Clinical comparison between microporrus polysaccharide hemispheres (MPH) and fibrin glue during laparoscopic partial nephrectomy.

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Abstract:

OBJECTIVE: Using hemostatic agents is one of the options to avoid complications during laparoscopic partial nephrectomy (LPN). Microporous polysaccharide hemispheres are made entirely from purified potato starch that activates the clotting cascade via a unique mechanism that hyperconcentrates platelets and coagulation proteins. We compare the efficacy of this new hemostatic agent, MPH and the standard hemostatic agent, fibrin glue. METHODS: Between January 2007 and October 2011, 70 LPNs with hilar clamping were completed by a single surgeon in Yokohama City University Hospital. We compare two sequential groups of patients: group A consisted of 27 patients in whom MPH was used and group B consisted of 43 patients in whom fibrin glue was used. These agents (MPH and fibrin glue) were applied to the partial nephrectomy bed before tying a suture in parenchymal suturing and after the renal hilum was unclamped. Study variables included blood loss, ischemic time and perioperative complications. RESULTS: Group A showed significantly less mean estimated blood loss (29.8 vs. 86.3 ml; p = 0.004) and less mean ischemic time (21.4 vs. 28.5 min; p = 0.002) than these of group B. Postoperative complications occurred in two patients in group B, but there were no postoperative complications in group A. CONCLUSIONS: MPH is available as an adequate hemostatic agent during LPN. There was no significant difference in the incidence of postoperative complications betweenMPHand fibrin glue.