

# **Biological glues and collagen fleece for hemostasis during laparoscopic partial nephrectomy: technique and results of prospective study.**

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## **Abstract:**

**PURPOSE:** The aim of this prospective study was to evaluate the advantages or disadvantages of the use of fibrin glue and collagen fleece during laparoscopic partial nephrectomy.

**PATIENTS AND METHODS:** Two groups of patients were studied. Group A (n = 24) received parenchymal suture, whereas Group B (n = 20) received parenchymal suture with fibrin glue and collagen fleece. The two groups were similar in baseline characteristics. We evaluated patient age, size of the lesion at CT, operative time, ischemia time, and sealant technique in relation to blood loss, hospital stay, and hemorrhagic complications.

**RESULTS:** No significant difference was observed in perioperative parameters ( $P > 0.05$ ). The mean size of lesion was  $3.3 \pm 1.2$  (range 1-8 cm) for group A and  $3.0 \pm 1.3$  (range 2-5 cm) for Group B. The mean operative time was  $116 \pm 26.6$  minutes (range 90-220 minutes) for group A and  $130 \pm 23.5$  minutes (range 90-210 minutes) for group B. The mean warm ischemia time was  $28.8 \pm 5.7$  minutes (range 18-60) minutes) and  $35.6 \pm 6.2$  minutes (range 20-52 minutes), respectively. The mean blood loss was  $178 \pm 34.5$  mL (range 50-400 ml) for group A and  $219 \pm 44.6$  mL (range 80-750 ml) for group B. The mean hospital stay was  $5.9 \pm 1.2$  days (range 5-8 days) for group A and  $6.3 \pm 2.1$  days (range 5-9 days) for group B. Four and two postoperative hemorrhage complications were observed in groups A and B, respectively.

CONCLUSION: The use of fibrin glues and collagen fleece should be considered an adjuvant, as it does not present any substantial advantages, the suture being the key point in hemostasis control. We believe that in order to improve hemostasis, the efficacy of other types of sealants should be studied, as we were not convinced by those we used.