

Cardiology Symposium

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INTRODUCTION

Cardiology has enjoyed a strong evidence base to inform its practise. Simultaneously, sub-specialisation has become more prevalent as diagnostics and therapeutics have advanced. Atrial fibrillation (AF), heart failure and ischaemic heart disease remain relevant to all, not just across the cardiology sub-specialties but also to physicians from other disciplines, general practitioners and specialist nurses who play an increasingly prominent role in the management of these patients in the clinic, acute care settings and the community.

SESSION 1 – ATRIAL FIBRILLATION, THROMBOEMBOLISM AND ANTI-THROMBOTICS

Atrial fibrillation accounts for 25% of all cardiovascular costs in Scotland.¹ Dr Anna-Marie Choy (University of Dundee) gave an overview of rate versus rhythm control strategies for managing AF. Attempting to control rhythm should be guided by symptoms. Rhythm control has not been demonstrated to reduce the incidence of stroke and anti-arrhythmic drugs can be toxic. Whether or not, and in whom, the achievement of sinus rhythm should be the ultimate aim remains for further assessment in the current era of refined ablation techniques, novel oral anticoagulants and newer anti-arrhythmic drugs.

Dr Derek Connelly (Glasgow Royal Infirmary) discussed the role of newer anti-thrombotic agents for thromboprophylaxis in AF. His presentation forms the basis of a detailed review of the subject.

A case-based discussion was led by Dr Paul Broadhurst (Consultant Cardiologist, Aberdeen Royal Infirmary). European Society of Cardiology guidelines provide an algorithm for the treatment of patients with AF but these patients need individualised care. Strong patient preferences are often based upon lifestyle choices and sometimes professional restrictions.

SESSION 2 – HEART FAILURE

Dr Mark Petrie (Scottish Advanced Heart Failure Service, Glasgow) discussed the management of advanced heart failure. After a first admission with heart failure in Scotland, 19% of patients are dead within 30 days.² The uptake of investigations, evidence-based therapies and access to expert care for patients with heart failure is a priority currently being addressed. In addition to the proven benefits of pharmacotherapies, the indications for cardiac resynchronisation therapy pacemakers have broadened.³ Ventricular assist devices are now an established means to support selected patients, ideally as a bridge to myocardial recovery or cardiac transplantation.

Professor John Cleland (Academic Unit of Cardiology, University of Hull) gave an overview of telemedicine in heart failure. A 2010 Cochrane meta-analysis revealed a 34% mortality reduction and a 9% reduction in hospitalisation in patients with heart failure receiving telemonitoring.⁴ Management and reduction of ‘false alarms’ will be a key to success as will focusing telemonitoring toward health maintenance rather than crisis management.

Professor Andrew Clark (University of Hull) discussed co-morbidities in heart failure. Most patients with heart failure have co-morbidity and this contrasts with most patients entered into clinical trials. Half of all patients with heart failure in Hull have impaired renal function. This is multifactorial and a predictor of poor prognosis. One-third of his patients are anaemic, again carrying prognostic implications. The Ferric Carboxymaltose Assessment in Patients with Iron Deficiency And Chronic Heart Failure with and without Anaemia (FAIR-HF) trial demonstrated improved quality of life and walking distances after treatment with intravenous iron in those who were deficient.⁵

SESSION 3 – ISCHAEMIC HEART DISEASE

Professor Keith Fox (University of Edinburgh) delivered the Sir Stanley Davidson lecture on the management of myocardial ischaemia in the patient with impaired ventricular function. Revascularization is an effective treatment for symptoms of angina in this group but data on mortality are less robust. A 2002 meta-analysis of small studies reported that revascularization provides a mortality benefit only in the presence of viable myocardium.⁶ The Surgical Treatment for Ischemic Heart Failure (STICH) trial examined the effect of coronary artery bypass grafting (CABG) in patients with coronary artery disease and left ventricular (LV) dysfunction but the outcome on all-cause mortality was neutral.⁷ The ongoing International Study of Comparative Health Effectiveness with Medical and Invasive Approaches (ISCHEMIA) study will address the benefits of percutaneous coronary intervention (PCI) or CABG in patients with LV dysfunction, significant coronary artery disease and a positive stress test.

Professor John Camm (St George's, University of London) discussed the medical treatment of angina. A total of 14% of men and 8% of women aged between 65 and 74 years have had angina and, following percutaneous coronary intervention, one-third of patients still experience it.⁸ Ivabradine acts at the sinus node to decrease heart rate and its beneficial symptomatic effects are now well documented. Ranolazine prevents intracellular calcium overload but does not affect heart rate or blood pressure. It increases exercise duration and time to angina when given to patients in addition to a calcium channel antagonist or beta blocker.

Dr Duncan Hogg (Consultant Cardiologist, Aberdeen Royal Infirmary) discussed therapies for refractory angina. These patients should be discussed within a multi-disciplinary heart team. Treatment plans should allow maximisation of medical therapy and rehabilitation before liaison with anaesthetists and consideration of referral to the National Refractory Angina Centre. Gene therapy and stem cell therapy may hold some promise for the future but are not ready yet for general use.

Dr Alan Begg (General Practitioner, Montrose) described models of care for the patient with angina in the context of current National Institute for Health and Clinical Excellence (NICE) guidance. Scottish patients tend to undergo exercise electrocardiogram (ECG) testing during initial assessment. This contrasts with systems in England and Wales where NICE guidance has been more widely adopted and exercise testing is not routinely used. The NICE guidelines place more emphasis on clinical assessment alone, computed tomography, functional imaging and/or invasive angiography. The widespread change to this model of care in Scotland would have significant implications for service planning.

SUMMARY

This Symposium delivered updates on current progress in important core areas of cardiology including AF, heart failure and ischaemic heart disease. Perhaps most importantly, it provided an opportunity to reveal gaps in the existing knowledge base. It provided the impetus to challenge current practise, often based on historical evidence that may be less relevant in the current era of novel and refined pharmacotherapies and interventional techniques. Standard models of care are changing or at least being questioned. It remains to be seen what the impact of telemedicine might be on the doctor-patient or nurse-patient relationship and expectations. Models of care such as those employed in Scottish Rapid Access Chest Pain Clinics are being scrutinised rather than quickly and radically overhauled before robust data are available. Evolution rather than revolution may prove to be key.

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