Living kidney donors at no increased risk of heart disease

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Living kidney donors are at no greater risk of heart disease than the healthy general population, finds a study published in the British Medical Journal today.

The results provide important safety reassurances to donors, their recipients and transplant professionals.

In the general population, there is a strong link between reduced kidney function and an increased risk of cardiovascular disease. Given that people who donate a kidney lose half their kidney mass, doctors need to know whether this risk extends to them.

Previous studies have suggested no increase in risk but a consensus has not yet been reached. So researchers based in Canada, Australia and the USA set out to determine whether people who donate a kidney have an increased risk of cardiovascular disease.

The study involved 2,028 people in Ontario, Canada who donated a kidney between 1992 and 2009 and 20,280 healthy non-donors for comparison.

The research team reviewed the medical records of each donor and linked them to national healthcare databases to monitor major cardiovascular events over an average of 6.5 years.

Further analysis according to year of donation was carried out to identify

any trends in risk over a longer time period.

Despite reduced kidney function in the donors, they found a lower risk of death or first major cardiovascular event in donors compared with non-donors (2.8 versus 4.1 events per 1,000 person years).

There was also no significant difference in the risk of major cardiovascular events between donors and non-donors (1.7 versus 2 events per 1,000 person years).

There was no increased risk among earlier donors or those who donated at an older age. The authors say this is likely to be because only healthy people are considered for living kidney donation and, in our region, they receive regular medical follow up after donating.

The risk of major cardiovascular events in people who donate a kidney is no higher in the first decade after transplantation than in matched non-donors, say the authors.

It is possible that an association between living donation and cardiovascular disease risk does exist, but takes much longer to manifest, they add. For this reason, they recommend ongoing monitoring of donors.

However, they say their study "adds to the available evidence base supporting the safety of the practice amongst carefully selected donors."

In an accompanying editorial, researchers at the University of Michigan say the study resolves the uncertainty that persists about the full extent of risks assumed by living kidney donors and "makes an important contribution to our understanding of the long term consequences of living kidney donation."

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