Arterial hypertension and mortality in the elderly

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Abstract

Background

The aim of this study was to evaluate at a population level whether hypertension is a risk factor for cardiovascular mortality and to verify whether or not this is true for both genders at any age.

Methods

This population-based, long-lasting, prospective study includes a 14-year mortality (institutional epidemiology in primary care). Unselected, unbiased subjects (5185) aged 22 to 95 years were recruited from the Italian general population, and divided into normotensive (<140 mm Hg systolic blood pressure [BP] and <90 mm Hg diastolic BP and untreated) and hypertensive groups. The main aim was to identify the significant predictors of mortality due to stroke, coronary artery disease, heart failure, and pulmonary embolism, and to quantify the age-adjusted relative risk of hypertension in men and women, at different age classes (<70, 70 to 79, ≥80 years) for each mortality cause. The analysis was repeated among 1091 normotensive and 1091 hypertensive age-matched subjects to clean statistics from the effects of age.

Results

There were 846 cardiovascular deaths, 178 due to stroke, 273 to coronary disease, 351 to heart failure, and 44 to pulmonary embolism. Hypertension predicted stroke mortality, but not that due to other causes. This prediction was only significant in women, not in men. No prediction was possible after the age of 80 years. Age-matching increased the significance level of stroke mortality prediction in women aged <80 years; in these women, systolic BP predicted stroke mortality directly and diastolic inversely.
Conclusions

In this population, hypertension predicted only stroke mortality in women aged <80 years. High systolic and low diastolic BP were predictive of stroke mortality, confirming a prognostic role for high pulse pressure.