Combating vascular disease in Scotland: 20 years of SHARP

The Scottish Heart and Arterial Risk Prevention Group (SHARP) was launched in 1988 with the aim of helping to reduce and prevent premature morbidity and mortality from cardiovascular disease (CVD) in Scotland. The programme for the 20th anniversary meeting – held on the 20th–21st November 2008 in the Hilton Hotel Dunkeld – examined the likely future direction for cardiovascular disease prevention and management but also reflected on achievements over the past 20 years. Dr Alan Begg, Chairman of SHARP reports.

Heart disease in Scotland

The age standardised mortality rate for the under 75s for coronary heart disease (CHD) continues to fall in Scotland from a rate of 124.6 per 100,000 population in 1995 to 61.3 in 2007.[1] The 30-day survival for acute myocardial infarction (MI), however, has remained constant over the last few years at 85%. Evidence of major differences in service provision, activity and approach between the devolved nations has been previously highlighted.[2] As the Department of Health Vascular Screening Programme for cardiovascular disease (CVD) and diabetes gathers momentum in the years ahead, this difference is likely to become more apparent. Deprivation as measured by the Scottish Index of Multiple Deprivation is associated with higher rates of CHD mortality. In the 15% most deprived areas in Scotland, the under 75s mortality rate from CHD (standardised by age) increased slightly from 110.2 in 2006 to 112.4 per 100,000 in 2007. This rate had previously fallen year on year from 2000 to 2006, with the prevalence rate in men aged 45–64 in East Glasgow at 9.1% being almost twice that of the rate in Aberdeenshire which is 4.7%. For women aged 45–64 the prevalence rate in north Glasgow is 4.4% compared with the equivalent rate of 1.5% in Shetland.[1]

Speakers at the conference were asked to highlight some important aspects and pressing developments that are required in the forthcoming years.

Acute coronary syndrome

Managing patients with acute coronary syndrome by a specialist cardiology service with access to continuous cardiac rhythm monitoring is now accepted as the norm, Dr John Maclean (GP, National Stadium Sports Medicine Centre, Glasgow) told the conference. There is evidence that patients managed in a specialist cardiology service are more likely to receive evidence-based therapy, compared to general physician care with prompt defibrillation and treatment of arrhythmias. On discharge from a specialist unit, patients are much more likely to be taking appropriate effective preventative drugs.

He felt the move to the use of primary percutaneous coronary intervention (PCI) for acute ST-elevation myocardial infarction (STEMI) will continue since it shows a mortality/reinfarction benefit and a reduced subsequent need for coronary artery bypass grafting. The use of intracoronary stent implantation at the time of primary PCI to reduce reinfarction and improve prolonged revascularisation needs to be encouraged and the use of drug-eluting stents, when clinically relevant, should be considered. There is also a need to ensure easy access to rescue PCI where there is apparent failure of reperfusion with thrombolysis.

Stroke care

Turning to stroke, Professor Peter Langhorne (Professor of Stroke Care, Royal Infirmary, Glasgow) said its rapid recognition and diagnosis was essential to ensure early acute treatment and secondary prevention, including the increased use of early recognition scores by those seeing patients at initial presentation. Early recognition and treatment offers the promise of preventing recurrent stroke or of limiting the extent of stroke damage. One challenge is in selecting patients in the acute phase who will benefit from the use of recombinant tissue plasminogen activator (rtPA) and in how to develop the service to encompass expanding applicability.

Managing patients in stroke units manned by a co-ordinated multidisciplinary team is now well established, he said, with the majority of patients being able to access such services in a timely manner. Rehabilitation needs to be a continuum with facilitation of the process from hospital to home, which requires all components of the stroke service to be fully integrated to ensure collaborative working between all health professional groups including social care.

Familial hypercholesterolaemia

The introduction of a programme of cascade testing to identify patients with familial hypercholesterolaemia will be a welcome development, according to Dr Robert Finnie (General Practitioner, Livingston). This, he said, involves screening and testing all first-degree relatives of an affected case and repeating the process when another affected individual is identified. This screening, carried out in conjunction with genetic testing for the common mutations and gene sequencing, will help to identify the normal mutations apparent within the Scottish population.

Peripheral arterial disease

On the basis of their increased CVD risk, Professor Jill Belch (Professor of Vascular Medicine, Ninewells Hospital, Dundee) told the meeting that there is an urgent need for patients with peripheral arterial disease (PAD) to be included in the Quality and Outcomes Framework (QOF) for general practitioners, either within its own disease category or as a directly enhanced service.

The REACH registry has shown that patients with PAD experience the highest rates of cardiovascular death and major cardiovascular events due to atherothrombosis and these higher event rates in patients with PAD may reflect a higher proportion of disease in other vascular beds.[3] She said this level of risk makes them one of the highest priority group of patients for intensive risk reduction.

Chronic kidney disease

Dr Chris Isles (Consultant Physician, Dumfries and Galloway Royal Infirmary) spoke about how the management of chronic kidney disease (CKD), especially to minimise cardiovascular risk, will gain increasing importance in primary care as general practitioners bring its management into their chronic disease portfolio. He told delegates that he felt the benefits of renin angiotensin system blockade in reducing progression in those with proteinuric nephropathy needed to be balanced against their potential nephrotoxic effects. Better outcomes from longer periods of dialysis is likely to lead to more nocturnal home dialysis with refinement of immunosuppressant therapy likely in those with a renal transplant. End-of-life issues and palliative care are an important aspect of the patient's management and need to be considered in appropriate cases.

Erectile dysfunction

The association between erectile dysfunction (ED) and its risk factors cannot be ignored with ED predicting the presentation of both acute and chronic CHD, Dr Graham Jackson (Consultant Cardiologist, Guy's and St Thomas's Hospital London) told the meeting. For those men with no cardiac symptoms, there is a window of between two to three years from the onset of ED in which their overall vascular risk can be actively reduced. Those at highest risk should undergo further investigations and intensive preventative therapy.

Cardiovascular risk reduction

Professor Lewis Ritchie (Professor of General Practice, University of Aberdeen) said he believed that traditional boundaries of care, currently demarcated by sectors of provision, will give way to more integrated care focused on the patient journey.

High risk and population strategies will continue to have complementary roles for cardiovascular morbidity/mortality reduction – the likely beneficial effects of the ban of smoking in public places is already being seen in reducing emergency cardiac admissions, for example. Other novel approaches to public and childhood education will also need to be pursued and the Quality and Outcomes Framework (QOF) should continue to evolve to meet the challenges of CVD management and prevention. Aligned to this will be the development and refinement of national standards for the prevention and optimal management of cardiovascular disease, as currently being developed by NHS Quality Improvement Scotland (QIS).

Cardiovascular risk scoring is an inexact science and needs to be refined not only in terms of scientific accuracy, but in addressing equity through deprivation correction. Risk-scoring tools need to be embedded seamlessly within computer systems and used actively to prompt more effective management and targeting. Patient-centred records should be available throughout the NHS and national guidelines also need to be embedded more seamlessly into electronic records in a context sensitive fashion.

Adequate training and learning for the primary care team is essential and there is potential for an extended role for pharmacists along with empowering patients for supported self-care.

Medical research

If patients are to continue to receive the benefit of medical advances and new treatments, it is important that they are encouraged to become involved in medical research, said

Professor Tom MacDonald (Professor of Clinical Pharmacology, Ninewells Hospital Dundee). The 'Get Randomised' campaign, which has the backing of four medical school faculties in Scotland, as well as the support of the Chief Scientist in Scotland, aims to highlight the importance of medical research, increase public awareness of clinical trials, and encourage people to become involved so that present and future generations can benefit from effective treatments.[5]

Atherosclerosis

"With time, genetics may have an increased role in determining the pathogenesis of atherosclerosis and an association with future events," Professor Peter Weissberg (Medical Director, British Heart Foundation) told the meeting. While biomarkers and molecular imaging may assume an increased role in future diagnosis, he said, drug therapy will continue to be the most important for prevention, The role of statins in changing our approach to heart disease prevention cannot be underestimated and the lower the cholesterol level, the better, he concluded. The concern now is that in the future our ability to predict risk may outstrip our ability to modify it.

Conclusion

In the years to come, SHARP will continue to have an important role in facilitating the implementation of guidelines and evidence-based practice, as well as auditing clinical practice. The Scottish Intercollegiate Guidelines Network (SIGN) published in February 2007 updates previous SIGN CHD and CVD prevention guidelines. Nationally agreed standards relevant to CHD management and CVD prevention are currently being developed by NHS QIS and are due to be finalised later this year.[5]

Dr Shirley McEwan, a founder member of SHARP, recently retired as its chairman. She is pictured here with a commemorative crystal bowl inscribed with the SHARP logo to mark her contribution to the prevention of heart disease in Scotland

H.E.A.R.T UK, the cholesterol charity, has recently presented the findings of a review into the implementation of the SIGN cardiovascular prevention guideline in Scotland.[6] Awareness of the guideline was high and GPs continue to use traditional risk-screening tools based on the Framingham function. There are clear concerns, however, about resources for carrying out primary prevention of CHD, as well as concerns about the levels and consistency of specific training for heart disease prevention. In the short term, this lack of educational opportunities is something that SHARP aims to rectify with its use of regional training sessions across Scotland throughout 2009 and 2010. Health Service organisations, clinical networks and public charities all need to work in unison towards the common goal of better prevention and disease reduction. Challenges in vascular disease prevention still remain and SHARP remains committed to rising to that challenge. Where we will be in another 20 years, however, is impossible to predict

References

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