



Title	Systematic Review of Laparoscopic Live-Donor Nephrectomy. Second Update and Reappraisal
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Aim

To compare the safety and efficacy of laparoscopic live-donor nephrectomy (LLDN) and open live-donor nephrectomy (OLDN).

Conclusions and results

Included were 72 studies, whereof 44 were comparative and 28 were case series or case reports. The quality of the evidence was average. Regarding safety for donors, a distinct difference was not found between laparoscopic and open approaches. Donor mortality was not reported for either procedure. Complication rates were similar although types differed between the two procedures. Conversion rates for LLDN to an open procedure ranged from 0% to 13%. Regarding efficacy, LLDN appears to be a slower operation with longer warm ischemia times than OLDN, but this did not increase the rate of delayed graft function for recipients. Donor postoperative recovery and convalescence (parenteral narcotic use, time to oral intake, time to ambulation, length of hospital stay, and return to work) was superior for LLDN, making it potentially more attractive for living donors. Short-term graft function and survival did not appear to differ between the two techniques, but long-term complication rates and allograft function remain unclear, and further long-term followup is required.

Recommendations

The ASERNIP-S review group rated the evidence-base as average. LLDN was rated at least as safe as OLDN for donors in the short-term, although long-term complication rates have not been fully established. LLDN was rated at least as efficacious as OLDN for donors, with advantages in convalescence. Graft function and survival were similar for recipients in the short term, but long-term efficacy could not be determined. Well-conducted, concurrently controlled comparative studies and the publication of long-term followup data would assist in resolving some the remaining questions on the safety and efficacy of LLDN. Given the remaining issues, particularly long-term efficacy for recipients, an update

and reappraisal of this review should occur within 2 to 5 years.

Methods

OVID PreMEDLINE, OVID MEDLINE, Current Contents, Cochrane Library, EMBASE, UK National Research Register, NIH Clinical Trials.Gov, PubMed, Science Citation Index, SIGLE, and the HTA Database were searched through March 2003. Studies were included if they dealt with laparoscopic live-donor nephrectomy and contained data on at least one of the specified outcomes. Studies that utilized hybrid open-laparoscopic approaches were excluded, as were studies where indications were mixed unless the results of live-donor nephrectomy could be separated. The comparator procedure was open live-donor nephrectomy. The specified outcomes were perioperative, short- and long-term donor morbidity and mortality rates, donor convalescence, and recipient graft function and survival.