

Retroperitoneoscopic Live Donor Nephrectomy: Our Current Procedure and Outcome

Introduction and Objectives: Living donor kidney transplantation has been carried out in 60 patients since March 2003 until June 2010 at our institution. After 10 successful open donor nephrectomies, hand-assisted retroperitoneoscopic nephrectomy was started. We will show our current operative procedure and clinical outcome.

Materials and Methods: Changes in operative techniques over time were separately analyzed according to the early 25 patients and the latter 25 patients. Operation time, warm ischemic time, time to urine production after revascularization and complications were investigated.

Results: Differences in operative techniques between the two periods were 1) timing of hand-assistance 2) frequency of vessel sealing device usage 3) way of kidney removal. Mean operative time of the earlier group was 327 ± 15 minutes and that of the latter group was 258 ± 13 minutes ($P=0.34$). Mean warm ischemic time of the earlier group was 306 ± 36 seconds and that of the latter group was 243 ± 49 seconds ($P=0.88$). Mean Time to urine production after revascularization was 24 minutes in the early group and 15 minutes in the latter group ($P=0.34$). There was no graft function delay. Open conversion was required in 1 case in the earlier group.

Conclusions: The intraoperative and perioperative parameters as to our laparoscopic donor nephrectomy in the current half cases have improved as compared to the earlier cases, although they did not reach statistical significance. The hand-assisted retroperitoneal approach of laparoscopic donor nephrectomy is certainly safe and less invasive without compromising the harvested kidney function.