

Does fibrin glue sealant decrease the rate of pancreatic fistula after pancreaticoduodenectomy? Results of a prospective randomized trial.

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Abstract:

Despite substantial improvements in perioperative mortality, complications, and specifically the development of a pancreatic fistula, remain a common occurrence after pancreaticoduodenectomy. It was the objective of this study to evaluate the role of fibrin glue sealant as an adjunct to decrease the rate of pancreatic fistula after pancreaticoduodenectomy. One hundred twenty-five patients were randomized after pancreaticoduodenal resection only if, in the opinion of the surgeon, the pancreaticojejunal anastomosis was at high risk for development of a pancreatic anastomotic leak. After completion of the pancreaticojejunal anastomosis, the patients were randomized to topical application of fibrin glue sealant to the surface of the anastomosis or no such application. The primary postoperative end points in this study were pancreatic fistula, total complications, death, and length of hospital stay. A total of 59 patients were randomized to the fibrin glue arm, whereas 66 patients were randomized to the control arm and did not receive fibrin glue application. The pancreatic fistula rate in the fibrin glue arm of the study was 26% vs. 30% in the control group ($p =$ not significant [NS]). The mean length of postoperative stay for all patients randomized was similar (fibrin glue = 12.2 days, control = 13.6 days) and the mean length of stay for patients in whom pancreatic fistula developed was also not different (fibrin glue = 18.9 days, control = 21.7 days). There were no differences with respect to total complications or specific complications such as postoperative bleeding, infection, or delayed gastric emptying. These data demonstrate that the

topical application of fibrin glue sealant to the surface of the pancreatic anastomosis in this patient population undergoing high-risk pancreaticojejunal anastomosis did not reduce the incidence of pancreatic fistula or total complications after pancreaticoduodenectomy. There seems to be no benefit regarding the use of this substance in this setting.