

Knotless Uninterrupted Running Suture Using V-Lock180™ Stitch in Laparoscopic Partial Nephrectomy

Introduction and Objective: To assess the surgical outcome of knotless uninterrupted running suture using V-Lock180™ stitch in laparoscopic partial nephrectomy.

Materials and Methods: In May 2011 and March 2012, 14 patients underwent laparoscopic partial nephrectomy using knotless uninterrupted running suture using V-Lock180™ stitch. The median age, BMI, and maximum tumor diameter were 61 years old (40-82 years), 23.3 (17.3-31.8), and 21 mm (13-58 mm), respectively. Eight of the tumors were protruded and 6 were buried. Transretroperitoneal and transperitoneal approaches were used in 5 and 9 patients, respectively. Partial nephrectomy with hypothermia using ice-cold saline was performed during temporary renal artery clamping. In a case of exposure of the urinary tract, running suture repair was performed with an absorbable stitch. The renal parenchyma was stitched with 2-0 V-Lock180™ thread of approximately 30 cm in length. After application of thrombin sealant to the defect, the thread was tightened and locked with a Hem-o-lok clip at the tip and end. Renal reperfusion was resumed after completing the parenchymal suture.

Results: The median renal ischemic time, insufflation time, estimated blood loss, and tumor weight were 20 min (11-31 min), 213 min (132-361 min), 50 ml (5-350 ml) and 12 g (4-194 g), respectively. No patients required open conversion or had operative complications. The median time from the operation to discharge was 7 days.

Conclusion: Knotless running suture using V-Lock180™ stitch in laparoscopic partial nephrectomy was simple and safe. Further studies are needed to confirm the utility of this wound closure device.