

HEALTH & WELL-BEING

TECHNOLOGY CAN HELP US TO REDUCE THE INCIDENCE OF HIGH BLOOD PRESSURE



Professor **Eoin O'Brien**, Vice President of the Irish Heart Foundation considers four problems that are contributing to what is now being dubbed 'the hypertension epidemic' and says cost-effective solutions can have an immediate and far-reaching impact on the health of the nation.

HOW COMMON IS HIGH BLOOD PRESSURE?

In Ireland, as in other western societies, high blood pressure (known also as hypertension) affects 30 per cent of the adult population. As blood pressure (BP) rises with age, it is not surprising to find that nearly 70 per cent of those aged 70 have hypertension. Projections indicate that the Irish population aged 65 years or older will grow by around 107,771 persons in the period 1996-2011, to represent in total about 14 per cent of the general population; many of these are likely to have hypertension.

WHAT ARE THE CONSEQUENCES OF HIGH BP?

High BP damages the arterial blood vessels. In the brain this results in stroke, cognitive impairment and dementia; in the heart - heart attack and heart failure, in the kidneys - kidney failure and the need for dialysis and in the lower limbs - peripheral vascular disease. All these consequences are preventable and though these illnesses are influenced by an individual's genetic make-up, lifestyle and environmental factors, the single most important causative factor is uncontrolled blood pressure, which if

reversed would bring the biggest benefit to Irish society and the greatest financial saving to the health care system. For example, in Ireland 5,000 of the 10,000 strokes occurring annually could be prevented if BP was controlled.

THE STATE OF BP CONTROL IN IRELAND

Despite knowing for at least two decades the importance of BP control in preventing stroke, and despite having more than enough drugs available to effectively treat hypertension, the 'rule of halves' is operative in most European countries: only half the people with hypertension are aware that their BP is raised; of those identified as having high BP, only half are on BP lowering drugs; and of those receiving treatment, only half are well controlled.

Until the publication of SLÁN 2007, we in Ireland held the misguided belief that we were at least as good as the rest of Europe, in other words the 'rule of halves' could be applied to the Irish population. In the SLÁN 2007 Survey, 60 per cent of respondents had high BP, of whom 57 per cent were not on medication and of those on medication, 70 per cent were not controlled in that their BP remained high even on treatment.

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WHY IS BP NOT CONTROLLED BETTER IN IRELAND?

We now have a range of most effective drugs for lowering BP so why are we not doing better? I will consider four problems that are contributing to what is now being dubbed 'the hypertension epidemic' and I will provide cost-effective solutions that would have an immediate and far-reaching impact on the health of the nation.

INACCURATE BP MEASUREMENT

The technique of BP measurement used in practice is renowned for its inaccuracy. Quite apart from the inaccuracy of the technique, it induces white coat hypertension, a condition in

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which the doctor-recorded BP is high but BP becomes normal as soon as the patient leaves the medical environment; over 20% of patients with so-called hypertension have this condition. By contrast, the doctor-recorded BP can be normal in some 15% of patients who have elevated BP during the day or night - so-called 'masked hypertension'. It follows, therefore, that hypertension is being misdiagnosed in as many as a third of all patients attending for routine BP measurements.

We now have the methodology of ambulatory blood pressure measurement (ABPM) that overcomes the shortcomings of BP snapshots in the surgery or hospital and provides a profile of BP over the 24-hour period. In addition the technique has been adapted in at least one system to provide an interpretative report of the 24-hour plot and the ability to collect data centrally. The RAMBLER Study in Ireland (the results of which are presently being analysed) has linked over 200 primary care practices with Galway University and has shown that ABPM and central hosting system can be a feasible means of improving BP control.

INADEQUATE EDUCATIONAL CAMPAIGNS

The public remains largely uninformed about the prevalence and consequences of hypertension. Public education is required on the relationship between blood pressure and lifestyle factors, such as dietary salt, raised body weight, inactivity and high alcohol intake. A major 'Know your numbers' campaign is required and the public need to be alerted to the fact that taking BP lowering drugs is not enough; these drugs must achieve BP control over the 24-hour period.

FAILURE TO INVOLVE PATIENTS IN BP MANAGEMENT

Hypertension is a life-long condition and patients must be involved in management. Patients must be made aware of the consequences of high BP and the importance of lifestyle change to reduce blood pressure as much as possible without medication. Though

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the decision to start medication may be influenced by total cardiovascular risk i.e. the level of blood pressure as well as for example the blood cholesterol level and whether or not the person smokes, the majority of patients with sustained hypertension require drug treatment. Patients should be advised not only about taking drugs to lower BP but they must also ensure that the drugs are bringing BP to normal levels during the day and night. Towards this end the dabl® system is now available in a number of pharmacies so that patients can learn about their own 24-hour ABPM and see if treatment is being effective.

FAILURE TO PRESCRIBE ADEQUATE BP LOWERING DRUGS - THERAPEUTIC INERTIA

In the past a number of factors have led to therapeutic inertia whereby patients have not been prescribed adequate drugs to achieve BP control; these have included side effects, cost and poor adherence to medication by patients. However, with newer combination drugs it is possible to achieve BP control in the majority of patients with no adverse effects, but the patient must be shown evidence that medication is achieving BP control over 24 hours.

CONCLUSION

We will do much better in our management of hypertension if we make changes to current practice. If not I fear we will be overwhelmed by the cardiovascular consequences of hypertension. We must take advantage of the technological advances that are available so as to change the future health of the nation in a very cost-effective way. Only by being innovative can we ensure that an ageing population will enjoy active longevity.

Professor Eoin O'Brien is Professor of Molecular Pharmacology, The Conway Institute, University College Dublin, and Vice-President of the Irish Heart Foundation. Email: eobrien@iol.ie

The author has contributed financially to the development of the dabl® ABPM software program for ambulatory blood pressure measurement and is a member of the Board of dabl Limited, Dublin, Ireland.

