Hypertension Early Drove Up Mortality Risk Later

Family Practice News

December 2011

Section: Pg. 2; Vol. 41; No. 20; ISSN: 0300-7073

Length: 800 words

Byline: Sharon Worcester

Body

High blood pressure in early adulthood hikes up the risk of coronary heart and cardiovascular disease mortality, as well as all-cause mortality much later in life, according to findings from the more than 18,000 men studied longitudinally in the Harvard Alumni Health Study.

"The results lend weight to blood pressure-lowering strategies beginning early in the life course than is currently the case," Linsay Gray, Ph.D., of University College London, and colleagues, concluded. However, trial data assessing the efficacy and safety of such early interventions are lacking, they said.

The associations, though attenuated, remained even after accounting for middle-age hypertension.

After adjustment for age, body mass index, smoking, and physical activity level at study entry, individuals from the large cohort study who had prehypertension (120-139/80-89 mm Hg), stage 1 hypertension (140-159/90-99 mm Hg), or stage 2 hypertension (160 or greater/100 or greater mm Hg) at baseline had a significantly increased risk of coronary heart disease mortality, compared with those who were normotensive (hazard ratios of 1.89, 1.46, and 1.21, respectively), according to the findings published online Nov. 22 in the Journal of the American College of Cardiology.

The risk for cardiovascular disease mortality for each hypertension category also was increased (adjusted HR, 1.13, 1.28, and 1.51, respectively), as was the risk for all-cause mortality for each of the hypertension categories (adjusted HR, 1.03, 1.09, and 1.19, respectively), the investigators found (J. Am. Coll. Cardiol. 2011 Nov. 22 [doi:10.1016/j.jacc.2011.07.045]).

The strongest associations were between hypertension in early adulthood and coronary heart disease mortality, but dose-response relationships were seen with all three outcome measures.

Notably – and surprisingly, considering the well-established relationship between high blood pressure and stroke – no evidence of an association between blood pressure level at university entry and stroke mortality was found in this study. However, those with hypertension in middle age had more than double the subsequent risk of stroke mortality (HR, 2.18).

Participants in the ongoing Harvard Alumni Health Study included 18,881 male students who had blood pressure measured at study entry at a mean age of 18 years and who completed a follow-up questionnaire at a mean age of 46 years, at which time they reported physician-diagnosed hypertension. The participants were followed for mortality until the end of 1998.

The study was limited by several factors, including a lack of diversity in sex, race, social class, and lifestyle, as well as by a low smoking prevalence – which may explain the fewer cardiovascular deaths compared with U.S. mortality statistics.

This study was supported by a Wellcome Trust Fellowship and by the U.S. National Institutes of Health. The authors reported that they have no relevant disclosures.

View on the News

Blood Pressure Matters at Every Age

Despite the limitations of this study by Dr. Gray and associates, the primary hypothesis that blood pressure matters in young adulthood is likely correct, particularly when considered in the context of prior studies.

Indeed, taken together, the available data – including their own analysis of the CARDIA (***Coronary Artery Risk Development in Young Adults***) study – help bolster the inference that blood pressure early in life can cause vascular damage that results in related mortality later in life.

The clinical implications of this inference are potentially profound.

Younger adults with hypertension tend to remain unaware of their hypertension, and are less likely to be on treatment, and less likely to have their blood pressure controlled. Thanks to rising obesity rates and challenges within the health care system, the problem will likely worsen. The findings of this study pose new challenges for those working in health care.

Researchers must address the difficult evidence gap in the lack of randomized controlled trials of blood pressure treatment in young adults and the most effective and efficient approach for generating and evaluating evidence of treatment effect on long-term outcomes in this population. Clinicians and public health practitioners must address the growing need to emphasize and support lifestyle approaches to the prevention and control of hypertension, including a healthy diet and avoidance of excessive weight gain, that remain the cornerstone of prevention in a young adult population.

KIRSTEN BIBBINS-DOMINGO, PH.D., AND MARK J. PLETCHER, M.D., are both with the University of California, San Francisco. Their comments were summarized from an accompanying editorial (J. Am. Coll. Cardiol. 2011 Nov. 22 [doi:j.jacc.2011.08.032]). Neither reported having any relevant disclosures.

Classification

Language: ENGLISH

Publication-Type: Newspaper

Journal Code: FPNEWS

Subject: CARDIOVASCULAR DISEASE (93%); HYPERTENSION (93%); ADULTS (90%); DISEASES & DISORDERS (90%); HEART DISEASE (90%); STROKES (89%); DEATHS & DEATH RATES (89%); INVESTIGATIONS (89%); RESEARCH REPORTS (78%); MIDDLE AGED PERSONS (78%); CARDIOLOGY (78%); EXERCISE & FITNESS (78%); COLLEGES & UNIVERSITIES (77%); SMOKING (77%); STUDENTS & STUDENT LIFE (77%); MEN (77%); ACADEMIC ADMISSIONS (76%); HEALTH DEPARTMENTS (73%); News (%)

Industry: CARDIOLOGY (78%); COLLEGES & UNIVERSITIES (77%); HEALTH DEPARTMENTS (73%)

Geographic: UNITED STATES (90%)

Load-Date: December 22, 2011

End of Document