Clinical comparison between microporous polysaccharide hemispheres (mph) and fibrin glue. [Japanese]

Authors: Sakata R., Makiyama K., Noguchi G., Sano F., Nakaigawa N., Yao M., Kubota Y.

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Abstract:

(Purpose) Nephron-sparing surgery for small renal tumors has gained acceptance in an attempt to preserve renal function while achieving a level of cancer control equivalent to that obtained by radical nephrectomy. Moreover, laparoscopic partial nephrectomy (LPN) has been applied to partial nephrectomy because of it is less invasive. However, LPN is a technically complex procedure and has more potential for complications than open partial nephrectomy (OPN). Using hemostatic agents is one of the options to avoid complications during LPN. Microporous polysaccharide hemispheres (MPH) are an absorbable hemostatic powder produced from purified potato starch. We compare the efficacy of this new hemostatic agent, MPH and the standard hemostatic agent, fibrin glue. (Methods) Between January 2007 and March 2011, 55 LPNs for suspected malignancy were completed by a single surgeon in Yokohama City University Hospital. We compare two sequential groups of patients: group A consisted of 12 patients in whom MPH was used (age 41-77, mean age 59.7, male: female = 10 : 2) and group B consisted of 43 patients in whom fibrin glue was used (age 22-79, mean age 60.3, male: female = 31: 12), retrospectively. 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 undamped. (Results) The MPH group showed significantly less mean estimated blood loss (25.6 vs. 86.3 ml; p = 0.036). There was no significant difference in surgical duration, ischemic time or urine leakage. 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 between MPH and fibrin glue.