

Target blood pressure for elderly systolic hypertension

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Control of high blood pressure in the young old is very effective in preventing cardiovascular events. A number of study such as SHEP, Syst-Eur showed that lowering of systolic blood pressure could decrease the ischemic cardiac events, stroke and heart failure.

Many guidelines in hypertension such as JSH, ESH, and KSH recommended systolic blood pressure to be below 140 mmHg, diastolic pressure to be below 90mmHg in the young old. Close look at the individual trials in elderly hypertension can demonstrate that only JATOS from Japan resulted in systolic pressure below 140mmHg. So the recommendations are not evidence-based.

There remains big debate how low it should go down in the old old. Previous meta analysis of the effect of BP lowering in the old old showed that it could increase the total mortality, and even CV mortality despite decrease in stroke and heart failure. From this back ground, HYVET study were designed and it took long time to perform due to use of placebo in control group. But the subjects of HYVETS were independent and have diastolic hypertension and it included high proportion of white coat hypertension. The target blood pressure was lower than 150mmHg in systolic pressure. Stroke as well as mortality was significantly reduced in medication group, showing that in the old old, BP lowering could lead to beneficial effect. But in JATOS, there showed some tendency to increased events in lower pressure group(less than 140mmHg)than high pressure group(150mmHg). These two studies led to the current guideline such as ESH, JSH and KSH that in the old old target blood pressure should be less than 150mmHg. And so called JNC-VIII even recommended that in the over 60 years old, target BP should be less than 150mmHg, which is typical example of binary vision of the world.

But recently published SPRINT study make this target more confusing. I will cover the details of SPRINT and its characteristics and potential implication of this study to target blood pressure.