10-minute consultation

Newly diagnosed hypertension

Christine A'Court

A 59 year old man has had, in the past three months, three successive pairs of blood pressure readings of 158/98 mm Hg, 150/92 mm Hg, and 156/96 mm Hg. The values were measured according to the recommendations of the British Hypertension Society. He has no history of coronary heart disease, transient ischaemic attack, ischaemic stroke, or peripheral vascular disease.

What issues you should cover

- Do any factors compel you to treat this "mild" hypertension (such as end organ damage or a formally estimated 10 year risk of coronary heart disease of 30% or more)?
- Is the hypertension treatable through lifestyle changes? Factors that increase blood pressure are excessive alcohol intake (men, >21 units a week; women, >14 units); being overweight; lack of exercise; excessive salt intake; and drugs such as non-steroidal anti-inflammatories and steroids.
- Ask about family history of hypertension, which might suggest essential hypertension.
- Could the patient have secondary hypertension (responsible for about 5% of cases of hypertension in the community)? The commonest cause is renal parenchymal disease. The medical history may also yield medical indications for, or contraindications to, specific antihypertensive drugs.

What you should do

- If possible, stop any drugs that might contribute to the hypertension.
- Give the patient advice and written information about high blood pressure, why it should be lowered, and the value of a Mediterranean diet, regular exercise, and reduced salt and alcohol intakes. Use computer printouts or have leaflets handy, and suggest website addresses (www.hyp.ac.uk.bhsinfo/ or www.hbpf.org.uk or www.medinfo.co.uk or www.healthnet.org.uk).
- Offer smoking cessation support from a trained adviser.
- If the patient has "mild" hypertension (140-159/90-99 mm Hg) and no clinically evident vascular disease, treat with drugs if there is evidence of end organ damage or a high cardiovascular risk (assess this using approved charts or computer programs).
- Check fundi for haemorrhages or exudates and organise electrocardiography (assessing left ventricular hypertrophy or ischaemia); urinalysis; measurement of creatinine and electrolytes, total cholesterol, high density lipoprotein, and triglycerides; and a blood screen for diabetes. Take a family history, as premature coronary heart disease (CHD) in first degree relatives will increase the estimated risk by 50%; familial dyslipidaemias confer a still higher risk and invalidate use of the charts.
- The patient's estimated risk of CHD should be recorded in a consistent, searchable way, as required by

Useful reading

Ramsay L, Williams B, Johnston G, MacGregor G, Poston L, Potter J, et al. Guidelines for the management of hypertension: report of the third working party of the British Hypertension Society. *J Hum Hypertens* 1999;13:569-92.

British Cardiac Society, British Hyperlipidaemia Association, British Hypertension Society. Joint British recommendations on prevention of coronary heart disease in clinical practice. *Heart* 1998;80(suppl 2):S1-29.

Muir J, Fuller A, Lancaster T. Applying the Sheffield tables to data from general practice *Br J Gen Pract* 1999;49:217-8.

the national service framework for CHD—for example, use Read code 3888.

- Patients with a 10 year CHD risk of 30% or above (about 3% of 30-74 year olds in the United Kingdom) should be offered drug treatment for their hypertension and lipid levels. If the 30% risk level results partly from smoking—as it does in 87% of cases satisfying the guidelines for statin prophylaxis—then pursue smoking cessation before prescribing a statin.
- If the 10 year CHD risk is 15-29%, consider drug treatment, particularly if further factors—such as impaired glucose homeostasis or South Asian ethnicity—are raising the risk. At the lower end of this risk band, drug treatment should be deferred (it is not feasible for the NHS to treat the 25% of UK 30-74 year olds who have a 10 year risk of CHD of >15%); these patients should be reviewed periodically, however, to assess lifestyle changes and to recalculate CHD risk as it increases with age.

Competing interest: CA'C has contributed to educational programmes sponsored by pharmaceutical companies making cardiovascular drugs.

This is part of a series of occasional articles on common problems in primary care

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A table showing the effects of interventions on blood pressure is on bmj.com

How benefits of treating hypertension, shown as numbers needed to treat (NNTs), vary according to severity of hypertension, age, and formally estimated risk level

Problem and treatment	Events prevented	NNT for five years to prevent one event
Antihypertensives for severe diastolic hypertension (115-129 mm Hg)	Death, stroke, myocardial infarction	3
Antihypertensives for mild or moderate diastolic hypertension (90-109 mm Hg)	Death, stroke, myocardial infarction	141
Antihypertensives for uncomplicated hypertension, no risk assessment (age 70-84)	Stroke	34
Antihypertensives for uncomplicated hypertension, no risk assessment (age ≥60)	Stroke	43
Antihypertensives for uncomplicated hypertension, no risk assessment (age 36-64)	Stroke	850
Antihypertensives if 10 year CHD risk is 30% (cardiovascular risk 40%)	Cardiovascular event	20
Antihypertensives if 10 year CHD risk is 15% (cardiovascular risk 20%)	Cardiovascular event	40