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

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Abstract:

BACKGROUND: The aim of this study was to evaluate the effect of topical fibrin glue applied externally to all anastomoses after a pancreaticoduodenectomy (PD) on drain lipase levels, anastomotic leaks, complication rates and length of hospital stay.

METHODS: A standardized non-pylorus preserving PD was performed with or without fibrin glue applied to each anastomosis.

RESULTS: Fifty-seven patients were randomized: 32 with and 25 without TISSEEL. There were no statistical differences in each group with respect to drain lipase levels (high 40% versus 43%, P = 0.794), complications including gastric or biliary leaks (24% versus 28%, P = 1.00), wound infection (16% versus 9%, P = 0.28) and a Clavien score of 3 or more (16% versus 25%, P = 0.757) or hospital stay (12 versus 17 days, P = 0.777). Most patients with elevated drain lipase levels had an unaltered clinical course not predictive of adverse outcomes. However, the operative finding of a soft pancreas (27 out of 57 patients) was associated with post-operative complications (P = 0.002). There were no peri-operative deaths.

CONCLUSIONS: Fibrin glue application to all anastomoses does not alter drain lipase levels. Drain lipase levels are not a significant surrogate marker for clinically significant anastomotic leaks or

complications. Fibrin glue application did not reduce the incidence of an anastomotic leak or complications.