

## **One-Hundred Laparoscopic Distal Pancreatectomies in a Single Institution**

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**Context** The laparoscopic approach for benign and malignant lesions of the left pancreas is increasingly applied. **Methods** Retrospective study on prospectively collected data. Perioperative data and operative outcome of consecutive laparoscopic distal pancreatectomies performed between March 2006 and March 2013 were analyzed (intent-to-treat analysis). Operative outcome of the subgroup of patients with conversion to open surgery was compared to patients with successful laparoscopy to assess the consequences of conversion. **Results** Among 341 distal pancreatectomies, 100 patients (29%) had a laparoscopic approach (with a progressively increasing rate from 6% in 2006 to 62% in 2012). Malignancy was not a contraindication. Mean age was 57.4 years (range: 24-83 years; 42 males and 58 females). Mean BMI was 25.3 kg/m<sup>2</sup> (range: 17-39 kg/m<sup>2</sup>). Conversion rate was 19% (11 cases because of the difficulty to isolate the pancreas or lesion from the peripancreatic vessels, 6 cases due to intraoperative bleeding, 2 cases due to the site and/or dimension of the lesion). Mean operative time was 244 min (range: 110-490 min). Median blood loss was 250 mL (range: 30-1,800 mL), with 20 patients receiving blood transfusion. Mortality was nihil, morbidity was 68%, with 5% grade  $\geq 3$  according to Clavien-Dindo classification (2 cases percutaneous drainage,

3 cases relaparotomy). Pancreatic fistula occurred in 55 cases (of which 8 grade B, 1 grade C). Mean postoperative stay was 8.2 days (range: 4-23 days). Readmission occurred in 7 cases. Spleen preservation (performed with preservation of splenic vessels) was planned in 64% of cases and was successful in 48%; in 12 cases splenectomy was intraoperatively decided due to adhesions with splenic vessels, in 4 cases due to bleeding. The 19 patients with conversion to open surgery, when compared to patients without conversion, had a longer operative time ( $P=0.01$ ), higher blood loss ( $P<0.001$ ), higher transfusion amount ( $P<0.001$ ), and longer postoperative stay ( $P=0.001$ ); no difference was observed in morbidity rate ( $P=0.42$ ). At final histology 25 cases were adenocarcinoma, 33 NET (9 insulinoma), 23 cystadenoma (17 mucinous, 6 serous), 8 IPMN, 5 solid pseudopapillary tumors, 4 chronic pancreatitis and pseudocysts, 2 metastases from RCC. R0 resection was obtained in 97% of cases. Mean number of retrieved lymph nodes was 14.4. **Conclusions** Laparoscopic distal pancreatectomy can be performed in more than 60% of overall distal pancreatectomy, with a successful spleen preservation rate of 75% of cases. A worse operative outcome is to be expected in patients requiring conversion to open surgery.