

● Coronary heart disease

Has anything changed in the management of CD?



Prof Eoin O'Brien writes that the results from the EUROASPIRE surveys show a continuing gap between the standards set in cardiovascular disease prevention guidelines and the reality of clinical practice

The first EUROASPIRE (European Action on Secondary and Primary Prevention by Intervention to Reduce Events) survey was carried out in 1995–96 in nine European countries, the second in 1999–2000 in 15 European countries (of which Ireland was one) and the third in 2006–07 in 22 countries, including eight countries that participated in EUROASPIRE I and II.^[1]

The first and second EUROASPIRE surveys showed high rates of modifiable cardiovascular risk factors in patients with coronary heart disease. The third EUROASPIRE survey was to show if preventive cardiology had improved and if the Joint European Societies' recommendations on cardiovascular disease (CD) prevention were being followed in clinical practice.^[2]

Has anything changed?

The short answer must be – yes, but for the worse! About a fifth of patients continued to smoke, with no reduction over the 12 years, but the proportion of women smokers aged less than 50 years had increased.

Furthermore, there was a substantial rise in obesity and diabetes mellitus – in the latest survey, almost 40 per cent of patients were obese (with a body-mass index of 30kg/m² or higher) and close to 30 per cent reported diabetes mellitus.

The only good news was a reduction in the proportion of patients with raised total cholesterol (≥ 4.5 mmol/L) with a fall from 95 per cent in EUROASPIRE I to 46 per cent in the latest survey, but even allowing for a substantial increase in the prescribing of lipid-lowering drugs, almost half of all patients remained above the recommended lipid targets.^[3]



Surgeons performing heart surgery in a hospital operating theatre

BP control – the greatest failure of all

Despite a substantial increase in antihypertensive medication, the proportion of patients with raised blood pressure (BP) (140/90 mmHg in patients without diabetes or $\geq 130/80$ mmHg in patients with diabetes) was similar at about 60 per cent in all three surveys, being even worse than the much-quoted rule of halves – that only half

the people in Irish society 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.

These figures from our European neighbours are in keeping with the recent SLÁN 2007 Survey in Ireland, showing that 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.^[3]

The 2007 Joint European Societies' guidelines on cardiovascular disease prevention recommended a lower BP target of less than 130/80 mmHg in patients with established cardiovascular disease or diabetes, but EUROASPIRE III shows

that three out of five patients in Europe are not reaching this target.^[2]

Are these BP statistics accurate?

One does not have to be a scientist par excellence to answer this question – if measurement is inaccurate, all conclusions based on such measurements must be themselves flawed. The authors of EUROASPIRE III go to considerable lengths to standardise measurements between the three surveys but, in truth, this is time wasted because whatever methodology was used, the simple truth is that conventional BP measurement is grossly inaccurate and misleading.

As I have pointed out repeatedly, 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.^[4]

Can we obtain better data?

Ireland was the first European country to show that ambulatory BP 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.

The RAMBLER study showed that ABPM allowed patients with adequate 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.^[5]

A RAMBLER II study is now commencing in Ireland, but to Spain must go the credit for taking the bull by the horns!

A series of informative analyses from the Spanish Society of Hypertension ABPM Registry study of ABPM in primary care was founded in 2004 on the basis that there was considerable evidence to show that BP levels measured conventionally in primary care were substantially higher than levels recorded using ABPM – and that this discrepancy was likely to lead to erroneous decisions in the management of hypertension and to be a major factor in the poor rates of BP control being achieved in virtually all countries of the world.

To date, over 90,000 patients have been recruited from more than 500 primary care practices across the country and the results are illuminating.

First, though the burden of poorly treated hypertension is remarkably high, blood-pressure control in the community is nearly twice as good when judged by ABPM as compared to office blood-pressure.

Second, 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.

Third, high-risk hypertensive patients showed a high prevalence of a non-dipping nocturnal pattern, with treated patients being more likely to show a non-dipping pattern.^[6]

So while not denying the dismal message from EUROASPIRE III on blood-pressure control in high-risk patients, surely it is time for us to utilise the advances in BP measurement technology and the on-line potential that broadband technology allows for the central collection of accurate measurement data.

Conclusion

EUROASPIRE III shows that risk-factor modification is truly awful, not changing in patients with established cardiovascular disease in whom (as distinct from patients without known disease) we might expect guideline recommendations to be implemented in clinical practice. The EUROASPIRE surveys add forcefully to the alarming message that the application of cardiovascular disease prevention into daily clinical practice is wholly inadequate.

As the authors point out, "The comparison between the three EUROASPIRE surveys shows a continuing gap between the standards set in cardiovascular disease prevention guidelines and clinical practice."^[1]

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