Laparoscopic Distal Pancreatectomy in Italy. A Pooled Analysis

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Context Laparoscopic distal pancreatectomy (LDP), was rapidly spread in Italy as technique for the treatment of both malignant and benign pancreatic neoplasm. Objective To compare the results of LDP in Italy in high volume (HVC) and low volume (LVC) pancreatic centers. Methods A systematic search using the terms “pancreatectomy AND laparoscopic AND Italy” was performed through MEDLINE and EMBASE. A total of 37 manuscripts were found and 5 manuscripts were considered. Data were extracted using a predesigned pro-forma and a pooled analysis was carried out. Results Three studies was conducted in HVC including 76% of the cases. The weighted mean number/years of patients who underwent LDP, was 8.8 and 3.4, in HVC and LVC, respectively, resulting in a pooled mean difference of 5.40 (95% CI: 4.26-6.54; P<0.001). The laparoscopic approach was more frequently used in LVC than HVC (88.8% vs. 31.6%) in patients underwent distal pancreatectomy, resulting in OR of 4.72 (95% CI: 1.84-12.07; P=0.001). The number of patients affected by ductal carcinomas treated was low both in HCV and LVC (11.5 and 20.0%, respectively; P=0.25). Operative time was similar in HVC and LVC with a weighed mean of 200 and 214 minutes, respectively (P=0.20). Rate of conversion was lower in HVC than LVC (7.6% vs. 20.0%) resulting in a OR 0.35 (95% CI: 0.16-0.78; P=0.01). Postoperative morbidity rate (42% vs. 30.0%; P=0.24), pancreatic fistula rate (27.3% vs. 26.6%; P=0.94), and re-operation rate (5.2% vs. 0%; P=0.21) were similar in HVC and LVC. Mean postoperative stay (LOS) was shorter in HVC than LVC (6.5 vs. 11.3 days) resulting in a pooled mean difference of -4.80 (95% CI: -6.57 to -3.03; P<0.001). The ratio between splenectomy observed\expected was higher in HVC than LCV (2.6 vs. 1.3) resulting in a RR of 1.25 (95% CI: 1.05-1.48; P=0.01). Conclusion In LVC, LDP was frequently performed. In HVC only one-third body-tail pancreatic lesions, more frequently cystic, was laparoscopically treated. Rate of conversion was lower and LOS shorter in HVC respect on LVC.