

# British Society for Heart Failure 15th Annual Meeting

The British Society for Heart Failure (BSH) recently held its 15th annual meeting where over 500 delegates enjoyed a variety of presentations over the two-day conference.

Sessions covered a number of aspects of heart failure (HF), including a keynote lecture on mineralocorticoid receptor antagonists from the internationally renowned Prof Faiez Zannad, thought-provoking issues in palliative care and multi-professional views on the management of acute HF. Of particular note were sessions on atrial fibrillation (AF) and controversies of heart rate (HR) lowering in HF.

## AF and heart failure

Dr John Cleland explained AF and HF are commonly associated and patients with HF who develop AF have a worse outcome. Standard anti-HF treatments including beta-blockers, renin-angiotensin-aldosterone system antagonists and digoxin are all associated with a reduced incidence of AF whereas treatment with ivabradine increases risk of developing AF [1]. However, restoring sinus rhythm (SR) has no effect on mortality and rhythm-control strategies may increase hospitalisation rates in patients with HF [2,3]. This may relate to toxicity of anti-arrhythmic drugs [4,5] and therefore, rate-control strategies may be more appropriate in HF populations; although target HR should be higher in patients with AF than in SR.

Dr Christopher George presented an enlightening lecture focusing on a basic sciences view of cell-cell signalling abnormalities as substrate for arrhythmia. Multiple cellular cascades interlink in a complex network and disease arises from progressive unravelling of this network. In HF, calcium leaks from sarcoplasmic reticulum, provoking highly ATP-dependent adaptive changes that place high metabolic demands on cellular systems over many years. Traditional anti-arrhythmic drugs target cell surface receptors but the drivers for signalling abnormalities are often intracellular and targeting the root causes may yield more effective anti-arrhythmic agents. While traditional anti-arrhythmic agents have not been promising in HF patients, Dr Stephen Furniss discussed the role of catheter ablation for AF. There are small, randomised-controlled trials demonstrating improvements in left ventricular ejection fraction (LVEF)

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and symptoms with catheter ablation in patients with persistent AF and HF [6]. However, LVEF measurement in AF is controversial and mortality outcome data is currently missing; further large clinical trials are awaited.

Cardiac resynchronisation therapy (CRT) is associated with significant morbidity and mortality benefits in patients with HF, low LVEF and prolonged QRS duration. Dr Rakesh Sharma explained AF can reduce biventricular pacing rates and the outcome of CRT in patients with AF is debated. Observational data suggest equivalent outcomes with CRT in SR and AF [7,8] although CRT is associated with better outcomes than right ventricular (RV) pacing in patients with AF and low LVEF who have a brady-indication for pacing [9]. The largest randomised-controlled trial of CRT in AF demonstrated no difference in outcome but this trial only recruited 229 patients, of which only one had an atrioventricular (AV) node ablation and only 30% achieved biventricular pacing rates >95% [10].

## Controversies of HR lowering

Resting HR is proportional to life expectancy in mammals [11] and Prof Andrew Clark described how lower HR is associated with better survival in humans with and without cardiovascular disease [12,13]. Proposed mechanisms include improved coronary oxygen delivery due to longer diastole, reduced oxygen demand and reduced coronary mechanical stress. However, there is a U-shaped curve and HR may not be the driver of improved outcome but merely a marker.

Beta-blockers are integral to modern HF treatment. Prof Henry Dargie explained there is an overwhelming body of evidence demonstrating improved outcomes, for HF patients treated with beta-blockers. Benefits include a reduction in all-cause mortality alongside reduced re-admission rates. Beta-blockers work via diverse mechanisms and their effects are not just due to rate control.

Ivabradine is a novel rate-dependent sinus node inhibitor and reduces HR in SR. Dr Suzanna Hardman discussed the 26%



Dr Christopher George (Credit: Robert Masters).



Prof Henry Dargie (Credit: Robert Masters).

reduction in HF hospitalisations with ivabradine in the SHIFT trial [1]. Greatest benefit was seen in patients with resting HR >77bpm. Effect on the composite endpoint (death and HF hospitalisation) was lost in those taking >50% target beta-blocker dose but a reduction in HF hospitalisation was observed in this group. Although entry into the trial mandated maximum tolerated beta-blocker doses, only one quarter were prescribed maximum doses, nearly half were prescribed <50% maximum dose and 10% were prescribed none.

HR modulation with devices was reviewed by Dr Roy Gardner. RV pacing in HF is associated with a poorer outcome [14] although CRT may improve outcomes in HF patients with brady-indications for pacing but without standard QRS criteria. Meanwhile, implantable cardioverter-defibrillators do improve mortality [5] but inappropriate shocks, lead failures and end of life issues remain significant challenges.

## Conclusion

The BSH annual meeting proved to be a valuable forum in which to learn from internationally renowned experts covering a broad range of issues in the field of HF. Lectures were thought provoking and speakers engaging, and there was also the opportunity to meet the experts between sessions. The BSH meeting is an important

date in the calendar for all individuals involved in HF, exemplified by the multidisciplinary backgrounds of speakers which included nurse specialists, surgeons, intensivists, palliative care specialists, geriatricians and general practitioners, as well as cardiologists, to name but a few.

Visit [www.bsh.org.uk](http://www.bsh.org.uk) for information on future meetings during 2013.

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