

Cardiovascular mortality

Affluent Ireland is faring poorly in comparison to other European countries in terms of cardiovascular mortality, writes the President of the Irish Heart Foundation, **Prof Eoin O'Brien**

MORE people still die of cardiovascular disease (CVD) — high blood pressure, coronary heart disease, strokes and arterial disease — every year in Ireland than from any other cause. It kills more people than cancer, suicide and road accidents combined. However, the numbers dying from heart disease have been decreasing steadily over the past 20 years.

In 2006 there were 3,700 fewer deaths from heart attack than in 1984. I noted in this column some time ago that this gratifying trend in the hard-fought battle against cardiovascular disease may be at an end, if for no other reason than recent figures from the Central Statistics Office showed an alarming 10 per cent increase in mortality.¹ Now we are faced with disturbing reports from Europe that support the inevitability of an increase in cardiovascular mortality in the near future.

“

223 people (aged 45 to 74) per 100,000 of the Irish population died from coronary heart disease in 2000, compared with just 65 in France, 87 in Portugal and 91 in Italy

”

As in Ireland, mortality rates from coronary heart disease in the UK have continued to decline steadily since the late 1960s, which is not to deny the fact that coronary heart disease remains the leading cause of death and exacts a heavy social and economic toll. What is interesting, and worrying, about these UK statistics is that the previous falls in age-specific mortality rates seem to be flattening in men and women aged less than 55 years, whereas mortality rates in older adults continue to decline.

It is salutary to consider that this trend is occurring despite the increasing use of evidence-based treatments,



Prof Eoin O'Brien, President, Irish Heart Foundation

such as angioplasty, thrombolysis and ACE inhibitors.

The explanation is not difficult to find: between 1993 and 2003, some of the largest relative increases in obesity and diabetes have occurred among adults aged 45 years; mean concentrations of cholesterol have fallen little or even increased among some of the younger age groups; the previous decline in smoking rates may be leveling off among young adults with the smallest reduction seen in men aged 25 to 34; and material deprivation may be an additional risk factor in younger adults, especially among the immigrant population.

It is not surprising, therefore, to expect to see adverse trends in CHD mortality rates appearing first among young adults.

Now, to add to this report, we have two further disturbing sets of statistical analyses.

The first of these is the 2008 European cardiovascular disease statistics, which brings together all the available sources of information about the burden of CVD in Europe.

Also included is an analysis of the staggering economic costs of CVD in Europe. CVD costs the EU just under €192 billion per annum — some 60 per cent of which is for healthcare costs and 20 per cent is from lost productivity and the cost of informal care.

The direct healthcare costs alone cost each resident of the EU €223 per annum. The cost of in-patient hospital care for people who have CVD accounted for about 54 per cent of these costs, and that of drugs for about 28 per cent. Almost one-fifth of healthcare expenditure on CVD in the EU is due to stroke, which is estimated to cost the EU economy over €38 billion a year.

In-patient hospital care for people who have strokes accounted for about 80 per cent of these costs and drugs accounted for about 6 per cent. Of the total cost of stroke in the EU, around 49 per cent is due to direct healthcare costs, 23 per cent to productivity losses and 29 per cent to the informal care of people with stroke.

Each year, CVD causes over 2 million deaths in the European Union (EU), which represents nearly half of all deaths. CVD is the main cause of death in women in all countries of Europe and is the main cause of death in men in all countries except France, the Netherlands and Spain.

Over a third of deaths from CVD are from coronary heart disease (741,000 deaths per annum) making it the single most common cause of death in the EU, with one in six men (16 per cent) and one in seven women (15 per cent) dying from the disease.

Just over a quarter of



IRISH HEART FOUNDATION

deaths from CVD are from stroke, with one in 10 men (9 per cent) and one in eight women (12 per cent) dying from the disease, but with increasing longevity and rising blood pressure these figures can only rise.

In another recent European report, Jacqueline Müller-Nordhorn and her colleagues calculated age-standardized mortality rates for coronary heart disease and stroke from data provided by the statistical office of the European Communities (Eurostat) and the national statistics offices of all the countries.⁴

They focused on those aged 45 to 74, as mortality in younger age groups is very low. They divided the rates per 100,000 of the population into quintiles of lowest to highest. It is readily evident that Ireland, with the exception of stroke, ranks with the worst countries in Europe for CVD mortality, coming 18th out of the 30 countries, with countries such as Latvia, Estonia and Slovakia performing the worst. Irish people are three times more likely to die from heart disease than people in France, Portugal and Italy.

Despite being one of the wealthiest countries in Europe, Irish mortality rates from CVD are as bad as those in less well-off Eastern European countries such as Poland, Macedonia and Croatia. The study shows that 223 people (aged 45 to 74) per 100,000 of the Irish population died from coronary heart disease in 2000, compared with just 65 in France (with the lowest death rate in Europe) 87 in Portugal and 91 in Italy.

How can Ireland prevent the inevitable?

It is one thing to look at the trends in mortality statistics, but this should not blind us to the fact that in Europe non-fatal events, such as stroke and heart failure, far from declining are on the increase, mainly because of increased longevity.

Approximately 10,000 acute strokes are admitted to hospital in Ireland each year, and for those who survive — some 30,000 people — only half make a complete recovery, leaving the remainder with the problems of coping

with serious disability and in need of support to cope with the activities of daily life.

High blood pressure — the major determinant of stroke — affects over a third of the adult population, and this figure doubles after the age of 60 years.

“

We must alert our patients to the dangers by giving appropriate lifestyle advice and encourage them to know their numbers — weight, blood pressure, total and LDL cholesterol and blood sugar

”

Globally, 62 per cent of stroke, 49 per cent of coronary heart disease and 14 per cent of other cardiovascular disease has been attributed to inadequate control of blood pressure. One of the most worthwhile initiatives to reverse the growing epidemic of stroke and heart attack in an ageing society will be the control of high blood pressure, which has the potential to reduce stroke by over 50 per cent.³

Of all of these risks, uncontrolled hypertension is a major causative factor in stroke. The age-adjusted prevalence of hypertension (both diagnosed and undiagnosed) in 1999 to 2002 was 78 per cent for older women and 64 per cent for older men.

Subjects with BP less than 120/80mmHg have approximately half the lifetime risk of stroke of subjects with hypertension.²

So what can we, as practising doctors, do to combat

what is clearly a rising cardiovascular epidemic, of which we are seeing only the tip of the iceberg? We need to alert our patients to the dangers by giving appropriate lifestyle advice in relation to diet, salt and alcohol intake, smoking, exercise, and importantly encouraging our patients to know their numbers — weight, blood pressure, total and LDL cholesterol and blood sugar — and not only their numbers but what levels of normality they should strive to achieve.

Finally, we need to shake off what has been dubbed therapeutic inertia — patients with any evidence of cardiovascular disease need to be treated so as to obtain optimal cardiovascular status.

Only by doing so, will we avert the onset of stroke, heart attack and heart failure. There is a limit, however, to what doctors can do — the healthcare providers must acknowledge the omens and act urgently. ■

References

1. Vital Statistics. First Quarter 2007. Compiled by the Central Statistics Office on behalf of the Department of Health and Children. Government Publications Sales Office, Sun Alliance House, Molesworth Street, Dublin 2
2. O'Flaherty M, Ford E, Allender S, Scarborough P, Capewell S. Coronary heart disease trends in England and Wales from 1984 to 2004: concealed levelling of mortality rates among young adults. *Heart* 2007; 000:1-4. doi: 10.1136/hrt.2007.118323
3. European cardiovascular disease statistics 2008 edition. British Heart Foundation Health Promotion Research Group, and Health Economics Research Centre, Department of Public Health, University of Oxford. 2008. pp.112
4. Muller-Nordhorn J, Binting S, Roll S, Willich SN. An update on regional variation in cardiovascular mortality within Europe. *Eur Heart J* doi:10.1093/eurheartj/ehm604

Prof Eoin O'Brien
President,
Irish Heart Foundation