Cardiovascular disease and hypertension risk in living kidney donors: an analysis of health administrative data in Ontario, Canada.


Abstract

BACKGROUND: Knowledge of any harm associated with living kidney donation guides informed consent and living donor follow-up. Risk estimates in the literature are variable, and most studies did not use a healthy control group to assess outcomes attributable to donation.

METHODS: We observed a retrospective cohort using health administrative data for donations which occurred in Ontario, Canada between the years 1993 and 2005. There were a total of 1278 living donors and 6359 healthy adults who acted as a control group. Individuals were followed for a mean of 6.2 years (range, 1-13 years) after donation. The primary outcome was a composite of time to death or first cardiovascular event (myocardial infarction, stroke, angioplasty, and bypass surgery). The secondary outcome was time to a diagnosis of hypertension.

RESULTS: There was no significant difference in death or cardiovascular events between donors and controls (1.3% vs. 1.7%; hazard ratio 0.7, 95% confidence interval 0.4-1.2). Donors were more frequently diagnosed with hypertension than controls (16.3% vs. 11.9%, hazard ratio 1.4, 95% confidence interval 1.2-1.7) but were also seen more often by their primary care physicians (median [interquartile range] 3.6 [1.9-6.1] vs. 2.6 [1.4-4.3] visits per person year, P<0.001).

CONCLUSIONS: Based on administrative data, the risk of cardiovascular disease was unchanged in the first decade after kidney donation. The observed increase in diagnosed hypertension may be due to nephrectomy or more blood pressure measurements received by donors in follow-up and requires prospective study.

Comment in

Reassuring results with regard to the effect of donor nephrectomy on cardiovascular outcomes. [Nat Clin Pract Nephrol. 2009]

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