Sutureless pancreatojejunal anastomosis using an absorbable sealant: evaluation in a pig model.

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Abstract:

BACKGROUND: Leakage from pancreatojejunal anastomosis continues to be a major source of morbidity in pancreatic surgery. In the present study, we test the hypothesis that a safe, sutureless pancreatojejunal anastomosis can be constructed using a synthetic surgical sealant.

MATERIALS AND METHODS: Ten pigs weighing 20 to 25 kg underwent distal pancreatectomy and anastomosis of the pancreatic remnant with a jejunal limb with the use of an absorbable surgical sealant. Integrity of the anastomosis was checked on the 10th postoperative d by means of an autopsy study and histological examination.

RESULTS: One animal died on the 3rd postoperative d of peritonitis. The remaining 9 animals had an uneventful postoperative course. Gross and microscopic pathological examination revealed intact pancreatojejunal anastomosis in all surviving animals.

CONCLUSIONS: Following distal pancreatectomy in pigs, pancreatojejunal anastomoses with the use of sealant are technically feasible. During a 10-d observation period, the sealant appeared to prevent anastomotic dehiscence and allow normal anastomotic healing.