

Fibrin glue-oxidized cellulose sandwich for laparoscopic wedge resection of small renal lesions.

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Publication Date: 2005

Abstract:

PURPOSE: We present our experience with standard laparoscopic wedge resection of small renal tumors using a fibrin glue-oxidized cellulose sandwich for hemostasis.

MATERIALS AND METHODS: From May 2002 to December 2003, 15 patients underwent laparoscopic wedge resection for a total of 15 nonhilar renal masses. Renal hilar clamping was performed in 1 patient and no sutures were placed. We used ultrasonic shears and an argon beam coagulator to resect and then coagulate the tumor bed. Tisseel (Baxter Corp., Deerfield, Illinois) was applied to the resection bed, followed by a layer of oxidized, regenerated cellulose (Surgicel, Ethicon, Somerville, New Jersey) and a final layer of Tisseel.

RESULTS: Mean preoperative tumor size was 2.2 x 2.2 x 2.1 cm. Lesions were subdivided based on the percent of the lesion that extended beyond the renal parenchymal border on computerized tomography as exophytic-greater than 60% in 6 cases, endophytic-less than 40% in 4 and mesophytic-40% to 60% in 5. Mean operative time was 3.8 hours (range 3 to 5). Mean blood loss was 108 ml (range 20 to 300). No patient required blood transfusion. There was no significant difference in blood loss or change in creatinine among the endophytic, exophytic and mesophytic groups (150, 121 and 93 ml, and 0.03, 0.07 and 0.04 mg/dl, respectively). Margin status was negative in all cases (mean thickness 3.2 mm). Average hospital stay and time to the resumption of oral intake were 2.7 and 1.4 days, respectively.

CONCLUSIONS: Small exophytic or mesophytic renal lesions can be safely excised laparoscopically without vessel clamping. Excellent hemostasis was achieved in each case with the newer hemostatic agents.