Effect of Preoperative Endoscopic Biliary Drainage on Postoperative Outcomes of Resectable Pancreaticobiliary Malignancies with Obstructive Jaundice

A Single-center Retrospective Study

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Study Objectives

Primary Objective: 30-Day Complication Analysis

The study aimed to compare postoperative outcomes including Surgical Site Infection (SSI), Pancreatic Fistula (PDPF), Delayed Gastric Emptying (DGE), hemorrhage, and mortality between PBD and Direct Surgery groups.

Secondary Objectives: Risk Identification

Evaluation of stenting related complications, the impact of the time interval between PBD and surgery, and determining a definitive bilirubin threshold for PBD benefit.

Retrospective Cohort (2018–2023)

A single-center study conducted at JIPMER, India, involving 190 patients with resectable pancreaticobiliary cancers.

METHODOLOGY AND DATA COLLECTION

Initial Cohort

190 eligible patients underwent successful Pancreaticoduodenectomy (PD).

Direct Surgery Group (n=122)

52 patients presented without jaundice, while 70 patients presented with jaundies and were included in the primary comparative analysis.

PBD + Surgery Group (n=88)

68 patients underwent preoperative biliary stenting followed by surgery and were considered for the analysis.

CORE RESULTS

Increased Risk of Surgical Site Infection (SSI)

Outcome	PBD Group	Direct Surgery Group	p-value
SSI Rate	78%	52.8%	0.018
Positive Intraoperative Bile Cultures	55.8%	27.1%	0.001

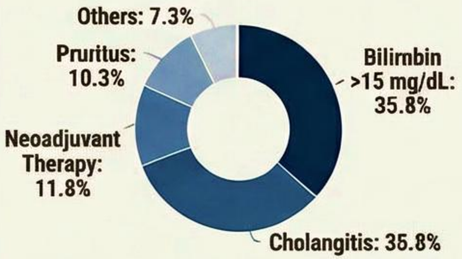
Higher Rates of Contaminated Bile

PBD Group: **55.8%** Positive Intraoperative Bile Cultures

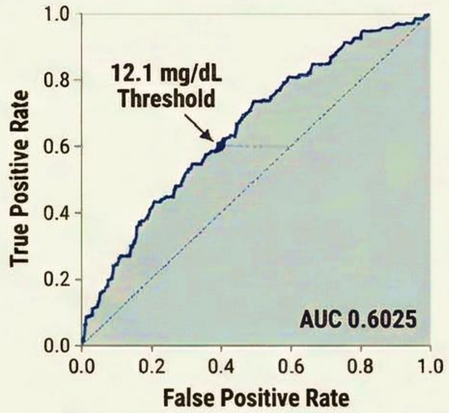
Direct Surgery Group: **27.1%** Positive Intraoperative Bile Cultures

(p=0.001)

Indications for PBD (n=68 Patients)



12.1 mg/dL Bilirubin Cut-off



No Benefit Below Threshold

PBD offers no clinical advantage or reduction in serious complications for patients with a serum billrubin less than 12.1 mg/dL.

Prolonged Stenting Risk

Stenting duration >28 days increases complication rate to 100% (p=0.02).

THE THRESHOLD & CONCLUSION

PBD as an Independent Risk Factor

Routine use of PBD is an independent risk factor for SSI and should be avoided if bilirubin is below the 12.1 mg/dL threshold.

Reserve PBD for Specific Indications

Severe illness | **Chemotherapy** | **Complex surgery**

Clinical practice should limit PBD to cases of severe cholangitis, patients requiring neoadjuvant therapy, or those needing extended preoperative optimization.