Do fibrin sealants impact negative outcomes after robot-assisted partial nephrectomy?.

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Abstract:

PURPOSE: Contemporary rates of postoperative hemorrhage after partial nephrectomy (PN) are low. Commercially available hemostatic agents are commonly used during this surgery to reduce this risk despite a paucity of data supporting the practice. We assessed the impact of fibrin sealant hemostatic agents, a costly addition to surgeries, during robot-assisted partial nephrectomy (RAPN).

PATIENTS AND METHODS: Between 2007 and 2011, 114 consecutive patients underwent RAPN by a single surgeon (MEA). Evicel fibrin sealant was used in the first 74 patients during renorraphy. The last 40 patients had renorraphy performed without the use of any hemostatic agents. Clinicopathologic, operative, and complication data were compared between groups. Multivariate and univariate logistic regression analysis was performed to test the association between the use of fibrin sealants and operative outcomes.

RESULTS: Patient demographic data and clinical tumor characteristics were similar between groups. The use of fibrin sealant did not increase operative time (166.3 vs 176.1 minutes, P=0.28), warm ischemia time (WIT) (14.4 vs 16.1 minutes, P=0.18), or length of hospital stay (2.6 vs 2.4 days, P=0.35). The omission of these agents did not increase estimated blood loss (116.6 vs 176.1mL, P=0.8) or postoperative blood transfusion (0% vs 2.5%, P=0.17). Univariate analysis demonstrated no association between use of fibrin sealants and increased complications (P>0.05). Multivariable logistic regression showed no statistically significant predictive value of omission of

hemostatic agents for perioperative outcomes (P>0.05).

CONCLUSION: Perioperative hemorrhage and other major complications after contemporary RAPN are rare in experienced hands. In our study, the use of fibrin sealants during RAPN does not decrease the rate of complications, blood loss, or hospital stay. Furthermore, no impact is seen on operative time, WIT, or other negative outcomes. Omitting these agents during RAPN could be a safe, effective, cost-saving measure.