

Blood Pressure Targets for Elderly Patients

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In the pre-specified subgroup analysis in elderly (≥ 75 years) SPRINT patients, targeting an SBP of less than 120 mmHg, as compared with less than 140 mmHg, achieved a significant 34% reduction in fatal and non-fatal CV events and a 33% reduction in all-cause mortality among the 2,636 ambulatory elderly participants (mean age, 79.9 years; 37.9% women; baseline SBP 142 mmHg) with a median follow-up of 3.14 years. The effects of aggressive BP lowering were irrespective of the frailty and ambulatory capacity of participants. The overall rate of serious adverse events was not different between treatment groups (48% in both groups).

The BP measurement adopted in the SPRINT trial, the unattended AOBP, is different from the BP measurements used in most RCTs. We recommend the SBP target of less than 120 mmHg for elderly (≥ 75 years) hypertensive patients if unattended AOBP can be reliably obtained (**COR I, LOE B**). The intentions are two-folds: one is to eradicate the myth that BP reduction should be conservative in elderly patients, and second is to promote the application of unattended AOBP in clinical practice.

It should be mentioned that patients with East Asian ethnicity in the SPRINT trial are very few ($< 2\%$). Instead, the HOPE-3 trial included 3,691 Chinese patients out of 12,705 participants with a mean baseline BP of 138/82 mmHg and showed that patients with baseline SBP of ≤ 131.5 mmHg were associated with numerically higher major CV events.

In a recent meta-analysis including 4 high-quality trials involving 10,857 older (≥ 65 years) hypertensive patients with a mean follow-up of 3.1 years and achieved SBP of < 140 mmHg, intensive BP lowering (SBP < 140 mmHg) was associated with a 29% reduction in major CV event and 33% reduction in CV mortality, compared with standard BP lowering (SBP ≥ 140 mmHg except SPRINT-SENIOR). Among the 4 trials, 3 trials comprising a total of 7,921 patients with an average age of 76 years were from East Asia. Thus, we recommend that, for elderly patients with an age ≥ 75 years, BP targets are $< 140/90$ mmHg using traditional BP measurement (**COR I, LOE B**). However, in the JATOS trial, effects of BP lowering were significantly smaller in patients ≥ 75 years with regard to cerebrovascular events. This finding reminds us that vigilance is required in managing elderly patients with higher baseline BP (e.g., SBP > 160 mmHg, the inclusion criteria of JATOS).