

## Guidelines from the British Hypertension Society

*The lower the pressure the better*

Education and debate  
p 634

**H**ypertension represents a major public health concern. It affects about a billion people worldwide and is the most common treatable risk factor for cardiovascular disease in patients aged over 50. In the United Kingdom, the prevalence of hypertension (blood pressure more than 140/90 mm Hg) has been estimated to be 42% in people aged 35 to 64.<sup>1</sup> Large benefits, in terms of avoided cardiovascular disease, are expected from the treatment of hypertension. However, these benefits are low because the control of hypertension remains poor in European countries—particularly in the United Kingdom, where it is controlled in only 10% of the hypertensive population.<sup>2</sup>

These past years, a huge quantity of novel data has been published on the prominent role of lowering blood pressure in the reduction of cardiovascular disease and on the safety and effectiveness of antihypertensive drugs. Two guidelines for management of hypertension, updating previous ones, were published in 2003.<sup>3,4</sup> They originate from the European Society of Hypertension/European Society of Cardiology<sup>5</sup> and the US Joint National Committee.<sup>6</sup>

Is it worth having a third one, written by the British Hypertension Society?<sup>7</sup> Although the major features of most of these recommendations are similar, they differ in some aspects; doctors may consider these guidelines as matters for specialists and may exaggerate the difficulty of treating hypertension. Thus we run the risk of dilution of the main message, which is to simplify the therapeutic approach, at a time where all efforts are needed to fight against the under diagnosis and under treatment of hypertension. However, tailoring guidelines for the United Kingdom has two advantages: these recommendations implement previous guidelines which doctors are familiar with,<sup>8</sup> and they are adapted to the NHS.

The British guidelines, which are published as a summary in this issue (p 634), simplify the therapeutic approach by selecting a small number of evidence based key actions.<sup>7</sup> Several boxes are added to give immediate answers to some key questions, for instance concerning the treatment target for antihypertensive drug therapy, or the contraindications for the major classes of antihypertensive drugs.

The strength of these guidelines is to delineate clearly the main objectives of the primary care physician, and the means for reaching these objectives. For instance, the choice of initial treatment has been facilitated by recent meta-analyses showing that overall

most classes of drugs are similarly safe and effective. These include the diuretics and  $\beta$  blockers (older drugs) and calcium channel blockers, angiotensin converting enzyme inhibitors, and angiotensin II receptor blockers (newer drugs).<sup>9</sup>

The British guidelines remind us that “the main determinant of benefit from blood pressure lowering drugs is the achieved blood pressure, rather than the choice of therapy.” In other words, the lower the pressure the better. Worldwide, a common reason for poor control of blood pressure is that most doctors keep using monotherapy in patients who obviously need combination therapy to normalise blood pressure. The British guidelines insist on at least two blood pressure lowering drugs in most patients. A simple treatment algorithm, named AB/CD, is now formally incorporated into the guidelines and underscores the need for two or three drugs for most patients.<sup>10</sup> Particularly, it states that drugs that inhibit the renin-angiotensin system—angiotensin converting enzyme inhibitors and angiotensin II receptor blockers (A) or  $\beta$  blockers (B)—should be logically combined with drugs which do not inhibit it—calcium channel blockers (C) or diuretics (D).<sup>11</sup> Although this therapeutic approach has yet to be validated by controlled trials, it illustrates the pharmacological synergy between drugs. By recommending the AB/CD algorithm, the British guidelines are more prescriptive than the European guidelines, which maintained  $\alpha$  blockers as first line drug treatment and offered a larger possibility of drug combinations.

The British guidelines also differ from the US guidelines, which positioned thiazide-type diuretics in the centre of treatment strategy after the ALLHAT trial showed that a therapeutic strategy based on a thiazide-type diuretic was superior to strategies based on a calcium channel antagonist or an angiotensin converting enzyme inhibitor in preventing some major forms of cerebrovascular disease. These different therapeutic strategies should be compared for their effectiveness in lowering blood pressure and cerebrovascular disease.

“The lower the pressure the better” is particularly true for patients at high cardiovascular risk. The British guidelines provide simple means, like European guidelines and to a larger extent than US guidelines, for identifying hypertensive patients at high cardiovascular risk—diabetes, complications of hypertension, target organ damage, or a 10 year cerebrovascular disease risk of 20% or more. (A risk scoring system to detect these patients more precisely, jointly established by the British societies and adapted from epidemiological

data recorded in the United Kingdom, is available in the full version of the British Hypertension Society's guidelines or on the society's website ([www.bhsoc.org](http://www.bhsoc.org)).<sup>13</sup>) The theoretical benefit in reducing cerebrovascular disease is largest in this high risk population. Unfortunately, this is precisely the population in which the rate of control of hypertension is one of the lowest.

In any case, adherence of primary care physicians to the British guidelines is key to successfully treating their individual patients, thus improving the rate of control of hypertension and reducing cardiovascular events.

Stéphane Laurent *professor and head of department*

Department of Pharmacology and Inserm EMI 0107, Hôpital Européen Georges Pompidou, 20 rue Leblanc, 75015 Paris, France ([stephane.laurent@egp.ap-hop-paris.fr](mailto:stephane.laurent@egp.ap-hop-paris.fr))

Competing interests: SL is an adviser for Chiesi, Merck Sharp and Dohme, and Servier.

- 1 Wolf-Maier K, Cooper RS, Banegas JR, Giampaoli S, Hense HW, Joffres M, et al. Hypertension prevalence and blood pressure levels in 6 European countries, Canada, and the United States. *JAMA* 2003;289:2363-9.
- 2 Wolf-Maier K, Cooper RS, Kramer H, Banegas JR, Giampaoli S, Joffres MR, et al. Hypertension treatment and control in five European countries, Canada, and the United States. *Hypertension* 2004;43:10-7.

- 3 Guidelines Sub-Committee. 1999 World Health Organization-International Society of Hypertension guidelines for the management of hypertension. *J Hypertens* 1999;17:151-83.
- 4 The sixth report of the Joint National Committee on prevention, detection, evaluation, and treatment of high blood pressure. *Arch Intern Med* 1997;157:2413-46.
- 5 Guidelines Committee. 2003 European Society of Hypertension-European Society of Cardiology guidelines for the management of arterial hypertension. *J Hypertens* 2003;21:1011-53.
- 6 Chobanian A, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL, et al. The seventh report of the Joint National Committee on prevention, detection, evaluation, and treatment of high blood pressure. The JNC7 report. *JAMA* 2003;289:2560-72.
- 7 Williams B, Poulter NR, Brown MJ, Davis M, McNnes GT, Potter JF, et al. British Hypertension Society guidelines for hypertension management 2004 (BHS-IV): summary. *BMJ* 2004;328:634-40.
- 8 Ramsay LE, Williams B, Johnston GD, MacGregor GA, Poston L, Potter JF, et al. British Hypertension Society guidelines for hypertension management 1999: summary. *BMJ* 1999;319:630-5.
- 9 Staessen JA, Wang JG, Thijs L. Cardiovascular prevention and blood pressure reduction: a quantitative overview updated until March 2003. *J Hypertens* 2003;21:1055-76.
- 10 Brown MJ. Better blood pressure control: how to combine drugs. *J Hum Hypertens* 2003;17:81-6.
- 11 Dickerson JE, Hingorani AD, Ashby MJ, Palmer CR, Brown MJ. Optimisation of antihypertensive treatment by crossover rotation of four major classes. *Lancet* 1999;353:2008-13.
- 12 Williams B, Poulter NR, Brown MJ, Davis M, McNnes GT, Potter JF, et al. Guidelines for management of hypertension: report of the fourth working party of the British Hypertension Society, 2004-BHS IV. *J Hum Hypertens* 2004;18:139-85.

## Congenital heart disease

### *Monitoring interventions after Bristol*

Children in the United Kingdom with congenital heart disease undergo surgery and catheter based interventions with a very high probability of survival as counted at 30 days and one year, according to data from the United Kingdom's central cardiac audit database.<sup>1</sup> The publication of these excellent results concerning a high profile area of practice prompts a reflection on the issues surrounding the collection and validation of clinical data and the methods used to evaluate outcomes.

To keep a tally of operations and their outcome, to have these results available for reflection, to be shared with colleagues, and for inspection by others, should be a simple matter and entirely appropriate.<sup>2</sup> Compared with, for example, the long term, multiple, and relatively subjective outcomes of cleft lip and palate correction, cardiac surgery is a readily countable activity—each operation is a major event, and death is an absolute and objective outcome. But doing this well has proved to be very difficult. When an audit was conducted in adult surgery of all cases operated on between April 1997 and March 1998 in 10 UK centres, 25% of essential data elements were missing.<sup>3</sup> In this central cardiac audit database report 22% of deaths would have been unrecorded,<sup>1</sup> had they relied on hospitals' discharge data. The data were corrected by linkage through NHS numbers to death registration at the Office for National Statistics. If there is no traceable unique identifier it is impossible to check back for veracity of data or be confident whether the individuals are alive or dead, before even considering reliability of data for research purposes.<sup>4</sup> But there is a substantial obstacle to retaining the identity of individuals in databases—a growing preoccupation with privacy and confidentiality. "The government has made it clear that

informed consent is the fundamental principle governing the use of patient information by any part of the NHS or research community"<sup>5</sup>; otherwise no identifiable data can be used unless exemption is gained by specific application under section 60 of the Health and Social Welfare Act 2001. The requirements are exacting, and the intention is evidently to tighten not relax them.<sup>5</sup>

Conflicting pressures exist for and against keeping on computer record traceable information about individuals while respecting their privacy. Allegations of rape and child abuse against the child murderer Ian Huntley were deleted and with them went the alert that might have prevented his employment as a school caretaker. British Gas cut off the gas supply to an elderly couple: they both died of hypothermia, without social services knowing. Observance of the Data Protection Act 1998 was cited in explanation of both.<sup>6</sup> Potential methods of protecting individuals' rights while collecting data to take better care of them are available<sup>7</sup> and will be the future of clinical databases, but the implications in making "privacy" sacrosanct rather than considering the greater good are wide. Implementation of the national programme for information technology will be undermined unless a patient specific identifier (ideally the NHS number) is included. The greater good would seem to require it. After all, we already put on paper all of this information about our patients in an inherently less secure form—the paper notes.

One of the benefits of computer storage and retrieval of data that has been slow in coming is to save work rather than add to it. Rather than replicate over and over the task of data collection, more use should be made of data collected nationally (in England, for