STRENGTHS AND LIMITATIONS OF ANTIHYPERTENSIVE TREATMENT FOR STROKE RISK IN A GENERAL POPULATION: THE AKITA STROKE REGISTRY

ACC Poster Contributions
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Background: Many interventional trials have demonstrated that blood pressure (BP) lowering can significantly reduce the stroke risk, however, in a general population, the relationship among the BP level, the stroke risk and antihypertensive treatment has not been investigated.

Subjects and Methods: We analyzed the mass screening data based on 156,847 people (untreated 142,989 and treated 13,858) by the Akita public hospitals from 1991 to 1998. Stroke events were identified from the Akita Stroke Registry: organized from all hospitals with emergency care in Akita prefecture. The first stroke episodes occurring within 3 years after the screening were defined as “stroke events”. According to JNC-6, blood pressure level was classified into 6 categories. The relative risk (RR) of a first stroke was analyzed using a multivariate logistic regression after the adjustment for possible confounding factors.

Results: We identified 1323 first strokes. Among the untreated groups, the RR of stroke increased with the BP levels, exponentially. On the other hand, among treated groups, the RR of stroke increased with the BP levels, not exponentially but linearly. The stroke risks, with and without medication, were significant higher in the stage-3 HT groups than the optimal BP groups (RR: 10.6; 95% CI: 7.8-14.4 and RR: 3.2; 95% CI: 1.4-7.2), respectively. (fig 1)

Conclusions: The antihypertensive medication reduces stroke risk especially in stage-3 HT, however, the RRs of stroke were not reduced in the “normal” BP range.