VIDEOABSTRACT

VIDEOSURGERY

Video can be found at http://www.ceju.online/journal/10000/donor-nephrectomy-donor-and-graft-outcomes-1850.php

A prospective evaluation of donor and graft outcomes of 3-D laparoscopic donor nephrectomy: a single centre experience

Anup Kumar, Pankaj Gupta, Sandeep Kumar, Siddharth Yadav, Y. M. Prasanth, Vijay Tyagi, Vishnu Prasad, Kumar Saurav

Department of Urology and Renal Transplant, VMMC and Safdarjang Hospital, New Delhi, India

Article history
Submitted: Jan. 3, 2019
Accepted: Feb. 12, 2019
Published online: Feb. 14, 2019

Citation: Kumar A, Gupta P, Kumar S, et al. A prospective evaluation of donor and graft outcomes of 3-D laparoscopic donor nephrectomy: a single centre experience. Cent European J Urol. 2019; 72: 72.

Key Words: donor nephrectomy ‹› donor and graft outcomes

Laparoscopic donor nephrectomy (LDN) is the standard of care for kidney retrieval from living donors. LDN has shown shorter convalescence and hospital stay. However, there are concerns about donor safety as well as graft function for LDN.

The use of 3-D laparoscopy results in improved magnification, better depth perception and precise dissection. We prospectively evaluated the donor and graft outcomes of 3-D laparoscopic donor nephrectomy with long-term follow-up. This is the first series of 3-D LDN reported from India.

All consecutive patients undergoing 3-D LDN at our institution, by a single surgeon, between March 2014 and January 2018, were included in the study. Various data including demographics (age, body mass index, gender, side of operation, serum creatinine, number of arteries), perioperative (operative time, blood loss, ischemia time, conversion to open surgery, intraoperative complications, hospital stay) postoperative complications and follow-up of the donors and recipients were collected and analyzed. We are presenting a video of one such case.

A total of 110 patients were included in the study. The mean age was 33.7 years with a mean preoperative serum creatinine and a mean glomerular filtration rate (GFR) of 1.09 mg/dl and 90.5 ml/min/1.73 m^2 respectively. The male-to-female distribution and right-to-female distribution were 45/65 (40.9%) and 25/85 (22.7%) respectively. Double renal arteries were present in 29 cases (26.3%) and triple renal arteries in 19 cases (17.3%). The mean operating time and estimated blood loss were 153.5 min and 101.7 ml respectively. The mean warm ischemia time was 1.9 min. There was no conversion to open surgery, nor were there any intraoperative complications. The mean hospital stay and mean catheter removal time were 1.9 and 0.9 days respectively. The mean convalescence was 1.7 weeks. Postoperative complications were mainly Clavien level 1 or 2 in a total of 15 (13.6%) donor patients. In recipients, ureter leakage and lymphocele were observed in 4.5% and 6.3% patients respectively. At 1, 2 and 3 year follow-up, mean recipient's serum creatinine was 0.8, 0.9 and 0.9 mg/dl respectively. The mean donor's serum creatinine was preserved at 1.10, 1.15 and 1.14 mg/dl at 1, 2 and 3 years respectively.

3-D Laparoscopic donor nephrectomy is feasible and safe with excellent 3 year donor and graft function outcomes.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

Corresponding author
Pankaj Gupta
panki.doc@gmail.com

doi: 10.5173/ceju.2019.1850