

## **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 0.35 (95% CI: 0.16-0.78; P=0.01). The most frequent lesion treated was cystic lesion in HVC (58.9%) while in LVC were solid neoplasm (73.7%) 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 HVC 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 0.32 (95% CI: 0.10-1.04; P=0.06). 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 LVC (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.