

Prevalence of masked hypertension among kidney donors

Sir,

Hypertension plays a major role in cardiovascular morbidity and mortality. A good correlation has been reported between multiple blood pressure readings taken in the clinic under standardized conditions and left ventricular mass.^[1,2] White coat hypertension or isolated clinic hypertension is transient elevation of blood pressure in response to the observer measuring the blood pressure.^[3] Ambulatory blood pressure monitoring has clarified not only the existence of white coat hypertension, but also the opposite phenomenon - masked hypertension. Masked hypertension or white coat normotension, also called isolated ambulatory hypertension, has been reported in the general population.^[4,5] Masked hypertension is present in approximately 10–25% of adult patients initially classified as normotensive on the basis of their blood pressure readings in the clinic.^[5] Kidney donors are screened for hypertension as well as other conditions, but masked hypertension is not well studied among them.

We report the prevalence of masked hypertension in potential kidney donors, who underwent ambulatory blood pressure monitoring as part of routine evaluation during the workup. The ambulatory blood pressure was measured by having the patients wear a noninvasive ambulatory blood pressure recorder with an appropriate sized cuff for 24 h. The monitor was placed in the nondominant arm and was set to record blood pressure every 15 min during the day and every 30 min at night.

A total of 277 subjects (154 men and 123 women), who were potential kidney donors, were studied. Masked hypertension was diagnosed when more than 25% of readings of awake ambulatory blood pressure were more than 130/90 mm of Hg and nocturnal blood pressure was more than 120/80 in patients with clinic blood pressure of less than 140/90. All of them went ahead with kidney donation irrespective of whether they had masked hypertension or not. Ambulatory blood pressure recording in potential kidney donors revealed the presence of masked hypertension in 11.2% of the donors (20 of 154 (12.9%) men and 11 of 123 (8.9%) women). The age group ranged from 20 to 72 years and the body mass index (BMI) ranged from 15 to 34 kg/m². The data were analyzed using the Chi square test as a test of goodness of

fit. Masked hypertension was not found in people below 30 years. It was 5.1%, 23.3%, 23.1%, 31.6%, and 25% in the age groups 31–40, 41–50, 51–60, 61–70, and more than 70 years, respectively. Masked hypertension was 5.7%, 13.4%, 18.2%, 25%, and 12.9% in the BMI groups 15–20, 21–25, 26–30, and above 31 kg/m², respectively. Age, sex, and BMI had no influence on masked hypertension. Only 20 of the 277 (7.2%) subjects attended the follow-up clinic. At the end of 2 years, sustained hypertension with a clinic blood pressure of more than 140/90 was noted in 10 of 20 (50%) subjects.

Our study showed a significant number (11.2%) of donors with masked hypertension but with no statistical correlation with age, sex, or BMI. Further studies are needed to evaluate this. Long-term follow-up of kidney donors who have masked hypertension is required so that appropriate interventions can be made to reduce cardiovascular risk.

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