

Laparoscopic And Open Distal Pancreatectomy With Celiac Axis Resection For Borderline Resectable Or Locally Advanced Pancreatic Cancers: Perioperative Outcomes And Survival Assessment

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Background : Distal pancreatectomy with celiac axis resection (DP-CAR) is remarkable option for borderline resectable or locally advanced pancreatic body cancers. Laparoscopic procedures have emerged recently, though its effectiveness on DP-CAR remains unclear. The purpose of this study is to compare surgical outcomes and survivals of open DP-CAR (ODP-CAR) and laparoscopic DP-CAR (LDP-CAR), and to determine the safety and feasibility of LDP-CAR upon ODP-CAR.

Methods : Retrospectively analyzed all consecutive DP-CARs performed in Asan Medical Center from the beginning till December 2020. Baseline characteristics, perioperative and oncologic outcomes, long-term survivals were included.

Results : Sixty-five DP-CARs were performed (55 open, 10 laparoscopic) during study period. No significant differences showed in baseline characteristics. LDP-CAR was associated with shorter operative time (311.3 ± 114.7 vs. 221.5 ± 81.2 min, $p=0.021$), and lower intraoperative transfusion rate (41.8 vs. 10.0%, $p=0.078$). Combined other organ resection rate was higher in ODP-CAR, especially in portal vein resection (34.5 vs. 0.0%, $p<0.001$). Major complication rate was higher in ODP-CAR (36.4 vs. 0.0%, $p=0.019$), but no significant differences were shown in postoperative pancreatic fistula, 90-day mortality, readmission, reoperation, and R0 resection rates. At median overall follow-up of 23.8 months, no significant differences were shown between two groups both in overall survival rate (24.2 ± 19.3 vs. 29.4 ± 23.2 months, $p=0.449$) and disease-free survival rate (14.4 ± 16.6 vs. 16.2 ± 18.2 months, $p=0.761$). Notably, celiac trunk length in preoperative CT scan was significantly longer in LDP-CAR (8.3 ± 2.7 vs. 21.4 ± 3.6 cm, $p<0.001$).

Conclusions : LDP-CAR represents shorter operative time and lower transfusion rate than ODP-CAR, though showed higher major complication rates with similar overall and disease-free survival rates. LDP-CAR could be an acceptable alternative to the open technique in carefully selected pancreatic cancer patients, borderline resectable or locally advanced cases.

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