Systolic Blood Pressure Intervention Trial (SPRINT)

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Reduction in cardiovascular events and all-cause mortality with intensive blood pressure control: Main results of the Systolic Blood Pressure Interventional Trial (SPRINT). Paul K. Whelton, MB, MD, MSc for the SPRINT Study Research Group. Tulane University Health Sciences Center, New Orleans, LA, USA.

Background: The optimal target for blood pressure (BP) reduction during treatment of patients with hypertension is uncertain.

Methods: Adults ≥50 years old with hypertension and at least one additional risk factor for cardiovascular disease (CVD), but excluding persons with diabetes mellitus, prior stroke, or advanced chronic kidney disease (CKD) were randomly assigned to intensive therapy (intensive), targeting a systolic BP (SBP) <120 mm Hg, or standard therapy (standard), targeting a systolic BP <140 mm Hg. The primary outcome was a composite of first occurrence of myocardial infarction, acute coronary syndrome, stroke, heart failure, or cardiovascular disease death. (ClinicalTrials.gov, NCT01206062)

Results: The study sample encompassed a diverse group of 9,361 volunteers with an average age of 67.9 years. Pre-specified subgroups comprising persons with CKD (28.5%), history of CVD (20.1%), or ≥75 years old (28.2%) were enrolled. The intervention successfully yielded a sustained difference in SBP between the intensive and standard groups. The SPRINT intervention was stopped early due to beneficial results, with an approximately 30% reduction in the primary outcome and 25% reduction in all-cause mortality in the intensive compared to standard group. Similar results were identified across pre-specified subgroups defined by age, gender, race, presence of CVD, SBP tertiles and renal function. Some expected adverse effects were more common in the intensive group.

Conclusions: In older adults with hypertension who are at risk for CVD, targeting a SBP lower than recommended in current treatment guidelines results in a substantial reduction in CVD events and all-cause mortality compared to standard therapy.

Disclosure:
P.K. Whelton: None.