Treatment of Hypertension in a Primary Care Practice

Mendelson G, Ness J, Aronow WS. Drug treatment of hypertension in older persons in an academic hospital-based geriatrics practice. J Am Geriatr Soc 1999;47:597–9.

Study Overview

Objective. To investigate (1) the prevalence of hypertension in a group of older persons; (2) the use of various antihypertensive drugs among older patients with hypertension and among older patients with hypertension and prior acute myocardial infarction (MI) or congestive heart failure (CHF); and (3) the lowering of blood pressure to a level below 140/90 mm Hg with various types of therapy.

Design. Retrospective medical chart analysis.

Setting and participants. All patients (459 men, 1360 women) seen between 1 December 1997 and 31 August 1998 by their primary care physician at an academic, primary care outpatient geriatrics practice. The practice was based at an urban hospital and staffed by fellows in a geriatrics training program and full-time faculty geriatricians. The mean age of the group was 80 ± 8 years (range, 59 to 101 years).

Main outcome measures. Prevalence of systolic and diastolic hypertension defined as a blood pressure of 140/90 mm Hg or greater (using criteria from the Sixth Report of the Joint National Committee [JNC VI]) [1], based on an average of 2 or more blood pressure readings taken at each of 2 or more visits after an initial screening visit. Presence of clinical cardiovascular disease and other comorbidities, based on history and various diagnostic tests. Usage rates of diuretics, β blockers, angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers, and other antihypertensive drugs in the study group. Control of hypertension, defined as the last recorded blood pressure reading being below 140/90 mm Hg.

Main results. Hypertension was present in 1051 (58%) of study participants. Prevalence was significantly higher in African-Americans (71%, $P < 0.001$) and Hispanics (62%, $P < 0.02$) than in whites (52%). Target organ damage, clinical cardiovascular disease, or diabetes mellitus was present in 738 (70%) of those with hypertension. Of the 1051 persons with hypertension, 520 (49%) were treated with diuretics, 297 (28%) with β blockers, 445 (42%) with ACE inhibitors, 171 (16%) with calcium channel blockers, and 13 (1%) with other antihypertensive drugs; 41 (4%) received no hypertensive therapy. Of 306 persons with hypertension and prior acute MI, 182 (59%) were treated with β blockers, 146 (48%) with ACE inhibitors, 96 (31%) with diuretics, and 29 (9%) with calcium channel blockers. Of 103 persons with hypertension and CHF, 103 (100%) were treated with β blockers, and 3 (3%) were treated with calcium channel blockers. The last blood pressure reading recorded on the chart was below 140/90 mm Hg for 735 (70%) of those with hypertension.

Conclusion

In this urban geriatric primary care practice, prevalence of hypertension is significantly high, especially in certain ethnic groups. In the study time period, care for hypertensive patients was based on the use of diuretics, β blockers, and ACE inhibitors (in accordance with JNC VI recommendations). The goal of lowering blood pressure to below 140/90 mm Hg with antihypertensive therapy was explicitly not met in nearly one third of patients.

Commentary

This study follows up on a previous study [2] conducted at the practice. Since that time, use of calcium channel blockers has decreased significantly (from 47% to 16% in those with hypertension, and from 45% to 9% in those with hypertension and MI), and use of diuretics and β blockers has increased overall (from 37% to 49%, and from 13% to 28%, respectively). The authors credit these changes partially to efforts of 1 of the authors to educate his colleagues on the underuse of β blockers and overuse of calcium channel blockers. Thus, this study illustrates how educational efforts can affect prescribing behavior at a particular site.

One weakness of this study is that it does not present detailed data on specific aspects of care. Future studies of the use and outcomes of specific therapeutic regimens should present data on the exact monotherapy or combination

"Outcomes Research in Review" is edited by Chris L. Pashos, PhD, Executive Director of Pharmacoeconomics and Outcomes Research, Abt Associates Clinical Trials, Cambridge, MA, and Associate Editor, Health Policy, Journal of Clinical Outcomes Management. *Dr. Pashos selects, summarizes, and provides the commentary on the studies that appear in this section.*