

Laparoscopic Pancreaticoduodenectomy for Periapillary and Pancreatic Malignancies

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Early Experience and Oncological Outcomes from a High-Volume Cancer Center in Pakistan

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66
PATIENTS

50 mL
BLOOD LOSS

5 days
HOSPITAL STAY

98%
R0 RESECTION

0%
30-DAY MORTALITY

2%
CLINICALLY RELEVANT POPF

BACKGROUND

Laparoscopic pancreaticoduodenectomy (LPD) is one of the most technically demanding procedures in gastrointestinal surgery. Despite increasing worldwide adoption, data from South Asia remain limited.

Aim: evaluate the safety, feasibility and oncological adequacy of LPD in a high-volume cancer center in Pakistan.

METHODS

Design: retrospective review | **Period:** Jan 2022 – Sep 2026

Inclusion: LPD for pancreatic, ampullary, distal cholangio, duodenal adenocarcinoma and other periapillary malignancies.

Outcomes: operative, morbidity, mortality, histopathology, oncological adequacy.

PATIENT CHARACTERISTICS

Total LPD cases 66

OPERATIVE OUTCOMES

390
min operative time

50 mL
blood loss

Blood transfusion	5%
Conversion to open	21.2%
Vascular resections	0

Procedure: pylorus-preserving PD

LENGTH OF STAY

1 day
ICU stay

5 days
hospital stay

Median age (range)	56 y (31–78)
Female	60%
Median BMI	25 kg/m ²
Diabetes mellitus	39%
Preoperative jaundice	80%
Biliary stenting	72%

ASA status

I 66% II 20% III

POSTOPERATIVE COMPLICATIONS

Delayed gastric emptying	41%
Surgical site infection	22%
90-day mortality	4.5%
Clinically relevant POPF	2%
Reoperation	2%
Post-pancreatectomy hemorrhage	0.5%
30-day mortality	0%

POPF = postoperative pancreatic fistula

ONCOLOGICAL OUTCOMES

98%	2%
R0 resection	R1 resection
3 cm	10
median tumor size	median nodes harvested
Node-positive disease	61%

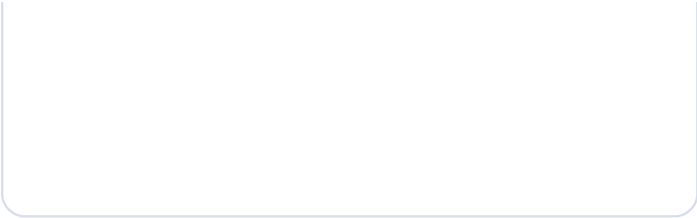
KEY FINDINGS

- ✓ Very low blood loss (50 mL)
- ✓ Short hospital stay (5 days)
- ✓ Clinically relevant POPF only 2%
- ✓ Zero 30-day mortality
- ✓ Excellent R0 resection rate (98%)
- ✓ Acceptable conversion rate during early learning curve

CONCLUSION

LPD can be safely implemented in a high-volume cancer center in Pakistan with excellent perioperative and oncological outcomes. Favorable morbidity, mortality and margin-negative resection rates are achievable through careful patient selection and institutional expertise.

Take-home: LPD is feasible, safe and oncologically sound in carefully selected patients, even during the early experience of a developing minimally invasive pancreatic surgery program.



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