

Time to Pancreatic Surgery after Preoperative Biliary Drainage in Periapillary Cancers: A Systematic Review and Meta-Analysis

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Abstract : Background and aim: Preoperative biliary drainage (PBD) has been introduced to lower bilirubin levels and to control the negative effects of obstructive jaundice in patients with malignant obstructive jaundice undergoing pancreaticoduodenectomy (PD). The optimal time interval between PBD and PD is still not clear. Delaying surgery by 4 to 6 weeks is the commonly accepted practice. However, delayed PD has been shown to decrease the rate of resection and adversely affect the tumor grading and prognosis. Thus, the purpose of our systematic review and meta-analysis was to evaluate the optimal period for PBD prior to PD: short or prolonged in terms of postoperative morbidity and survival outcomes. Methods: Trials were searched in PubMed, Science Direct, Google Scholar, and Cochrane Library until November 2022. Studies using PBD in patients with malignant obstructive jaundice that compared short duration group (SDG) (surgery performed within 3-4 weeks) with prolonged duration group (PDG) (at least 3-4 weeks after PBD) were included in this study. The risk of bias was assessed using the Rob v2 and Robins-I tools. The priori protocol was published in PROSPERO (ID: CRD42022381405). Results: Seven studies comprising 1625 patients (SDG 870, PDG 882) were included. All studies were non-randomized, and only one was prospective. No significant differences were observed between the SDG and PDG in mortality (OR= 0.59; 95% CI [0.30, 1.17], p=0.13), major morbidity (Chi² = 30.28, p <0.00001; I² = 87%), pancreatic fistula (Chi² = 6.61, p = 0.25; I² = 24%), post pancreatectomy haemorrhage (OR= 1.16; 95% CI [0.67, 2.01], p=0.59), positive drainage culture (OR= 0.36; 95% CI [0.10, 1.32], p=0.12), septic complications (OR= 0.78; 95% CI [0.23, 2.72], p=0.70), wound infection (OR= 0.08, p=0.07), operative time (MD= 0.21; p=0.21). Conclusion: Early surgery within 3 or 4 weeks after biliary drainage is both safe and effective. Thus, it is reasonable to suggest early surgery following PBD for patients having resectable periampullary cancers.

Keywords : preoperative biliary drainage, pancreatic cancer, pancreatic surgery, complication

Conference Title : ICPHE 2023 : International Conference on Public Health and Epidemiology

Conference Location : Venice, Italy

Conference Dates : August 10-11, 2023