

# **Use of fibrin glue sealant with polyglycolic acid sheets to prevent pancreatic fistula formation after laparoscopic-assisted gastrectomy.**

Authors: Hiura Y, Takiguchi S, Yamamoto K, Kurokawa Y, Yamasaki M, Nakajima K, Miyata H, Fujiwara Y, Mori M, Doki Y

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## **Abstract:**

**PURPOSE:** A pancreatic fistula is a serious postoperative complication that can occur after gastrectomy with lymphadenectomy for gastric cancer. The aim of this prospective study was to analyze the usefulness of the local application of fibrin glue sealant (FG) and polyglycolic acid sheets (PAS) in preventing pancreatic fistula formation after gastrectomy.

**PATIENTS AND METHODS:** The surface of the pancreas was covered with FG and PAS after peri-pancreatic lymph node dissection in 34 patients (F/P group). The postoperative outcome was compared with historical control subjects who did not receive the same application (control group, 64 patients).

**RESULTS:** A pancreatic fistula occurred in three patients in the control group but in none the F/P group ( $P = 0.049$ ). The volume of drainage fluid on postoperative day (POD) 1 and 3 was smaller in the F/P group than in the control group (POD1: F/P group, 80 ml; control: 150 ml,  $P < 0.001$ ; POD3: 60 vs. 120 ml,  $P < 0.001$ ). The amylase levels in the drainage fluid on POD1 and 3 were also significantly lower in the F/P group than in the control group (POD1: F/P group, 660 U/L; control: 1220 U/L,  $P = 0.030$ ; POD2: 270 vs. 830 U/L,  $P = 0.038$ ; POD3, 160 vs. 630 U/L,  $P = 0.041$ ).

**CONCLUSION:** The application of FG and PAS after LAG helps to prevent pancreatic fistula

formation.