-, and 2D-laparoscopy to complete biotissue pancreatic- and hepatico-jejunostomy anastomoses



Legend: From left to right: first, 3D robotic surgery (n = 20); second, 3D-laparoscopy (n = 35); third, 2D-laparoscopy (n = 35).

Aims: To assess the impact of robotic surgery versus 3D- and 2D-laparoscopy on surgical performance and operative time using a standardized biotissue model for pancreatic- and hepatico-jejunostomy using pooled data from two randomized controlled crossover trials (RCTs).

Materials and Methods: Pooled analysis of data from two RCTs with 60 participants (36 surgeons, 24 residents) from 11 countries (December 2017 – July 2019). Each included participant completed two pancreatic- and two hepatico-jejunostomies in biotissue using both 3D- and 2D-robotic surgery, or 3D- and 2D-laparoscopy. Primary outcomes were the objective structured assessment of technical skills (OSATS; 12–60) rating, scored by observers blinded for 3D/2D and the operative time required to complete both anastomoses. Sensitivity analysis excluded participants with excess experience compared to others.

Results: A total of 220 anastomoses were completed (robotic 80, 3D-laparoscopy 70, 2D-laparoscopy 70). Participants in the robotic group had less surgical experience (median 1 [0–2] versus 6 years [4–12], $P < 0.001$), as compared to the laparoscopic group. Robotic surgery resulted in better OSATS ratings (50, 43, 39 points, $P = .021$ and $P < .001$) and shorter operative time (56.5, 65.0, 81.5 min, $P = .055$ and $P < .001$), as compared to 3D- and 2D-laparoscopy, respectively, which remained in the sensitivity analysis.

Conclusion: In a pooled analysis of two RCTs, robotic surgery resulted in better surgical performance scores and shorter operative time for biotissue pancreatic and biliary anastomoses, as compared to 3D- and 2D-laparoscopy.

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Robotic pancreatoduodenectomy for pancreatic cancer with aberrant vasculature: How to do it

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Introduction: Robotic pancreatoduodenectomy (RPD) for pancreatic cancer is a challenging procedure. The safety of RPD with aberrant hepatic vasculature was confirmed by several studies as long as these procedures