

# **Experience with the use of fibrin sealant plus polyglycolic acid felt at the cut surface of the liver in laparoscopic hepatectomy.**

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## **Abstract:**

**BACKGROUND:** To minimize bleeding and biliary leakage after open hepatectomy, fibrin sealing is undertaken at the transaction plane of the liver. Recently, clinicians have begun using polyglycolic acid PGA felt as an absorbable cross-linker. However, this method has not been well studied for laparoscopic hepatectomy because available laparoscopic devices are quite limited. This study aimed to investigate the feasibility and efficacy of using fibrin sealant with PGA felt in laparoscopic hepatectomy.

**METHODS:** A retrospective analysis of prospectively collected data from 1997 for laparoscopic hepatectomy was performed. Application of fibrin sealant with PGA felt in laparoscopic hepatectomy was begun in February 2009, and the data collected until November 2009 were used. The differences in the perioperative factors were compared including hematocrit and bilirubin concentration changes in the drainage fluid between the surgical procedures conducted with and without the use of fibrin sealant and PGA felt.

**RESULTS:** Fibrin sealant with PGA felt was used in 18 patients who underwent laparoscopic hepatectomy after February 2009. The data for these patients were compared with those for 22 patients who underwent laparoscopic hepatectomy before the start of fibrin sealant use. The operative procedure and devices differed according to the period. No significant differences in

preoperative factors were observed between the groups. The use of fibrin sealant had no influence on the operation time or changes in the leukocyte count or serum C-reactive protein. No cases of postoperative bleeding or biliary leakage occurred in either group, and the time course of the perioperative hematocrit and drain bilirubin concentrations did not differ between the two groups.

**CONCLUSION:** Use of fibrin sealant with PGA felt in laparoscopic hepatectomy appears to be feasible, and the outcomes are not inferior to those in the control group.