



The Medical **Bulletin**

In Hypertension

Does Orthostatic Hypertension in Young Adults Predict Major Cardiac Events?

Among elderly adults with hypertension, orthostatic hypotension when standing is prevalent and predicts future cardiovascular (CV) events and mortality. Orthostatic changes in blood pressure (BP) and their significance among younger adults have historically been poorly characterized. In a recently published study of over 1200 young to middle age participants with untreated stage 1 hypertension, the current method of BP measurement taken while the patient is sitting may need to be reconsidered. If major adverse cardiovascular events (MACE) have the potential of being predicted with a routine office visit, members of the healthcare team, especially in primary care settings, may be more capable of providing an early diagnosis and intervention to improve future patient outcomes.

Study Synopsis and Perspective

A sudden drop in BP when standing is a common and concerning problem in elderly hypertensive people. Now, research suggests a large BP swing in the opposite direction on standing may be equally concerning in younger hypertensive people.

Young and middle-aged adults with a systolic blood pressure (SBP) response to standing > 6.5 mm Hg had almost double the risk for MACE during follow-up compared with other participants.

An exaggerated BP response remained an independent predictor of MACE, even after adjusting for traditional risk factors, including 24-hour BP, the study showed.

"The clinical implication is important because now doctors measure [BP] in young people in the upright posture, but what we say is it must be measured also while standing," said Paolo Palatini, MD, a professor of internal medicine at the University of Padova, Padova, Italy, who led the study.

Previous studies have found that an exaggerated BP response to standing is a predictor of future hypertension, CV events, and mortality particularly in older patients, but few prognostic data exist in persons who are young to middle age



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Clinical implication

- Exaggerated SBP response to standing in young hypertensive adults independently predicts MACE during follow-up.
- Orthostatic BP testing is easily performed in clinical settings and offers prognostic information beyond ambulatory BP monitoring.
- Implications for the Healthcare Team: Hyper reactors should be treated based on the average of their supine and standing pressure.

Dr. Balachandran