Specialist hypertension clinics: an essential pathway but under-resourced

Terry McCormack, Sarah Partridge and Ian Wilkinson

There are potentially 13 million adults in the UK and Ireland who have raised blood pressure that requires treatment.[1] While the majority of patients with hypertension are well managed in primary care, there is a significant proportion who need specialist care. Approximately 10% of patients have complex hypertension that requires specialist input,[2,3] but the provision of specialist clinics is poorly distributed throughout the UK and Ireland, making access for patients inequitable. GPs need support in managing these complex hypertension cases and they need to be aware of the limitations that currently exist in accessing that care for those patients.

It is important that GPs are aware that in the UK there is currently no specialist registration for hypertension doctors and the only medical training that includes a specific module in hypertension is the specialism of clinical pharmacology and therapeutics. Most clinical pharmacologists who work in specialist clinics are sited in major cities or based within university departments with an academic interest in hypertension. Thus, many GPs are forced to refer patients with complex hypertension to their local cardiology department. Very few cardiologists have any specialist training in hypertension and may not offer much more than the advice already offered by the National Institute for Health and Care Excellence (NICE).[2] Many will not have experience managing hypertensive crises or have access to the specialist facilities required to accurately diagnose hyperaldosteronism, the most common cause of secondary hypertension. Not only do patients need hypertension specialists, but GPs also need a source of advice and guidance for managing the patients in their primary care clinics.

The British and Irish Hypertension Society (BIHS) has been campaigning to improve the provision of such services for the past 3 years. We have engaged with governments, medical societies, and the Royal College of Physicians to try to improve the situation. We believe three things need to happen: first, we need a clear mechanism to provide specialist training and accreditation; second, we need guidance for primary care on who to refer; and third, we need healthcare administrators to ensure that every region has a hypertension clinic run by accredited hypertension specialists. In regard to the second point, the BIHS have recently published guidelines advising primary care on referrals to secondary care.[4]

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Who should be referred to a specialist hypertension clinic?

In cases of markedly elevated blood pressure >180/120 mmHg and/or life-threatening target organ damage, emergency/same-day referrals are needed. NICE recommends routine referral to hypertension specialists for all people aged <40 years at diagnosis (irrespective of current age), when secondary hypertension is suspected, pregnant women (who are best served by a multidisciplinary team) and women who remain hypertensive postpartum, resistant hypertension, persistent symptomatic postural hypotension, and complex polypharmacy.[2,4–7]

Resistant hypertension is probably primary care's biggest headache and is defined as blood pressure remaining above target despite maximum tolerated doses of angiotensin-converting enzyme inhibitor (ACEi) or angiotensin II receptor antagonist/blocker (ARB), dihydropyridine calcium channel blocker (CCB), and thiazide-like diuretic.[2,4] We recognise the challenges of managing patients with uncontrolled hypertension on multiple medications and suggest that GPs re-consider the most common reason for resistant hypertension, namely non-adherence. Careful and sensitive communication will be essential here and in some areas it is now possible for primary care to send urine samples for concordance testing to demonstrate the patient's blood pressure is truly resistant to multiple medications before referral to a hypertension specialist.[8]

What should the primary care team do before referral?

Primary care has greatly improved its approach to managing hypertension in the past 20 years and this may have contributed to the decline in the provision of secondary care services; however, clearly primary care needs the support of secondary care hypertension specialists in this massive endeavour. The BIHS recently published new guidance on referrals to hypertension specialists, which included a new treatment algorithm (Figure 1).[4] In this algorithm we recommend that those with a home average blood pressure ≥150/95 mmHg (or clinic blood pressure ≥160/100 mmHg) go straight to step two of the NICE treatment recommendations. This is consistent with international guidelines that recognise the cardiovascular benefits of avoiding a long titration period and thus achieving

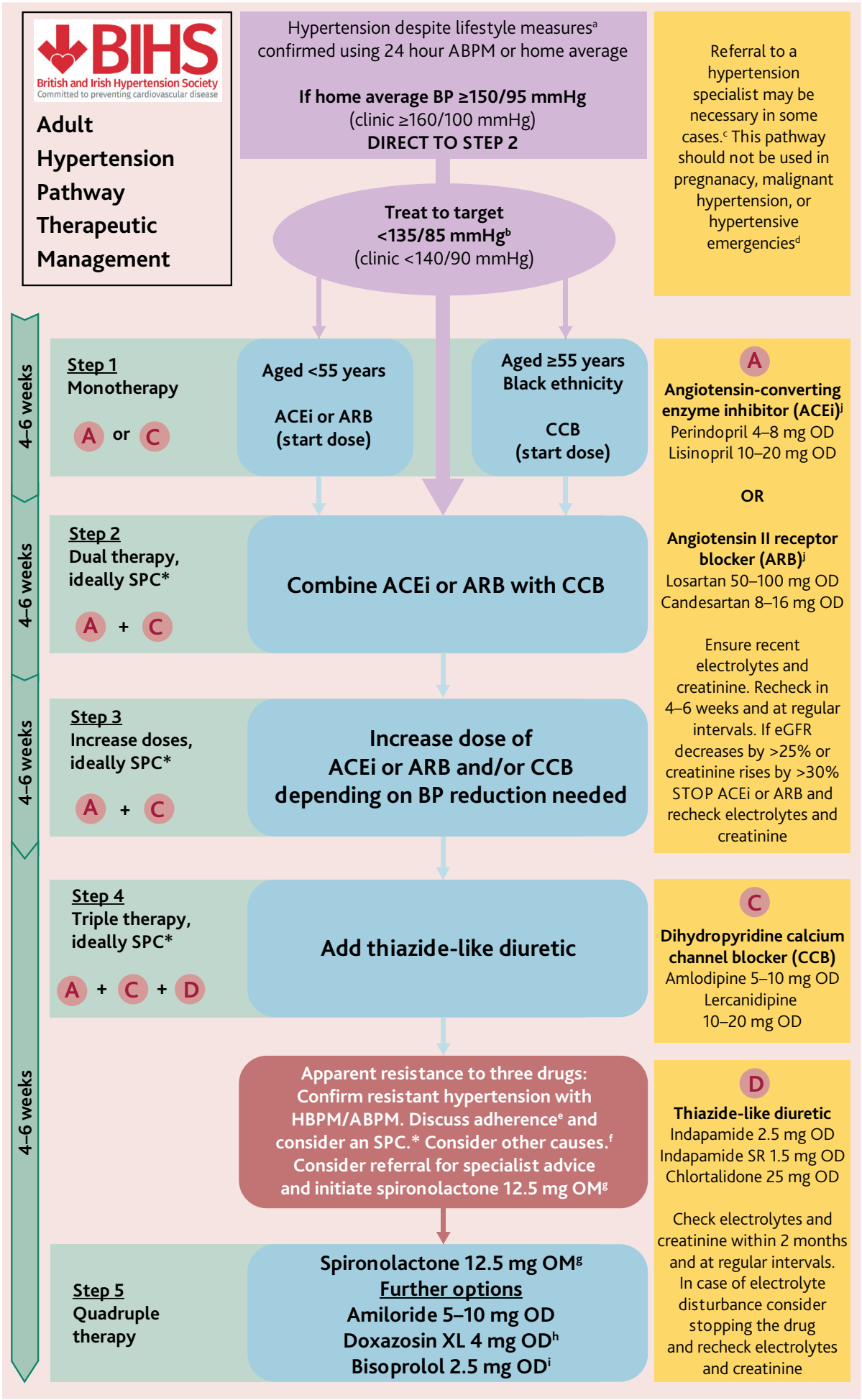

Figure 1. British and Irish Hypertension Society Adult Hypertension Pathway Therapeutic Management. Figure adapted from Lewis *et al*[4] under Creative Commons licence CC BY 4.0: http://creativecommons.org/licences/by/4.0/. See Lewis *et al*[4] for footnote explanations. ABPM = ambulatory blood pressure monitoring. ACEi = angiotensin-converting enzyme inhibitor. ARB = angiotensin II receptor blocker. BP = blood pressure. CCB = calcium channel blocker. eGFR = estimated glomerular filtration rate. HBPM = home blood pressure monitoring. OD = once daily. OM = every morning. SPC = single pill combination.

earlier blood pressure control.[6,7] To facilitate implementation of the BIHS algorithm we give examples of specific generic drugs and their doses.

We recommend that primary care should try at least three classes of drugs before either referral or considering fourth-line agents such as spironolactone. If clinicians are considering referral to hypertension specialists, they may find patients are willing to revisit lifestyle modifications, including optimising weight, salt, and alcohol intake. It can also be helpful to re-assess blood pressure with ambulatory and home monitoring. For newly diagnosed patients in whom secondary causes are suspected, or are aged <40 years at diagnosis, or postpartum, we recommend a non-renin-angiotensin-aldosterone system interfering drug (for example, amlodipine or equivalent) as a temporary treatment while awaiting specialist review. This will help the hypertension specialist to interpret the results of screening tests for the secondary causes of hypertension.

What is the best referral process?

Initially, it is essential that GPs establish that their local secondary care hypertension clinic is run by clinicians with specific training and expertise in hypertension, and they have access to specialist facilities to conduct and interpret relevant investigations. The BIHS is currently working on a system for accrediting hypertension specialists, but in the interim GPs can check if their local hypertension specialist is a member of the BIHS or holds a European hypertension specialist certificate.

It is really helpful to write a referral letter that includes why the GP thinks the patient needs specialist input, current and relevant past medications, reasons for intolerance to specific antihypertensive drugs, the age at diagnosis, details of all relevant investigations and recent blood results, and blood pressure readings, especially those derived by ambulatory or home blood pressure monitoring. A detailed referral letter avoids patients undergoing repeated investigations and helps secondary care clinicians start new or modified treatment regimens as soon as possible.

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Competing interests
Terry McCormack is the immediate past president of the British and Irish Hypertension Society (BIHS). He has advised AstraZeneca and Medtronic regarding hypertension treatments for personal financial gain. Sarah Partridge is the chair of the BIHS communication panel. Ian Wilkinson is the current president of the BIHS. He has received research grants from AstraZeneca, GSK, and scientific advisory board consultation fees from Viatris.

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