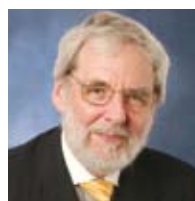


● Hypertension

The disgrace of Ireland's blood pressure statistics



Prof Eoin O'Brien examines the state of the nation's blood pressure as revealed by the SLÁN survey and concludes that unless we take immediate action, the prospects for Ireland's cardiovascular health look pretty bleak

The 'SLÁN 2007 Survey of Lifestyle, Attitudes and Nutrition in Ireland' has just been published (www.slano7.ie). This is the most comprehensive survey of the state of Ireland's health, involving face-to-face interviews with over 10,000 adults, along with a sub-study on the body size of approximately 1,000 younger adults (aged 18-44) and a more detailed physical examination of over 1,200 adults (aged 45 years and over).

In summary, almost half of the participants surveyed were not taking adequate physical activity; almost one-third of respondents either always or usually added salt to food while cooking, or added salt to food at the table; 48 per cent had smoked at some point in their lives, with 29 per cent being current smokers; 94 per cent had at least one of three risk factors – namely high blood pressure, high cholesterol and obesity; 59 per cent had two out of three and 18 per cent had all three risk factors. Obesity has increased from 18 per cent to 25 per cent since the last SLÁN report in 2002. So the future for the nation's cardiovascular health is truly awful.

My purpose in this review is to concentrate on the revelations which SLÁN 2007 provides on the state of nation's blood pressure (BP).

A major risk to all

Before looking at the SLÁN 2007 data on BP, it is pertinent to remind ourselves, firstly, of the prevalence of hypertension and secondly, how serious a risk it is for cardiovascular events. 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. Nearly 25 per cent of persons in this group will be over 80 years.

Put another way, in 1926 an Irish male infant was expected to live only 57 years, with Irish female infants faring slightly better by surviving to 58 years. Contrast this with similar estimates in 1996, when Irish men at birth can expect to live until 73 years and Irish women until 78.5 years.

In Ireland, as in other western societies, hypertension affects 30 per cent of the adult population. BP rises with age, with 30 per cent of the population aged 30 and 70 per cent of those aged 70 having hypertension. With increasing longevity worldwide, estimates for high BP will approach one billion people. Approximately 12.8 per cent of all worldwide deaths (7.1 million) and 4.4 per cent of all disability life years lost (64.3 million) in the year 2000 were due to poor control of BP levels.

The inevitable consequence of increased longevity and the accompanying rise in the prevalence of hypertension in Ireland is that despite remarkable therapeutic advances, the burden of heart attack and stroke must increase. Ironically, the very medical advances that have resulted in a substantial reduction in coronary heart

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Worldwide in 2000, 4.4 per cent of all all disability life years lost were due to poor BP control

disease mortality will further accelerate this burden by allowing progression to stages of the illness not previously commonplace, such as heart failure.

Effective control of hypertension

Most strokes are preventable and though the causes of stroke (and heart attack) are multifactorial, ranging from an individual's genetic make-up to lifestyle and environmental factors, if one examines the greatest benefit accruing to Irish society by the reversal of a single risk factor, it would have to be the effective control of hypertension.

Based on the evidence available, it can be safely stated that if patients with hypertension in Ireland had their blood pressure reduced to optimal levels, stroke could be reduced by at least 50 per cent and probably appreciably more, and incidence rates of heart attacks and other cardiovascular manifestations of hypertension would also be reduced.

The caveat to this assumption is that BP must be reduced to optimal levels; merely prescribing antihypertensive drugs will not suffice.

BP control in the rest of Europe

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 opera-

tive 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 basked in 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. Unhappily, the situation is far worse!

BP in Ireland

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 to levels below 140/90 mmHg.

In addition, 62 per cent had cholesterol levels of 5.0 mmol/L or higher, and were not receiving treatment and 48 per cent had both hypercholesterolaemia and hypertension. If we reflect on the fact that conventional blood pressure measurement is inaccurate and misleading and that the level of 140/90 mmHg is now regarded as a liberal figure (130/80 mmHg being considered optimal), the real state of affairs is likely to be even worse.

Since Riva-Rocci and Korotkoff gave us the technique of conventional blood pressure measurement over a century ago, we have landed men on the moon, encircled Mars, invented the automobile and aero-

plane and most importantly, revolutionised the technology of science with the microchip. Why, we might ask, has medicine ignored scientific evidence for so long so as to perpetuate a grossly inaccurate measurement technique in both clinical practice and hypertension research?

It is a salutary thought that if (as conservative estimates show) white coat hypertension is present in 20 per cent of the population when BP is measured conventionally in primary care, and if masked hypertension is present in 10 per cent of patients whose BP is measured in similar circumstances, it follows that hypertension is being misdiagnosed in as many as a third of all patients attending for routine BP measurements.

Ireland was the first European country to show that ambulatory blood pressure measurement (ABPM) using the dabl interpretive reporting and analysis software programme could be used effectively in primary care to achieve better BP control in patients with hypertension.

Impact of ABPM on decisions

The RAMBLER study showed that ABPM allowed patients with inadequate BP control to be identified and in some cases prevented from unnecessarily commencing on antihypertensive medication, and that BP control was improved in those managed with ABPM compared with conventional measurement. This led the authors of the RAMBLER study to conclude that 'ABPM appears to have a significant impact on decision-making of general practitioners and on the medical management of patients with hypertension in the community'.

Recently, the Spanish Society of Hypertension has taken the RAMBLER message and gone one step further in developing a nationwide project based on electronic transfer of data to promote the use of ABPM in primary care settings.

With 1,126 physicians contributing over 20,000 ABPM records, the study has demonstrated that there was a wide discrepancy between clinic and ambulatory BPs, particularly in patients with severe hypertension at the office; that high risk patients had the most unfavourable ABPM levels when compared with low-to-moderate risk patients, in spite of receiving much more antihypertensive treatment; and that high-risk hypertensive patients showed a high prevalence of a nocturnal non-dipper pattern.

Conclusions

We are indebted to the SLÁN team for providing, for the first time, data on the state of the nation's blood pressure, and the figures are truly alarming. One does not have to need to be an Einstein to forecast that if the present situation is allowed to continue, an epidemic of stroke will magnify the damning indictment of stroke care facilities in Ireland as depicted in the recently-published Irish Heart Foundation National Audit of Stroke Care and render the call for stroke care facilities inadequate for the future.

We need to be innovative and turn our attention, as the Spaniards have done, to reversing the present ambivalent attitude to the management of hypertension so as to obtain control of BP, and to document that we are doing so by using ABPM and central data collection.

If we do so, we can prevent up to 5,000 strokes per annum and we will see an ageing population enjoy active longevity, rather than being institutionalised or dependent on carers, wheelchairs and Zimmer frames.

References on request.

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