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TRANSPLANTATION

Long-term risk of ESRD in living donors

> extrapolations based on short-term follow-up might underestimate the risks of ESRD, particularly in younger patients

The life-time risk of end-stage renal disease (ESRD) in living kidney donors is often extrapolated from studies that follow donors for <10 years, although the aetiology of early and late post-donation ESRD might differ. New research from Dorry Segev and colleagues shows that the risk of ESRD is higher late after donation (10–25 years) than the risk <10 years after donation, and that different aetiologies lead to early and late post-donation ESRD.

To investigate the long-term causes and risk of ESRD in living kidney donors, the researchers followed 125,427 donors for a median of 11 years. Unlike previous studies, which mostly assessed ESRD as an all-encompassing clinical outcome, the researchers analysed ESRD according to the different causes of the disease. They showed that early post-donation ESRD was predominantly associated with glomerulonephritis and had an incidence of 10 events per 10,000 donations, whereas at 25 years post-donation, ESRD was mostly associated with diabetes and hypertension, and had an incidence of 85 events per 10,000.

"We found that ESRD caused by diabetes and hypertension, two aetiologies that we obviously worry about in younger patients, is much more problematic in the later years," explains Segev. Indeed, patients had a 7.7-fold higher risk of developing diabetic ESRD 10–25 years post-donation than 10 years after donation and a 2.6-fold higher risk of acquiring hypertensive ESRD late than early after donation. The risk of glomerulonephritis-associated ESRD showed no significant change over time. The researchers say their findings emphasize the importance of monitoring of glycaemia, blood pressure and renal function in live kidney donors for many decades after nephrectomy and suggest that extrapolations based on short-term follow-up might underestimate the risks of ESRD, particularly in younger patients.

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ORIGINAL ARTICLE Anjum, S. *et al.* Brief report: Patterns of end stage renal disease caused by diabetes, hypertension, and glomerulonephritis in live kidney donors. *Am. J. Transplant.* http://dx.doi.org/10.1111/ajt.13917 (2016)

FURTHER READING Ngam, N. L. *et al.* Long-term medical risks to the living kidney donor. *Nat. Rev. Nephrol.* **11**, 411–419 (2015)