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Editor's Choice

A new era for blood pressure management

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This week we publish two studies that, taken together, may herald a new era of blood pressure management. So say our editorialists Richard McManus and Jonathan Mant (doi:10.1136/bmj.b940). The studies challenge the current orthodoxy, which is still that antihypertensive treatment should be titrated against regular blood pressure measurements. If acted on, these studies will simplify how we manage cardiovascular risk, with antihypertensive treatment being offered regardless of blood pressure, with less frequent blood pressure monitoring, and with checking for adverse events as the main focus of medical care.

The first paper, by Malcolm Law and colleagues, represents an enormous amount of work (doi:10.1136/bmj.b1665). The authors looked at data from 147 trials of antihypertensive treatment published between 1966 and 2007 involving 464 000 people aged 60-69. Their aim was to address the continuing uncertainty about which drugs to use and who to treat. They found that any one of the main classes of drug at standard dose reduced the incidence of fatal and non-fatal myocardial infarction by about a quarter and stroke by about a third. Incidence of heart failure was also reduced by about a quarter. These reductions were similar in people with and without clinical cardiovascular disease and regardless of blood pressure before treatment. All classes of antihypertensive had a similar effect for a given reduction in blood pressure.

Two of the authors, Malcolm Law and Nick Wald, proposed the "polypill" (combining a statin, three antihypertensives at half standard dose, folic acid, and aspirin) in the *BMJ* six years ago as "a strategy to reduce cardiovascular disease by more than 80%" (*BMJ* 2003;326:1419, doi:10.1136/bmj.326.7404.1419). In their new paper they find some indirect support for the polypill concept. They discuss how combining their new results with two previously published studies shows that three antihypertensive drugs together, each at a low dose to minimise side effects, could increase the preventive effect, reducing heart attacks by about 45% and stroke by about 60%.

As McManus and Mant say, if antihypertensives differ little in their efficacy, then acceptability in terms of adverse effects becomes the key driver in deciding which drugs to use. And given the findings of our other blood pressure paper this week, acceptability rather than blood pressure itself becomes the main focus of medical check ups, which may be needed much less often than currently supposed. Katherine Keenan and colleagues (doi:10.1136/bmj.b1492) sought to differentiate true changes in blood pressure over time from random variation and measurement "noise". Using data from the treatment arm of a randomised trial of long term antihypertensive drugs in people who had had a stroke or transient ischaemic attack, they found that when a patient's blood pressure was seen to exceed treatment thresholds this was most likely to be due to day to day variability rather than to true increases in blood pressure.

In the UK, general practitioners are currently paid to ensure that their patients' blood pressures have been checked in the past nine months. If such checks are not only costly in terms of patients' and doctors' time but also likely to give unreliable information, how soon can we change the policy?

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Management of blood pressure in primary care

Richard J McManus and Jonathan Mant

BMJ 2009 338: b940. [Extract] [Full Text]

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Katherine Keenan, Andrew Hayen, Bruce C Neal, and Les Irwig

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N J Wald and M R Law

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