Drug Treatment of Mild Hypertension: A Continuing Debate

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Hypertension, the most common chronic clinical problem in everyday medical practice, affects about 24 million people in the United States.[1] Hypertension has been shown to be the second leading clinical diagnosis in content studies of family practice, such as the National Ambulatory Medical Care Study.[2] It is of further interest that general/family physicians in the United States represent the single largest provider group of care for hypertension and hypertensive heart disease. Reflected by comparative numbers of office visits by specialty, general/family physicians account for one half of all office visits for these problems, whereas internists and cardiologists account for 31 and 5 percent of such office visits, respectively.[3]

Despite the prevalence of hypertension and the intensity of research efforts directed toward its treatment in recent years, considerable controversy still surrounds some aspects of its treatment. With regard to mild hypertension (diastolic blood pressure, 90 to 114 mmHg), for example, there is substantial disagreement as to current indications for initial drug treatment and appropriate target levels for control of blood pressure.

The Hypertension Detection and Follow-up Program (HDFP), the largest (over 10,000 patients) and most costly ($60 million) study of hypertension yet undertaken in the United States, has recently been completed. This study compares the outcomes of care (ie, five-year mortality) given in special centers (Stepped Care Group) with care given over a five-year period in community hospitals, clinics, and physicians' offices (Referred Care Group). It was found that the five-year mortality for the Stepped Care Group with an entry diastolic blood pressure (DBP) of 90 to 104 mmHg was 20 percent lower than that for the corresponding Referred Care Group.[4] These results are now being used widely to support the aggressive use of antihypertensive drugs for all patients with blood pressure readings over 90 mmHg. Two other major studies,[5,6] however, showed no significant reduction of morbidity or mortality as a result of drug therapy of mild hypertension with a DBP of 90 to 104 mmHg. The Veterans Administration Cooperative Study[5] and US Public Health Service Hospitals Cooperative Study[6] were both placebo-controlled studies involving average durations of follow-up of three and eight years, respectively. There is one other major national study still in progress on the efficacy of drug treatment in mild hypertension—the large trial of the Medical Research Council in Britain, which involves over 17,000 patients from the lists of 176 general practices and 14 industrial clinics or screening organizations.[7]

A strong case can be made questioning the value of antihypertensive drugs for mild hypertension with a DBP of 90 to 104 mmHg. Aagaard[8] points out basic methodologic reasons that he feels invalidate the conclusions of the HDFP study concerning drug therapy for diastolic blood pressure in this range. He calls attention to the lack of a double-blind, placebo-controlled design of the HDFP study and the excellent support system and overall medical care afforded the Stepped Care Group. Kaplan[9] shares these concerns and further notes that two other placebo-controlled national blood pressure trials also fail to demonstrate benefit of drug therapy for patients with diastolic blood pressures below 100 mmHg. The Australian Therapeutic Trial[10] involved more than 3,000 patients followed over a four-year period, and the placebo group with end DBP below 100 mmHg actually had fewer cardiovascular complications than the drug therapy group. In another national study in Norway involving more than 700 patients

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(all men younger than 50 years of age) without target organ damage and with a DBP less than 110 mmHg, there was no difference over a five-year period in either mortality or cardiovascular complications between the placebo and drug therapy groups.[11] Additional evidence mitigating the use of antihypertensive drugs in patients with mild elevations of blood pressure, particularly with a DBP below 100 mmHg, includes (1) the acknowledged effectiveness of other modalities in reducing blood pressure in mild hypertension (eg, restricting salt, stopping smoking, controlling weight, exercising); (2) the finding that initial elevations in blood pressure readings often spontaneously drop to acceptable levels without drug treatment (eg, the mean blood pressures of almost 2,000 control [placebo] subjects in the Australian trial dropped from 158/102 mmHg at the first screening visit to 144/91 mmHg three years later)[12]; and (3) the potential hazards of overly aggressive drug treatment of hypertension. The Public Health Service study, for example, found that depression, postural faintness, and impotence were twice as common in treated subjects as in controls.[6] Another study over a six-year period in England demonstrated a more than fivefold increase in risk of first myocardial infarction in patients in whom final DBP was reduced below 90 mmHg compared with patients in whom final DBP was between 100 and 109 mmHg.[13]

Given the conflicting findings of available hypertension treatment trials, the recent recommendations by Kaplan seem to represent a fully defensible "middle ground" approach:[9]

1. Use of antihypertensive drugs for patients with a DBP above 110 mmHg or with a DBP above 100 mmHg with accompanying target organ damage or other cardiovascular risks

2. Close follow-up for six months without drug therapy for patients with a DBP below 110 mmHg without obvious cardiovascular disease or other risk factors

3. Continued follow-up at least every six months if the DBP remains below 100 mmHg, reserving use of drug therapy for those with persistent DBP above 100 mmHg

Restriction of antihypertensive drugs to these indications would avoid "overtreatment" of up to 20 million people in the United States with DBP in the 90 to 100 mmHg range.[9] Active treatment for these patients includes emphasis upon weight control, salt restriction, and exercise.

The various studies of hypertension in recent years have other implications for family physicians. It is important to avoid premature labeling of the patient as hypertensive based upon one or two elevated blood pressure readings. The family physician clearly has a health promotion role in the management of hypertension, including periodic follow-up, detection and treatment of risk factors, attention to psychosocial problems, appropriate diagnostic workup, and the rational use of antihypertensive drugs when indicated. Further research is needed on the outcomes of various treatment protocols for hypertension, and the development of collaborative research groups in family practice settings[14,15] could contribute in this area as well.

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