# Autologous fibrin sealant (Vivostat) for mesh fixation in laparoscopic transabdominal preperitoneal hernia repair.

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## Abstract:

BACKGROUND AND STUDY AIMS: The use of fibrin glue derived from humans or animals has been reported as an alternative method of mesh fixation, instead of staples, in inguinal hernia repair. However, fibrin sealants involve the potential risks of virus transmission or immunological reactions to foreign proteins. This risk could be avoided by using autologous fibrin derived from the patient. A feasibility study on the use of autologous fibrin was therefore carried out in patients undergoing laparoscopic transabdominal inguinal hernia repair.

PATIENTS AND METHODS: In a series of 10 patients undergoing laparoscopic transabdominal inguinal hernia repair, autologous fibrin was produced from 120 ml of the patient's blood during the hernia repair. The process took an average of 20 min. The perioperative and postoperative results were compared with those in a control group of 20 patients in whom conventional fibrin was used.

RESULTS: Producing and applying the autologous fibrin was uncomplicated. No differences in the outcome were observed between the two groups. One patient in the conventional fibrin group developed a seroma. None of the patients reported persistent pain. No recurrences were observed after a mean follow-up period of 9 months (range 6 - 12 months) in the conventional fibrin group and 7 months (range 6 - 8 months) in the autologous fibrin group.

CONCLUSIONS: This feasibility study suggests that autologous fibrin sealant allowed adequate

mesh fixation that did not differ from that in a control group in whom conventional fibrin glue was used. Autologous fibrin may be an interesting alternative for a variety of laparoscopic and endoscopic applications.