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CLINICAL OUTCOMES IN TRANSPLANTATION 1

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LONG-TERM OUTCOMES IN LIVE KIDNEY DONORS: PREVALENCE OF ISCHEMIC HEART DISEASE, DIABETES, CANCER AND CEREBROVASCULAR DISEASE AFTER DONATION COMPARED TO HEALTHY CONTROLS

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Background and Aims: During long-term follow-up kidney donors are at increased risk of hypertension and end-stage renal disease after donation. Hypertension is a known risk factor for development of cardiovascular disease, but it is unknown whether kidney donors are at increased risk of cardiovascular disease.

We evaluated a large Norwegian kidney donor cohort and assessed prevalence of ischemic heart disease after donation compared to healthy controls. Prevalence of cancer, diabetes and cerebrovascular disease was also calculated.

Method: Follow-up data were retrospectively retrieved from past kidney donors. Healthy non-donor controls from a general population screening study were selected. Controls were selected according to standard donation criteria, assessed in similar time periods as the living donors. Stratified logistic regression was used to estimate associations with various disease outcomes. The diagnoses at follow-up were self-reported for the controls and registered by a physician for the donors.

A total of 1029 donors and 16084 controls were included.

Results: Mean observation time was eleven years after donation. Forty-four per cent of donors were male and mean age at follow-up was 56 years. Among the controls, 39 % were male and mean age at follow-up was 53 years.

At the time of follow up, 3.5 % of donors vs 1.7 % of controls had been diagnosed with ischemic heart disease, 3.7 % vs 4.4 % cancer, 1.8 % vs 1.4 % cerebrovascular disease and 4.1 % vs 1.9 % diabetes.

After adjusting for gender, age at follow up, smoking at baseline, BMI at baseline, systolic blood pressure at baseline and time since donation (time since participation in general population survey for controls), odds ratio for ischemic heart disease was 1.64 (CI 1.10-2.43; P=0.01) in previous kidney donors compared with healthy controls. Other outcomes did not differ significantly between donors and controls.

Conclusion: During long-term follow-up of kidney donors we find an increased risk of ischemic heart disease compared to healthy controls. This information may be important in the follow-up and selection process of living kidney donors.