Impact of reconstruction methods and pathological factors on survival after pancreaticoduodenectomy

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Abstract:

BACKGROUND: Surgery remains the mainstay of therapy for pancreatic head (PH) and periampullary carcinoma (PC) and provides the only chance of cure. Improvements of surgical technique, increased surgical experience and advances in anesthesia, intensive care and parenteral nutrition have substantially decreased surgical complications and increased survival. We evaluate the effects of reconstruction type, complications and pathological factors on survival and quality of life.

MATERIALS AND METHODS: This is a prospective study to evaluate the impact of various reconstruction methods of the pancreatic remnant after pancreaticoduodenectomy and the pathological characteristics of PC patients over 3.5 years. Patient characteristics and descriptive analysis in the three variable methods either with or without stent were compared with Chi-square test. Multivariate analysis was performed with the logistic regression analysis test and multinomial logistic regression analysis test. Survival rate was analyzed by use Kaplan-Meier test.

RESULTS: Forty-one consecutive patients with PC were enrolled. There were 23 men (56.1%) and 18 women (43.9%), with a median age of 56 years (16 to 70 years). There were 24 cases of PH cancer, eight cases of PC, four cases of distal CBD cancer and five cases of duodenal carcinoma. Nine patients underwent duct-to-mucosa pancreatico jejunostomy (PJ), 17 patients underwent telescoping pancreatico jejunostomy (PJ) and 15 patients pancreaticogastrostomy (PG). The pancreatic duct was stented in 30 patients while in 11 patients, the duct was not stented. The PJ duct-to-mucosa caused significantly less leakage, but longer operative and reconstructive times. Telescoping PJ was associated with the shortest hospital stay. There were 5 postoperative mortalities, while postoperative morbidities included pancreatic fistula-6 patients, delayed gastric emptying in-11, GI fistula-3, wound infection-12, burst abdomen-6 and pulmonary infection-2. Factors that predisposed to development of pancreatic leakage included male gender, preoperative albumin

Keywords:

Complication; mortality and survival; pancreaticojejunostomy duct to mucosa; periampullary cancer; postoperative pancreatic fistula; reconstruction

Published In: