

One-Hundred and Six Robot-Assisted Pancreatectomies

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Context Laparoscopy has revolutionized abdominal surgery becoming the standard approach for many operations. The “da Vinci” surgical system overcomes most of the inherent technical limitations of laparoscopy. **Objective** We test whether the robotic approach can improve the outcome of pancreatic resections, which often require challenging dissection and complex digestive reconstructions. **Methods** One-hundred and six consecutive robotic pancreatic resections were performed between October 2008 and June 2012. There were 40 males and 66 females (62%), with a mean age of 57 years (range 21-80 years) and a mean BMI of 24.6 Kg/m². Thirty-nine patients underwent pancreaticoduodenectomy (PD) (37%), 47 distal pancreatectomy (DP) (44%), 10 total pancreatectomy (10%), 7 tumor enucleation (6%) and 3 central pancreatectomy (3%). Since our activity spans over about a 4-year period, data were analyzed according to the time of surgery, to verify progress in the learning curve: 17 patients were operated on between October 2008 and September 2009, 22 patients between October 2009 and September 2010, 32 patients between October 2010 and September 2011 and 35 patients during the last 9 months (from October

2011 to June 2012). **Results** No patient was converted to laparoscopy or open surgery. Mean operative time (OT) was 442.8 minutes. In the first period OT was 512 min for PD and 420 for DP. The mean number of lymph nodes examined (LN) was 16.8; 31.2 for PD and 11.9 for DP. Pancreatic fistula (PF) occurred in 41% of the patients. In the second, OT was 596 min for PD and 402 for DP. The LN was 16.7; 27.2 for PD and 10.0 for DP. PF was amounted 36.3%. In the third, OT was 583 min for PD and 288 for DP. The LN was 28.7; 36.0 for PD and 19.1 for DP. PF was amounted 36.6%. In the fourth, OT was 590 min for PD and 250 for DP. The LN was 30; 32 for PD and 20 for DP. PF was amounted 35%. Fifty-six benign/low-grade tumors and 50 cancers were diagnosed. Surgical margins were all negative. Post-operative mortality was nil, morbidity was 56% and mean hospital stay was 16 days. **Conclusions** Robot-assisted pancreatic resections can be safely performed in selected patients. Despite the existence of a learning curve, experienced pancreatic surgeons are not expected to pay to robotics the same price that they would have been asked for by laparoscopy.