

Impact of Diabetes Mellitus on the Outcomes After Pancreaticoduodenectomy for Pancreatic Ductal Adenocarcinoma: A Single Center Experience

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Abstract

Purpose: Pancreatic ductal adenocarcinoma is a life-threatening health problem. Surgical excision is the principal step of multimodal treatment, but it is associated with poor outcomes. At the time of diagnosis, up to 80% of those patients have impaired glucose tolerance or diabetes mellitus. The role of pre-operative diabetes mellitus on the outcomes after pancreaticoduodenectomy is still unclear.

Method: We reviewed the data of patients who underwent pancreaticoduodenectomy for pancreatic ductal adenocarcinoma. Patients were divided into 2 groups according to presence or absence of preoperative diabetes mellitus.

Results: Our study included 451 patients. Diabetes mellitus group included 113 patients (25.1%), and non-diabetes mellitus group included 338 patients (74.9%). More firm pancreas was found in diabetes mellitus group, and more clinically relevant postoperative pancreatic fistula was found in non-diabetes mellitus group. There was more delayed gastric emptying, and wound infection in diabetes mellitus group. The long-term outcomes were comparable between groups regarding the overall ($p=0.55$) and disease-free survival rates ($p=0.972$).

Conclusion: Preoperative diabetes mellitus did not affect the perioperative outcomes after pancreaticoduodenectomy for pancreatic ductal adenocarcinoma. Preoperative diabetes mellitus is not associated with postoperative pancreatic fistula; however, it is significantly associated with delayed gastric emptying and wound infection.

Key words: diabetes mellitus, pancreaticoduodenectomy, pancreaticogastrostomy, pancreaticojejunostomy, pancreatic fistula