

TRANSPLANTATION

Good news for live organ donors

Live kidney donation is associated with a low risk of perioperative death and does not increase the risk of long-term mortality, according to the results of a study published recently in *JAMA*.

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Dorry Segev, a surgeon at the Johns Hopkins Medical Institutions and first author of the study, says that although results from previous studies indeed suggest that live kidney donation is safe for donors, these studies had a number of limitations that hindered generalizability of their results. “Evidence [that kidney donation was safe] came from single-center studies that were limited by sample size, mostly white populations, large-academic-center bias, and inappropriate comparison groups.”

Segev and colleagues analyzed data on 80,347 live kidney donors (21,603 of them non-white) recorded between 1994 and 2009 by the Organ Procurement and Transplantation Network. This national database records the characteristics of all live kidney donors in the US. Segev *et al.* compared mortality rates of live kidney donors with those of healthy participants of NHANES III, a survey of US households conducted between 1988 and 1994. After a process of statistical ‘oversampling’ that enabled the NHANES III cohort to represent the demographic distribution of the larger living-donor cohort, 9,634 adult participants of NHANES III who were judged to qualify as potential candidates for kidney donation were matched with the donors from the Organ Procurement and Transplantation Network database. Notably, the death of live kidney donors and NHANES III participants was ascertained by cross-linking individual identities with social security data.

Surgical mortality rate, defined as death within 90 days of nephrectomy, was 3.1 per 10,000 donors. This rate is lower than that, for instance, of laparoscopic cholecystectomy (18 per 10,000 cases) or nondonor nephrectomy (260 per 10,000 cases). Importantly, the risk of death was similar between the donor group and the NHANES III group after 1 year and remained similar over a median follow-up of 6.3 years.

Segev concludes that live donor nephrectomy is “one of the safest operations one can undergo” and that live kidney donation did not increase risk of mortality during the study period. He adds that potential subtle physiological changes after kidney donation and their consequences need to be investigated in future studies.

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Original article Segev, D. L. *et al.* Perioperative mortality and long-term survival following live kidney donation. *JAMA* 303, 959–966 (2010)