

THE IMPACT OF LAPAROSCOPIC PANCREATICODUODENECTOMY ON SHORT-TERM AND LONG-TERM ONCOLOGICAL OUTCOMES IN PANCREATIC DUCTAL ADENOCARCINOMA PATIENTS

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Objective:

To evaluate the short-term and long-term oncological outcomes in pancreatic ductal adenocarcinoma (PDAC) patients after laparoscopic pancreaticoduodenectomy (LPD).

Methods:

Retrospectively collected clinical data of patients undergoing pancreaticoduodenectomy for PDAC from Jan 2015 to Jan 2018 in our center, divided into LPD group and open pancreaticoduodenectomy (OPD) group according to their surgical approach, compared short-term and long-term oncological outcomes between two groups. Our last follow-up was on May 6, 2019.

Parameters	LPD n=26	OPD n=40	P value
Tumor size, cm±SD	3.3±1.6	3.4±1.0	0.82
Vein resection, n (%)	6(23.1)	13(32.5)	0.58
Harvest lymph nodes, n±SD	15±7	16±7	0.69
Positive lymph nodes, n(IQR)	1(0, 3)	0.5(0, 2)	0.27
R0 resection, n (%)	24(92.3)	35(87.5)	0.70
AJCC* stage, n (%)			0.22
I	10(38.5)	10(25.0)	
II	12(46.2)	27(67.5)	
III	3(11.5)	2(5.0)	
IV	1(3.9)	1(2.5)	
AC#, n (%)	18(69.2)	27(67.5)	1.00
Time to AC, days (IQR)	35.5(31, 44)	40(32, 53)	0.82
Recurrence, n (%)	17(65.4)	32(80.0)	0.047
Local recurrence, n (%)	9/17(52.9)	18/32(56.3)	0.45
Liver recurrence, n (%)	3/17(17.6)	7/32(21.8)	0.73
Lung recurrence, n (%)	1/17 (5.9)	1/32(3.1)	1.00
Multiple recurrence sites, n (%)	4/17(23.5)	6/32(18.8)	1.00
Chemotherapy after recurrence, n (%)	12/17(71.0)	12/32(37.5)	0.02
One-year survival rate, %	20(76.9)	30(73.2)	0.73
18-month survival rate, %	18(69.2)	24(58.5)	0.38

Results:

Totally 66 patients were enrolled, 26 were LPD, 40 were OPD. The Tumor stage classification, tumor size, harvest lymph nodes and R0 resection rate were similar between two groups. 69.2% patients of LPD group and 67.5% patients of OPD group had adjuvant chemotherapy after surgery. The median time to chemotherapy after surgery was 35.5 days in LPD group and 40 days in OPD groups of no statistical difference. 65.4% patients of LPD group and 80% patients of OPD group had recurrence during follow-up. More patients continued chemotherapy after recurrence in LPD group than in OPD group, with a P value of 0.02. Our median follow-up was 18 months. The median overall survival was 21.7 months of LPD and 15.3 months of OPD group with a Log-Rank P value of 0.20.

Conclusions:

The laparoscopic approach had similar short-term oncological outcomes compared to open approach for PDAC patients. In long-term outcomes, it might have a potential longer survival over open approach with a lower recurrence rate. A future large scale prospective randomized trial will be needed to confirm our results.

