

Inter-Arm Blood Pressure Differences May Be Important for Predicting Mortality

Dear Editor:

We read the article “Inter-Arm Blood Pressure Difference in Hospitalized Elderly Patients Is Not Associated With Excess Mortality” written by Weiss and colleagues¹ with great interest. They concluded that a more than 10 mm Hg inter-arm BP difference (IAD) for both systolic and diastolic blood pressure (BP) was not associated with mortality in hospitalized elderly individuals. Thanks to the authors for their contributions. But, it is well-known that IAD is associated with peripheral vascular disease and associated with cardiovascular mortality, especially in elderly patients with hypertension, diabetes mellitus, and ischemic heart disease.²

The measurement of BP in both arms and legs is very important in case of vascular disease such as peripheral vascular disease, aortic coarctation, and subclavian artery disease.² The BP differences in both arms at the initial evaluation may lead to underdiagnosis of hypertension; therefore, it is recommended to not only measure BP in one arm.³ The impact of IAD during BP measurements has been a subject of extensive research in recent years.^{4,5} There may be a relationship between IAD and increased risk of cardiovascular morbidity in older patients.⁵

In the present study, the characteristics of vascular disease in the patients were not emphasized. We did not know about the subclavian stenosis of the patients. It would be useful to perform Doppler ultrasonography of the upper extremities to identify the vascular disease and actual IAD of these elderly patients. The atherosclerosis of the subclavian arteries may predict the total arterial system atherosclerosis. Therefore, this condition may be related with morbidity and mortality, especially in very elderly patients.

The results of studies about the effects of IAD in very elderly patients might be controversial. Currently, coronary risk factors, eg, hypertension, obesity, and diabetes, are increasing in the elderly population.⁶ Higher systolic and diastolic BP may be one of the features of excessive cardiovascular risk not only for elderly patients but also younger patient.^{7,8} Additionally, the measurement of BP must be very sensitive. While some centers can do it automatically, measurements are usually performed manually. Twenty-four-hour ambulatory BP monitoring is the best way of excluding white-coat hypertension in laboring patients with higher BP measurements in the doctor’s office, even if elderly.⁹ There are some reports about IAD and increased mortality in elderly patients. It is expected

that very old patients likely have a higher prevalence of atherosclerosis. IAD >10 mm Hg has been found to predict cardiovascular morbidity and mortality, especially in patients with diabetes, stroke, and hypertension.¹⁰

In conclusion, the subject is very important and we need further studies to better evaluate and understand BP measurements in both arms to exclude some cases of vascular disease and detect IAD in elderly and young patients. The very elderly with atherosclerotic vascular disease may have more IAD and may have increased cardiovascular morbidity and mortality.

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