

Donor surgery: Post-op Complications

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ISSUE

What are the complications after laparoscopic donor nephrectomy?

DATA

With the advent of laparoscopic donor nephrectomy, post-operative discomfort has decreased. In a study comparing open and laparoscopic donor nephrectomy, the laparoscopic approach was associated with better pain control, better respiratory function, decreased hospital stay, and earlier return to normal activities¹ and improved cosmetic results. Recipient outcomes and organ quality are similar for open and lap nephrectomy. Several studies have evaluated complication rates.

In a UNOS study of 13,000 donors from 2005-6, centers reported 1.7 % readmission rate, 0.6 % had interventional procedures, 0.5% reoperations, 0.5% transfusions².

In a single center US study of 1500 cases, 3.5% were readmitted, mostly for GI complaints. Reoperation was needed in just 0.4% (SBO and wound dehiscence) and there were 1.8% incisional hernias³.

In a study of 700 laparoscopic donor procedures in Japan, just 3% had perioperative complications, mostly slow bowel recovery, shoulder pain, urinary retention, and wound infection⁴.

Single port laparoscopic nephrectomy (LESS- LDN) has results equal to the traditional multiple port surgery but with lower analgesic requirement⁵.

One year rehospitalization rates after donor nephrectomy were significantly better (5% at 1 year) than those after appendectomy, cholecystectomy, and nephrectomy for nonmetastatic carcinoma⁶

RECOMMENDATION

1. Laparoscopic donor nephrectomy is safe and is associated with acceptable complication rates and low re-admission rates.

References

1. Nicholson ML, Kaushik M, Lewis GR, et al. Randomized clinical trial of laparoscopic versus open donor nephrectomy. *The British journal of surgery*. Jan 2010;97(1):21-28.
2. Davis CL. Living kidney donors: current state of affairs. *Advances in chronic kidney disease*. Jul 2009;16(4):242-249.
3. Rajab A, Pelletier RP. The safety of hand-assisted laparoscopic living donor nephrectomy: the Ohio State University experience with 1500 cases. *Clinical transplantation*. Mar 2015;29(3):204-210.
4. Nakajima I, Iwadoh K, Koyama I, Tojimbara T, Teraoka S, Fuchinoue S. Nine-yr experience of 700 hand-assisted laparoscopic donor nephrectomies in Japan. *Clinical transplantation*. Sep-Oct 2012;26(5):797-807.
5. Autorino R, Brandao LF, Sankari B, et al. Laparoendoscopic single-site (LESS) vs laparoscopic living-donor nephrectomy: a systematic review and meta-analysis. *BJU international*. Feb 2015;115(2):206-215.
6. Schold JD, Goldfarb DA, Buccini LD, et al. Hospitalizations following living donor nephrectomy in the United States. *Clinical journal of the American Society of Nephrology : CJASN*. Feb 2014;9(2):355-365.

Note: The recommendations in these chapters are the opinions of the Living Donor Community of Practice of AST. They are not meant to be prescriptive and opinions by other groups or institutions may be equally valid.