Does a fibrin glue sealant decrease post-operative pancreatic fistulae after pancreaticoduodenectomy; a single centre comparative study in 100 consecutive patients undergoing whipple's procedure by a single surgeon.

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Abstract:

Aims: This study evaluated the effect of fibrin glue applied as a sandwich film between a two layer pancreatico-jejunostomy anastomosis following pancreaticoduodenectomy (PD). Primary end-points were post-operative pancreatic fistulae (POPF), overall complication rates and post-operative length of stay (LOS). Methods: PD was performed by fashioning a two layer pancreatico-jejunostomy with or without a glue sealant which when applied, formed a thin film external to the ductal anastomoses but internal to the seromuscularpancreatic parenchymal layer. Results: 100 consecutive patients undergoing PD were randomized into two groups [Glue (G) n = 50 or No Glue (NG), n = 50]. Each were matched with regard to age [median, G = 68 years vs. NG = 66 years, (p = 0.19)] and sex (p = 0.84). There were no statistically significant differences between the two groups with respect to overall POPF [G n = 7(14%) vs. NG n = 11(22%), (p = 0.42)], significant complications (Clavien Grade 3 or more), [G n = 4(8%) vs. NG n = 2(4%) (p = 0.40)], or post-operative length of stay (LOS) [G 13 days vs. NG 14 days, (p = 0.90)]. In those patients with the highest Fistulae Risk Score (FRS), there were significantly more POPF in the NG cohort. There was no mortality in either group. Conclusions: This study shows that application of sealant glue significantly reduces POPF in high risk patients, but does not reduce overall complications or hospital stay following PD.