Guidelines to outcomes: clinical leadership in atrial fibrillation

In December 2008, delegates attending a symposium in Barcelona sponsored by sanofi-aventis on atrial fibrillation debated how clinical care could be improved to meet the challenge of caring for increasing numbers of patients with atrial fibrillation and preventing its complications. This report reproduces selected excerpts from the presentations, summarizes the discussion and highlights key learning points for clinicians across the UK.

The atrial fibrillation burden: turning policies into practice

Summarized from the presentation by Henry Purcell, Senior Fellow in Cardiology, The Royal Brompton Hospital, London

Atrial fibrillation (AF) is the most common sustained arrhythmia worldwide. While the estimated prevalence of AF is 1% in the general population (Go et al, 2001), it increases with age to 9% in people 80 years or older (Wolf et al, 1991). According to the Framingham Heart Study, the lifetime risk for the development of AF is one in four for men and women aged 40 years and older (Lloyd-Jones et al, 2004).

AF affects up to 1% of the population in England (rising to 4% in the over-60s) and absorbs almost 1% of the entire budget of the NHS. The overall incidence of stroke is about 5% per year in people with AF so it is a significant cause of mortality in England (National Service Framework for Coronary Heart Disease, 2005).

We need better and earlier diagnosis and treatment, improved anticoagulation and arrhythmia management, and clarification of the impact and the role of catheter ablation. www.heart.nhs.uk cites a number of initiatives in primary care to address these needs, e.g. a programme of opportunistic diagnosis of AF during flu vaccinations, so while the patient is getting his/her jab, his/her pulse is taken. Homerton Hospital runs a point of care echocardiography course, aimed at reducing the burden of open access echocardiography in secondary care. GPs and practice nurses get a feel for echocardiography and become more involved in it in their own community.

Many people who do not warrant anticoagulation receive it, and many of those who do, do not (Nieuwlaat et al, 2007). Further guidance on diagnosis and treatment is needed. We still rely on warfarin, with all its limitations.

www.heartrhythmcharity.org.uk and www.atrialfibrillation.org.uk are very informative websites for patients. www.americanheart.org has shown that patient home monitoring of international normalized ratios can be very effective. Despite initiatives in primary care, there are serious gaps in AF services. In secondary care, there are not enough cardiologists in the UK, even though the numbers have doubled over the past decade. This shortage, especially of arrhythmia specialists, can cause great tensions, particularly in meeting the 18-week treatment deadline.

Arrhythmia management is an important part of the services we provide: demand will increase as the population ages and the prevalence of AF increases.

Heart failure and atrial fibrillation

Summarized from the presentation by John Camm, Head of Cardiac and Vascular Sciences, St George's Hospital Medical School, University of London

Heart failure and AF are common problems and commonly occur together. Heart failure predisposes patients to AF, and AF aggravates heart failure.

Guidelines on heart failure – rather than AF – provide a lengthy explanation of how to handle AF in heart failure, but there is nothing that distinguishes the management of AF in heart failure from the management of AF in any other setting. Some heart failure in patients with AF is caused by tachycardiomyopathy, i.e. inadequate rate control of AF rather than sinus rhythm per se.

What does the research show?

If AF is slowed, or sinus rhythm restored, most studies have shown a consequent improvement in ejection fraction and outcome measures looking at functional capacity.

Anti-arrhythmic drugs do not seem to prevent the development of AF in heart failure, but some studies suggest the opposite, e.g. the Sudden Cardiac Death in Heart Failure Trial SCD-HeFT study (Singh et al, 2006). The development of AF was higher in the group treated with an implantable cardioverter defibrillator, a little lower in a group treated with placebo and the best results were seen in the group treated with amiodarone. So amiodarone, at least in the context of SCD-HeFT, did show an effect.

The primary end point of the AF-CHF study (Roy et al, 2008) was cardiovascular death with patient follow-up for as long as 5 years. Criticisms can be levelled at this trial in terms of the number of patients withdrawn, but nevertheless it demonstrates that there is no difference between rate and rhythm control in terms of outcome.

Many other outcomes were measured, including hospitalization, electrical cardioversion, pacemaker therapy and implantable cardioverter defibrillator therapy and no significant difference was demonstrated for any of these secondary end points between any of the groups, with the exception of electrical cardioversion, which was more

common in the rhythm control group. At 1 year, hospitalization was reduced in the rate control group.

Upstream therapy

Upstream therapy fascinates everybody – many publications suggest that it might be possible to prevent AF. Angiotensin-converting enzyme inhibitors and angiotensin-receptor blockers, aldosterone antagonists, statins, corticosteroids, fish oils and beta-blockers have been the major focus for investigation.

In the valsartan heart failure study, Val-HeFT (Maggioni et al, 2005), there was less AF in the valsartan-treated group (as compared to placebo), which suggests we might be able to prevent the development of AF, particularly in heart failure or hypertension.

There have been several meta-analyses. Healey et al (2005) showed that angiotensin-converting enzyme inhibitors and angiotensin-receptor blockers combined had some benefit in preventing development of AF. Patients were characterized by hypertension, myocardial infarction, heart failure, or AF not related to underlying pathology.

Beta-blockers are effective in heart failure, and they should help prevent the development of AF but there is little evidence to support this. In MERIT-HF although AF incidence was reduced, AF-related mortality, except heart failure death in AF, was not influenced at all by beta-blockade (MERIT-HF Study Group, 1999).

What commissioners want

Summarized from the presentation by Tim Jones, NHS Commissioning Specialist

Commissioning is about adding life to years and years to life. This means faster access to diagnostics and treatment in a patient-orientated service producing a good patient experience. Achieving that also means reducing health inequalities.

Commissioners want to exercise their power on behalf of patients. So they want new models of health care, and an increasing emphasis on patient self-caring and self-management; behavioural change; making the best use of technology predicting or at least catching adverse events early; and taking the service to the patients, e.g. finding men who would not think of seeing their GP – in betting shops, football grounds or motorway service areas. Innovation should be driven from the point of view of managing the patient, with a focus on outcomes to find out what worked and whether it was value for money, including patient-reported outcome measures. We should be receptive to good techniques from the private sector, persuading patients to behave as consumers and make active choices between one provider and another.

Is integrated care the answer?

Summarized from the presentation by Gerard Panting, Director, TWG Resources Ltd

Integrated care is the provision of comprehensive care for specific groups of patients, in the main suffering from chronic conditions as diverse as AF and alcohol dependence. Care combines elements of primary, secondary and community health as well as social care, which have been provided by separate bodies, and not always seamlessly.

Integrated care has been offered for specific groups through integrated networks but dedicated organizations take the proposal one stage further, with primary and community care enhanced by specialists and social care as well. Organizations that could contribute to integrated care organizations include: GP practices, NHS and foundation trusts, primary care trusts, care trusts, local authorities, social enterprises and ambulance trusts. An integrated approach does not necessarily mean providing care in a single building or within single organizations.

The aim is to deliver better secondary, primary and social care services, improving the standard of overall care for specific groups of patients. As this is a government initiative another aim is to do this more economically. **BJHM**

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Quick Summary

- Atrial fibrillation is associated with an adverse prognosis in patients with chronic heart failure.
- Rate control is not inferior to rhythm control with regard to mortality and major adverse cardiac events.
- Antiarrhythmic drugs and 'upstream' therapies will delay reversion to atrial fibrillation.
- Antiarrhythmic agents other than beta blockers have not been shown to reduce mortality related to atrial fibrillation.