

LAPAROSCOPIC LIVE-DONOR NEPHRECTOMY WITH TRANSVAGINAL GRAFT EXTRACTION

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OBJECTIVES

Laparoscopic donor nephrectomy, first performed in 1995, quickly gained popularity and became the standard in many hospitals [1]. Since its introduction the number of living donors has greatly increased. The operation with transvaginal extraction of the kidney first made in 2010 by Allaf et al. [2] attracted even greater attention among female kidney donors. We have been performing similar operations since 2012 [3]. In this report we present three cases of laparoscopic transperitoneal live donor nephrectomy with transvaginal extraction of the kidney.

METHODS

Since 2012, three female patients with a median age of 49 years have undergone laparoscopic live donor nephrectomy with transvaginal extraction of the kidney. Our donors insisted on having no visible scars on the abdominal wall. A left kidney nephrectomy was performed in 1 patient, right kidney nephrectomies were made in 2 patients. Median BMI was 27.4. Patients underwent standard laparoscopic live donor nephrectomy with extraction of the specimen through vagina. In order to minimize the size of the graft we completely freed the kidney of the perirenal fat. To reduce the warm ischemia time, we made the incision of the vaginal wall before the ligation of the renal vessels. Previously we had introduced a sterile gauze with antiseptic into the vagina. This acted as a cushion plug, retaining pneumoperitoneum. The posterior colpotomy incision was repaired laparoscopically.



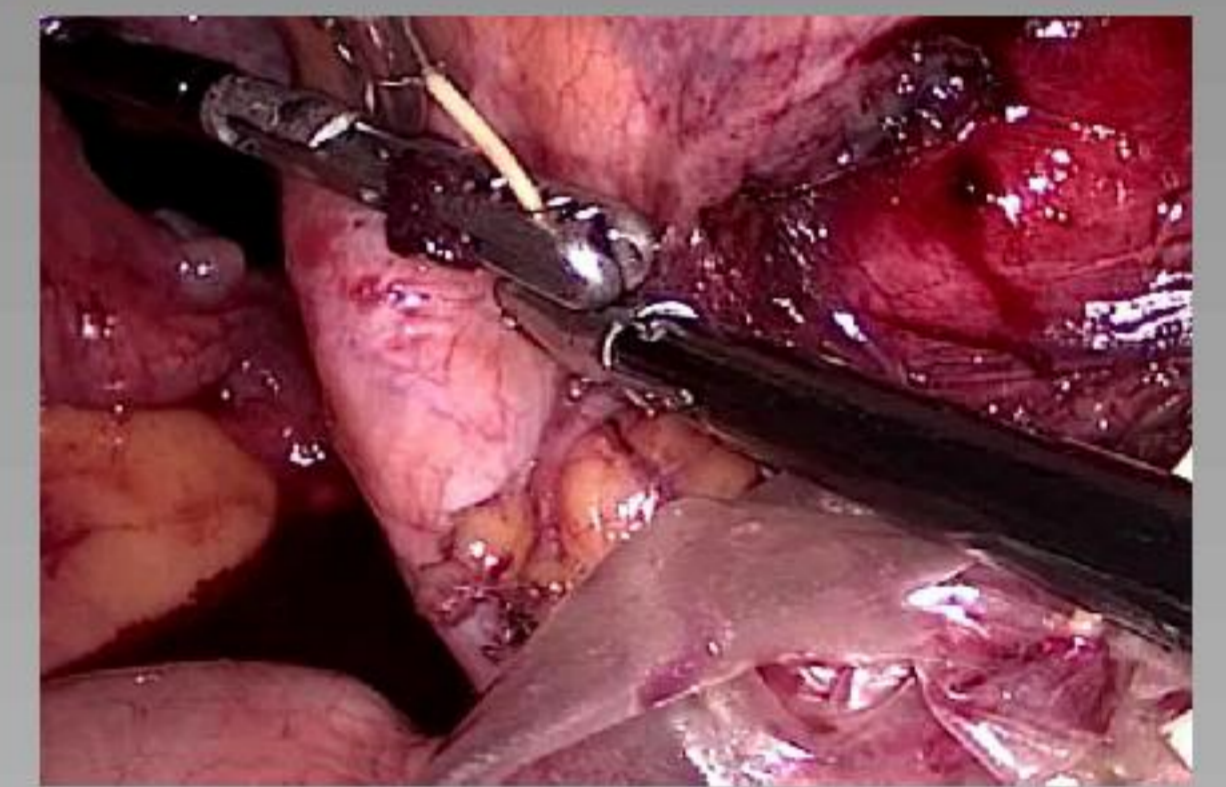
Pic. 1. Separation of the kidney from the perirenal fat.



Pic. 2. Posterior vaginal fornix incision (a sterile gauze is inserted into the vagina).



Pic. 3. Clipping the renal artery.



Pic. 4. Extracting container with the kidney through an incision in the vaginal wall with endoscopic forceps.



Pic. 5. Suturing of the vaginal vault.



Pic. 6. Donor's abdominal wall (6 months after surgery).

RESULTS

No intraoperative complications occurred. Mean operative time was 240 min. Mean blood loss was 140 mL. Mean warm ischemia time was 5.3 min. No wound infections were seen in the donors or in the recipients. Mean length of hospital stay was 7.3 days. All patients returned to normal physical activity after 2 weeks, to sexual activity after 1 month. Donors are completely satisfied with the cosmetic effect. All removed kidneys were transplanted to recipients, their function remains good.

CONCLUSIONS

Laparoscopic nephrectomy with transvaginal graft extraction is associated with low levels of pain, good cosmetic results, early discharge and early return to physical activity. Graft function is comparable to traditional laparoscopic nephrectomy. However, careful selection of donor women to perform such operations is needed.

REFERENCES:

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