

Fibrin sealants does not impact perioperative blood transfusions rate in patients undergoing partial nephrectomy.

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Publication Date: 2015

Abstract:

INTRODUCTION AND OBJECTIVES: Despite the relatively low incidence of bleeding after partial nephrectomy (PN) it remains one of the most serious complications. Hemostatic agents like fibrin sealant are commonly used during PN to reduce this risk despite a paucity of data supporting its efficacy. The aim of this study was to evaluate whether using fibrin sealant impact the rate of perioperative blood transfusions (PBT) in patients undergoing PN for renal masses. METHODS: Six hundred and fifty four patients who underwent elective PN for renal masses between the years 2004-2013 were reviewed. Fibrin sealant was used in 315 patients. In this group, fibrin sealant were placed in the partial nephrectomy bed after performing renorrhaphy. The remaining 339 patients had renorrhaphy performed without the use of any hemostatic agents. PBT was defined as transfusion of allogeneic red blood cells during PN or postoperative hospitalization. The associations between PBT and patient demographics, surgical characteristics and pathologyrelated variables were assessed by univariate and multivariate analysis. RESULTS: The groups were comparable in age, gender, Body Mass Index (BMI), pre-operative hemoglobin levels, tumor size, location and number of central tumors. Univariate analysis demonstrated no association between use of fibrin sealants and ischemia time, estimated blood loss, perioperative blood transfusion or postoperative urine leak. Since the use of fibrin sealant was significantly higher in patients undergoing laparoscopic surgery, groups were further divided based on the type of operation. Univariate analysis demonstrated no association between use of fibrin sealants and decreased complications in both surgical approaches. Multivariate analysis showed omission of fibrin sealants was not a significant predictor

of perioperative outcomes. CONCLUSIONS: In the current study, the use of fibrin sealants during PN did not decrease the rate of PBT administrations. Furthermore, no impact was seen on ischemia time or other negative outcomes, including urinary leak. If Homeostasis is performed well with stitches alone, there is no need for additional adhesive agents.