

Fibrin glue may reduce pancreatic leak following whipple's pancreatico-duodenectomy.

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Abstract:

Aim: Leakage from the pancreatic anastomosis is a major contributor of morbidity following Whipple's operation. Numerous methods of minimising this risk have been explored. We sought to assess the utility of fibrin glue sealant as an adjunct to a sutured pancreatico-jejunostomy. Methods: Our hospital acts as a tertiary referral centre for elective and emergency hepato-pancreato-biliary surgery. The unit performs over 100 elective pancreatic resections annually. Pancreatico-jejunostomies performed as part of Whipple's pancreatico-duodenectomy under the care of a single consultant surgeon were either sealed with fibrin glue or washed with saline on an alternate basis following 55 consecutive Whipple's performed from October 2008-2010. All Pancreatico-jejunostomies were fashioned uniformly using 4-0 PDS suture. Every patient had 3 surgical drains placed in the same anatomical locations and drain effluent analysed for amylase daily following operation from the 3rd post operative day. Drains were routinely removed on day 8 post operation. All care was standardised and all complications recorded prospectively. Pancreatic leak has been defined as a drain amylase more than 3 times normal serum levels in any drain measured up to the 8th postoperative day. Complications have been graded according to the Clavien classification and International Study Group on pancreatic Fistula (ISGPF). Results: 3 of 28 (10.7%) of anastomoses which were sealed with fibrin glue leaked, whereby 5 of 27 (18.5%) in the saline group displayed pancreatic leaks. In the group that were sealed, 1 patient required treatment with Octreotide (Clavien 2, ISGPF B) and the other 2 were treated conservatively (Clavien 1, ISGPF A). In the non-glue group, 4 of the leaks were Clavien A and the 5th required surgical treatment

(Clavien 4, ISGPF C). There were no mortalities. Conclusion: Fibrin glue can be used easily as an adjunct to sutured pancreatico-jejunostomy and may reduce the occurrence of pancreatic leak. The severity of leak as graded by Clavien does not appear affected by the use of fibrin glue.