Gestational hypertension and preeclampsia after kidney donation: a nationwide population-based cohort study from Korea

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Background: Living kidney donation has known to increase the risk of gestational hypertension or preeclampsia. However, pregnancy outcomes in Asian living kidney donors are scarce.

Methods: We performed a retrospective cohort study on 112 living kidney donors and 672 healthy non-donors using the Korean National Health Insurance Claims database from 2007 to 2018. Donors and non-donors were matched with respect to age, residency, income, insurance, and number of pregnancies.

Results: Gestational hypertension or preeclampsia was more common in living kidney donors than in non-donors (12 of 112 donors [10.71%] vs. 37 of 672 non-donors [5.51%]; odds ratio, 1.99; 95% confidence interval, 1.04–3.82; $P=0.03$). Use of antihypertensive drugs during preeclampsia was also more common in donors than in non-donors (3 of 112 donors [2.68%] vs. 4 of non-donors [0.60%]; odds ratio, 4.56; 95% confidence interval, 1.02–20.37; $P<0.01$). There were no significant differences in preterm birth and low birth weight between two groups. There were no reports of maternal death or neonatal death in the donors.

Conclusions: Our findings indicate that living kidney donors appear to be associated with increased risk of gestational hypertension or preeclampsia compared to matched healthy non-donors.

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