HYPERTENSION IMPACT OF HAVING 'PREHYPERTENSION'

Approximately one-third of the Japanese population is estimated to have blood pressure (BP) within the range 120–139/80–89 mmHg, a condition known as prehypertension. However, as Dr Hisatomi Arima explains, “there has been uncertainty surrounding the effects of the lower range of prehypertension (or ‘normal BP’ according to European or Japanese guidelines; 120–129/80–84 mmHg) on the risks of cardiovascular disease (CVD) in [the] Japanese [population].” Dr Arima and colleagues thus set out to estimate the population-attributable risks of the lower and higher ranges of prehypertension in Japan.

Their prospective study involved 2,634 residents of Hisayama in Japan, who were followed up annually for 19 years. At baseline, participants were classified as having normal BP (<120/80 mmHg; 24.9%), prehypertension (120–139/80–89 mmHg; 37.7%), stage 1 hypertension (140–159/90–99 mmHg; 23.8%), or stage 2 hypertension ($\geq$ 160/100 mmHg; 13.6%). Individuals with prehypertension were further characterized as being in the lower (120–129/80–84 mmHg) or higher (130–139/85–89 mmHg) ranges of BP. Individuals whose systolic and diastolic BPs put them in two categories were allocated to the category with the higher BP range.

As expected, individuals with stage 1 or stage 2 hypertension had the highest incidences of CVD. Notably, however, by the sixth year of follow-up, the incidence of CVD was also significantly higher in individuals in the lower and higher categories of prehypertension, compared with individuals with normal BP at baseline. Indeed, one-third of excess CVD attributable to elevated BP was derived from the group with prehypertension. After adjustments for age and sex, the incidences of cardiovascular disease were 7.5, 12.6, and 12.1 per 1,000 person-years in patients with normal BP, lower-range prehypertension, and higher-range prehypertension, respectively. Lower-range and higher-range prehypertension were associated with hazard ratios of 1.58 and 1.69, respectively.

Dr Arima concludes that “because a large proportion of the population is classified as [having] prehypertension or hypertension, population strategies to lower BP at the community level ... are essential for reduction in the burden of CVD.”

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