

# **Fibrin glue sealing for the prevention of pancreatic fistulas following distal pancreatectomy.**

Authors: Suzuki Y, Kuroda Y, Morita A, Fujino Y, Tanioka Y, Kawamura T, Saitoh Y

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## **Abstract:**

**OBJECTIVE:** To evaluate the use of fibrin glue sealing of the pancreatic stump for the prevention of postoperative pancreatic fistulas.

**DESIGN:** A prospective, randomized clinical trial.

**PATIENTS AND METHODS:** Fibrin glue is a biologic adhesive consisting of highly concentrated human fibrinogen, thrombin, and factor VIII. Twenty-six of 56 patients who underwent distal pancreatectomy for gastric cancer or pancreatic disease were randomly assigned to the fibrin glue group. Fibrin glue was applied to the suture line of the pancreatic stump with the ligated main pancreatic duct. Pancreatic fistula was defined as a pancreatic fluid discharge for over 7 post-operative days diagnosed by local findings, with amylase concentration in the discharge fluid more than three times the serum amylase concentration, a level low enough that even a small pancreatic leakage could be diagnosed.

**RESULTS:** The overall incidence of pancreatic fistula was 28.6%. Postoperative pancreatic fistulas occurred in four patients (15.4%) in the fibrin glue group and 12 (40.0%) in the control group ( $P = .04$ ). The lower pancreatic fistula rate was seen in the fibrin glue group also when analyzing patients with gastric cancer or pancreatic disease only, although there was no statistically significant difference.

**CONCLUSIONS:** Intraoperative use of fibrin glue following distal pancreatectomy could prevent pancreatic fistula formation. This method was feasible, safe, and reliable and will complement other prophylactic methods.