

Meeting report – 17th BSH Annual Autumn Meeting 2014

Yesterday's problems, today's solutions

More than 700 people attended the 17th Annual Autumn Meeting of the BSH at the Queen Elizabeth II (QE II) Centre on 27–28 November 2014. The atmosphere was as lively and good humoured as ever, with the happy sound of friends meeting each break and with the hall remaining packed to the last moment of the conference. Even the food was particularly good this year.

The programme directors, **Dr Roy Gardner**, **Professor John McMurray** and **Dr Jackie Taylor** (all from Glasgow), took as their theme Yesterday's problems, today's solutions.

The meeting was opened by the BSH Chair, **Professor Andrew Clark** (Hull).



Professor Andrew Clark

Forthcoming events

European Heart Failure Awareness Day
8 May 2015

Sessions at the **BCS Annual Conference**
8–10 June 2015 –
Manchester

18th BSH Annual Autumn Meeting
26–27 November 2015 –
Queen Elizabeth II Centre,
London

8th BSH Heart Failure Day for Revalidation and Training
3 March 2016,
venue to be confirmed

6th BSH Heart Failure Nurse Study Day
4 March 2016,
venue to be confirmed

For more information visit:
www.bsh.org.uk
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Session 1: New trials and guideline updates

Session 1 opened with **Professor Theresa McDonagh** (London) presenting data from the National Heart Failure Audit. Unfortunately, the audit had not yet been published due to problems linking the audit data with other databases so, necessarily, some of the data were provisional. Nevertheless, the same messages come through: in the UK, most patients admitted with heart failure have left ventricular (LV) systolic dysfunction; those with normal ejection fraction commonly have other cardiac pathology (such as arrhythmia and valvular heart disease). Patients treated on cardiology wards remain more likely to receive guideline-indicated therapy and have a better prognosis, but overall, the prognosis of heart failure is slowly, gradually, improving.

Professor John McMurray (Glasgow) presented a clinical trials update, focusing specifically on results from the PARADIGM-HF* trial. He emphasised how every outcome measure examined demonstrated an improved outcome for patients randomised to LCZ696 (which blocks the action of angiotensin II and inhibits neprilysin, the enzyme degrading natriuretic and other vasoactive peptides) compared with those receiving enalapril. Although LCZ696 is not yet commercially available, it's difficult to see how it can long be delayed in being awarded a licence, and the audience were clearly relishing the arrival of a major new drug for their patients.

It's been a busy year for National Institute for Health and Care Excellence (NICE) guidelines in relation to heart failure, and **Dr Suzanna Hardman** (London) presented those for acute heart failure. She stressed the importance of ready access to natriuretic peptide testing to exclude heart failure in patients presenting with breathlessness; this raised concerns from the audience worried about being potentially overwhelmed by the numbers of patients with natriuretic



Dr Suzanna Hardman

*A list of study acronyms can be found on page 7.



The scene inside the lecture hall

peptide levels above arbitrary, rather low, thresholds. Dr Hardman and the Chairs were quick to emphasise the importance of continuing to treat the whole patient, not just the numbers generated by a test. The development of local multidisciplinary heart failure specialist teams to meet the demand to provide specialist care to all patients with heart failure is going to be challenging, and meeting the target of a review by the team within 2 weeks of discharge may take some time!

Dr Roy Gardner (Glasgow) presented the guidelines on cardiac resynchronisation therapy (CRT) and implantable cardioverter defibrillators (ICDs). The development of these guidelines has been somewhat protracted, but has been marked by the willingness of the development group to listen to constructive criticism and to revise their initial proposals. The final guidelines represent a triumph for pragmatism and sense, and are very difficult to disagree with (Table).

QRS interval	NYHA class			
	I	II	III	IV
<120 milliseconds	ICD if there is a high risk of sudden cardiac death			ICD and CRT not clinically indicated
120–149 milliseconds without LBBB	ICD	ICD	ICD	CRT-P
120–149 milliseconds with LBBB	ICD	CRT-D	CRT-P or CRT-D	CRT-P
≥150 milliseconds without LBBB	CRT-D	CRT-D	CRT-P or CRT-D	CRT-P
≥150 milliseconds with LBBB	CRT-D	CRT-D	CRT-P or CRT-D	CRT-P

NYHA, New York Heart Association; LBBB, left bundle branch block.

Session 2: Dealing with common non-cardiac co-morbidities – case-based problems

Session 2 used a case-based approach. **Dr Callum Chapman** (Twickenham) presented the case of an elderly patient with intractable heart failure who had not been well served by a transcatheter aortic valve implant. The key intervention turned out to be intravenous iron therapy, which led to a dramatic improvement in the patient's symptoms. The iron deficiency was due to celiac disease. The audience agreed that intravenous iron is probably better than oral replacement therapy (although there are no clinical trials to support that contention) and iron should probably be used more often.

Dr Jonathan Dalzell (Glasgow) presented the case of a young man with dilated cardiomyopathy (DCM). Following an out-of-hospital cardiac arrest, he had a CRT-defibrillator implanted. Some months after a box change, he became infected with *Staphylococcus epidermidis* associated with multiple vegetations on the pacing system. Although the device was extracted and he received appropriate antibiotic treatment, he then needed surgical removal of the vegetations. His postoperative recovery was, to say the least, stormy, and he eventually had a long-term ventricular assist device implanted. Two years on, he remains on the transplant waiting list. The main lesson is that sepsis can result in severe deterioration in LV function, particularly those with pre-existing LV systolic dysfunction.

Table. Treatment options with ICD or CRT for people with heart failure who have LV dysfunction with an LV ejection fraction of 35% (according to NYHA class, QRS duration and presence of LBBB).

Professor Phil Kalra (Manchester) started his presentation with the reassuring news that the formula for measuring the estimated glomerular filtration rate (eGFR) is going to change, allowing fewer people to be labelled as having chronic kidney disease. Of course, renal dysfunction is very common in heart failure, and associated with a worse prognosis. In investigating patients, he emphasised the importance of checking for symptoms of bladder outflow obstruction. His cases highlighted how it is far too easy for patients with acute kidney injury to have all their medication stopped without adequate plans to re-start their heart failure medication once the acute illness has passed. ‘Sick day rules’ are all-important for people with heart failure and renal impairment – in other words, the patients (and their carers and physicians) have to know how to manage transient episodes of intercurrent dehydrating illness.



Professor Anita Simonds

Professor Anita Simonds (London) presented a case of a patient with central sleep apnoea. Treatment with assisted servo-ventilation certainly improved the sleep-disordered breathing, but knowing what effect the treatment will have on the patient’s symptoms

or longer-term outlook is very difficult. The SERVE-HF study has specifically addressed the issue of treating periodic respiration in a large clinical trial; results should be presented at the European Society of Cardiology meeting in 2015.

Session 3: Uncertainties, myths and dogmas



Dr Nigel Rowell

It is often difficult to deal with knowledge imparted at an early stage of training that turns out to be built on foundations of sand. It’s difficult to get rid of the feeling that there must be something in these dogmas that we all carry with us. **Dr Nigel Rowell**

(Middlesbrough) addressed the demographic dogma of heart failure, and highlighted that the data we collect are intrinsically flawed: they are (amongst other things) subject to financial constraints, errors in coding and differences in data collection between sites. He also

took issue with the gloomy prognosis of heart failure: prognosis is, of course, improving with modern medical therapy.

We all think that salt and water limitation is part of heart failure management, but **Dr Paul Kalra** (Portsmouth) showed how there is almost no evidence to support this practice, which serves only to make patients feel thirstier than otherwise. Excessive salt (>3 g/day) should probably be avoided, but there is little trial evidence to support even this notion.

Dr Lindsey Tilling (London) tackled the subject of anticoagulation. It is central to the management of patients with atrial fibrillation (AF), but it is not as clear whether patients in sinus rhythm might benefit. A major unanswered question is the extent of clinically silent paroxysms of AF in patients with heart failure, and whether this form of AF should mandate anticoagulation. There is no evidence specifically to support the use of newer oral anticoagulants in patients with heart failure, although the ongoing COMMANDER-HF study of rivaroxaban in patients with recent heart failure admission, ischaemic heart disease and sinus rhythm should go some way to answering this question.

In the last talk of the session, **Professor Andrew Clark** (Hull) addressed cholesterol lowering and diabetes management. There is compelling evidence that patients with established heart failure, whatever the aetiology, gain no benefit from rosuvastatin, and it seems unlikely that there would be a difference between rosuvastatin and the other statins. However, the point at which statin therapy can be stopped during the progression from acute myocardial infarction to heart failure remains undefined. A more challenging issue is that of reducing glycated haemoglobin (HbA_{1c}) (and of managing type 2 diabetes more broadly). Trial evidence suggests that tighter control of diabetes (as shown by a lower HbA_{1c}) is associated with a worse outcome. In fact, the historic trials of diabetes management show that no therapy is convincingly associated with an improvement in hard outcomes, particularly mortality. Undoubtedly treating hypertension in patients with diabetes (and using statins in those without heart failure) improves outcomes, but there is a burning need for properly constructed outcome studies to find out whether treating blood sugar *per se* translates into better patient outcomes.

Session 4: Diagnostic dilemmas



Professor Michael Polkey

Heart and lung disease often co-exist and have many of the same underlying risk factors. Short of asking a chest physician to see all your patients, **Professor Michael Polkey** (London) suggested that there are some things a cardiologist might usefully do

to help differentiate cardiac from pulmonary breathlessness. Finger tip oxygen saturation is helpful; hypoxia is rare in cardiac breathlessness, and a fall in saturation with a corridor walk test strongly suggests pulmonary disease. A chest X-ray is vital, principally to exclude pulmonary disease, not confirm cardiac disease. Spirometry is also very helpful. A restrictive pattern is common in obesity, lung or cardiac disease, but an obstructive pattern strongly suggests pulmonary disease.

Diaphragmatic paralysis can present as possible cardiac breathlessness, and a standing chest X-ray and spirometry can be normal. Spirometry is again helpful: a drop in vital capacity of more than 20% from seated to lying suggests a problem with diaphragmatic weakness. Hyperventilation is common: the Nijmegen questionnaire is helpful in making a diagnosis.¹ Large airway narrowing may be missed on initial examination and chest X-ray: flow-volume loops in a lung function laboratory confirm the diagnosis.

The next two talks were on the thorny issue of heart failure with ‘preserved’ ejection fraction (HF-PEF).

Dr Mark Petrie (Glasgow) discussed the relationship between HF-PEF and obesity. He made the point strongly that obesity is a co-morbidity in heart failure that is often ignored. We’re not very good at defining obesity. Distinguishing between obesity and HF-PEF is problematic: obesity makes the clinical examination very unreliable. Chest X-rays are useful only to exclude pulmonary pathology and an ECG doesn’t help in making a diagnosis of HF-PEF. Natriuretic peptides are lower in obese people, making their value less certain in HF-PEF. Echocardiography is limited by the presence of obesity but magnetic resonance imaging is often helpful in showing structural details. Cardiac catheterisation, particularly with exercise, can be very helpful. However,

the overlaps between obesity, HF-PEF, airways disease and unfitnes are considerable, and still difficult to disentangle. Perhaps obesity should be included as a co-morbidity in the National Heart Failure Audit?

Dr Alison Seed (Blackpool) then discussed the link between AF and HF-PEF. There is significant overlap between patients with heart failure and AF and many patients with AF with have symptoms of heart failure with preserved LV systolic function. Patients with AF and preserved LV function at the very least represent a group that can go onto develop LV systolic dysfunction, and so treatment of neurohormonal activation and close monitoring may be effective despite the resource implications.

The final talk was entitled ‘Dilated cardiomyopathy – idiopathic or specific’, presented by **Dr Joanne Simpson** (Glasgow). With the advent and rise of personalised medicine and the recognition that different causes of DCM provide different potential therapeutic targets, it is necessary to fully understand and categorise DCM. The MOGE(S) method of classifying DCM was introduced and explained: **M**, morphofunctional phenotype; **O**, organ(s) involvement; **G**, genetic inheritance pattern; **E**, aetiological annotation, including genetic defect or underlying disease/substrate; **S**, functional status of the disease.

The MOGE(S) system allows greater clarity and accuracy in labelling compared with a diagnosis of DCM.

Session 5: Heart failure research/Hyde Park



This year’s finalists for the BSH Young Investigators’ Award. Left to right: Dr Pierpaolo Pellicori, Dr Arjun Ghosh, Mr Connor Emdin and Dr Colin Stirrat

Session 5 started with presentations by four researchers in search of the BSH Young Investigators’ Award.

The audience heard presentations from **Mr Connor Emdin** (Oxford), **Dr Arjun Ghosh** (London), **Dr Colin Stirrat** (Edinburgh) and the eventual winner **Dr Pierpaolo Pellicori** (Hull). The standard of the entries was once again very high, with Dr Pellicori’s data on ‘Prognostic significance of ultrasound-assessed

jugular vein distensibility in patients with heart failure' just taking the prize. Delegates then heard from **Professor Ahmet Fuat** (Darlington) who in a Hot-line session presented data from a British Heart Foundation-funded study of community use of intravenous diuretics in patients with heart failure. The presentation stimulated much discussion from the audience, with the general consensus being that a randomised, controlled trial was needed to know whether the general use of intravenous loop diuretics in the community was safe and effective.



Dr Divaka Perera. Is holding the meeting in November a good idea?

Session 5 drew to a close with the popular Hyde Park presentations. This year we heard about ongoing questions regarding coronary revascularisation in ischaemic cardiomyopathy (**Dr Divaka Perera**, London). Dr Perera is running the REVIVED study of revascularisation for heart failure, and if you have any interest or questions, please contact him through the website (<http://revived.lshtm.ac.uk/>) or email REVIVED@lshtm.ac.uk.



Dr Paul Callan

Dr Angus Nightingale (Bristol) addressed difficulties in decision making in light of entrenched patterns of thinking, and a presentation from **Dr Paul Callan** (Hull) suggesting that the management of acute heart failure is best left to non-specialists had the audience in fits of laughter.

Session 6: Frightening calls & consultations

Session 6 on Day 2 of the meeting was on those phone calls we hate to receive. **Dr Lorna Swan** (London) talked about heart failure in pregnancy. The principles of acute heart failure management are broadly the same when treating a pregnant woman. However difficult decisions sometimes need to be made in the period before fetal viability. This requires multidisciplinary care (cardiologists, neonatologists and obstetricians) to achieve the best outcomes. In similar

vein, **Dr Niki Walker** (Glasgow) discussed heart failure in adult congenital heart disease. For some patients, heart failure is an almost inevitable outcome of earlier palliative surgery, but patients should be assessed and initially managed as those with 'common-or-garden' heart failure. A specific cause of heart failure in those with a Fontan circulation is arrhythmia, which must be treated promptly and aggressively. Specialist advice should always be sought.



Dr Niki Walker

Dr Derek Connelly (Glasgow) described the management of challenging arrhythmias in patients with heart failure. The overwhelming message was that expert input at an early stage is best for the patient. A common theme in many of his case presentations was that whilst some smaller hospitals are taking up the burden of device implantation, they may lack the expertise to deal with device complications and programming. Perhaps implantation should only continue in centres with that expertise.

Professor Theresa McDonagh (London) and **Dr Simon Williams** (Manchester) (in Session 7) both gave talks about the interaction between cancer chemotherapy and heart failure. Problems with anthracyclines and trastuzumab are common, even many years after initial therapy. Patients receiving such treatment need to be screened regularly, perhaps 6 monthly, for any decline in LV function (with the same imaging modality used each time to minimise the risk of error). Dr Williams recommended the use of a high-sensitivity troponin assay as a way to identify patients who have developed cardiotoxicity secondary to chemotherapy agents. Any resulting heart failure should be managed in the usual way, with diuretics for symptom relief, angiotensin-converting enzyme (ACE) inhibitors, beta blockers and mineralocorticoid receptor antagonists. The most difficult situation is how to deal with the patient who needs chemotherapy, potentially curative, but who has LV systolic dysfunction. As ever, the decision always has to be made on an individual patient basis, weighing the risks of treatment against the likelihood of response.

Session 7: Problem drugs



Professor Iain Squire

Professor Iain Squire (Leicester) discussed problems with commonly used drugs and their possible effects on patients with heart failure, and the potential for interaction between different types of drugs used for different indications. The risks

of polypharmacy are a major concern: many patients are elderly and have several co-morbidities. With polypharmacy (the receipt of three or more prescribed medications) the risk of adverse events climbs. It is difficult for patients to comply with complex medication regimens and Professor Squire revealed that up to a quarter of heart failure patients were not taking their medications as prescribed. Two talks from pharmacists **Mr Steve McGlynn** and **Mr Paul Forsyth** (both from Glasgow) were particularly fascinating as they dealt beautifully with areas that we often don't think about. Mr McGlynn is a pharmacist with a specialist interest in heart failure, and he talked about over-the-counter and 'alternative' medication, and the potential for both to interact with heart failure and its treatment. How many of us knew that a standard soluble paracetamol tablet contained as much sodium as 1 g of salt? Other potential offenders are herbal remedies, including some based on liquorice, and St John's Wort, widely used for depression. A careful and comprehensive drug history is a vital part of history taking; and don't forget mail order and the internet as sources of potentially interacting medications.

Mr Forsyth described the problem of compliance with medication generally and in heart failure particularly. All our patients have complex medical regimens and all will occasionally miss medication. For some patients, poor compliance can lead to repeated hospitalisations and be life threatening. Factors such as motivation, memory and the complexity of the treatment regimen all have significant influence, as do social factors such as living alone or social isolation. Poor compliance is a strong predictor of a poor outcome. Mr Forsyth described his own approach: for selected patients, intensive support from pharmacists and liaison nurse specialists to improve

compliance and, perhaps, outcome – particularly when the underlying reasons for poor compliance can be identified and managed.

Session 8: Hearts and minds

Dr John Sharp (Glasgow) shared his experiences as a clinical psychologist working with patients with advanced heart failure. Patients with chronic heart failure commonly have depression (10–60%, depending upon the study) and/or anxiety (11–45%). Mood disorders are linked to increasing healthcare use, reduced quality of life and increased mortality, but we are not good at detecting them or, indeed, knowing how to treat them once they are detected. **Dr John Baxter** (Sunderland) then discussed delirium and how to manage it. Heart failure is the third most common cause of delirium and, in trying to sort it out, Dr Baxter recommended the acronym PINCH ME: **P**ain, **I**nfection, **C**onstipation, **H**ydration, **M**edication, **E**nvironment. He memorably used the example of an elderly patient trying to find the loo at night only to discover the Sister's Office to illustrate his point about environment.

Finally, **Dr Jane Cannon** (Glasgow), the BSH Research Fellow, presented some of her preliminary data on cognitive impairment associated with heart failure. Subtle abnormalities are very common, with perhaps as many as half of patients with ischaemic heart disease (and not even with heart failure) having detectable changes in cognitive function.



Dr Jane Cannon, the BSH Research Fellow

Session 9: Devices and surgery today and tomorrow

The final session of the meeting had a device and surgical emphasis. **Dr Ninian Lang** (Glasgow) gave us an overview of available complex pacemakers and defibrillators looking at recent trials and technology. **Dr Stephen Pettit** (Papworth) then took us through the relevant history and information around assist device therapy – who to consider,

which device to use and the potential advantages of these therapies – looking forward towards destination therapy perhaps? An ongoing NICE review is inviting comments on destination therapy.

Professor Nawwar Al-Attar (Glasgow) approached LV assist devices from a surgical angle and tempted us with the development of ‘no driveline’ technology. To close the session, and the meeting, **Professor Christian Latrémouille** (Paris) gave the ‘state of the heart’ lecture.

He described the long and difficult development of the Carmat Total Artificial Heart and described the two first ever implants in man. The vision (not to mention the financial backing and confidence) required are extraordinary, and left delegates with a fascinating glimpse into the possible future of device therapy for advanced heart failure.



Professor Christian Latrémouille

Reference

1. van Dixhoorn J, Duivenvoorden HJ. Efficacy of Nijmegen Questionnaire in recognition of the hyperventilation syndrome. *J Psychosom Res* 1985;29:199–206.



The BSH Board at the conference. From left to right (front row): Dr Suzanna Hardman, Professor Andrew Clark, Professor Iain Squire; (back row): Mrs Jayne Masters, Dr Lindsey Tilling, Professor John McMurray, Dr Paul Kalra, Dr Roy Gardner, Dr Jim Moore, Dr Simon Williams, Dr Jackie Taylor, Mrs Annie MacCallum. Mrs Amanda Crundall-Goode and Dr Ceri Davies were not available for the photo.

Thanks to Andrew Clark, John Baxter, Ceri Davies, Annie MacCallum, Iain Squire and Simon Williams for their contributions to this article. Photos courtesy of Dr Roy Gardner.

Study acronyms

COMMANDER-HF	A Study to Assess the Effectiveness and Safety of Rivaroxaban in Reducing the Risk of Death, Myocardial Infarction or Stroke in Participants With Heart Failure and Coronary Artery Disease Following an Episode of Decompensated Heart Failure
PARADIGM-HF	Prospective Comparison of ARNI with ACEI to Determine Impact on Global Mortality and Morbidity in Heart Failure
REVIVED	REVascularisation for Ischaemic VEntricular Dysfunction
SERVE-HF	Treatment of Predominant Central Sleep Apnoea by Adaptive Servo Ventilation in Patients With Heart Failure

Message from the BSH Chair

The BSH Board is very keen that you, as a member of the Society, view the BSH as being **your** Society. As you know, the Board election is coming up shortly: please feel that *you* can stand for election, nominate candidates for election and, most importantly, vote in the elections.

We would like to hear from you regarding the content of the BSH meetings, both the training meetings and the annual meeting. Are there any particular topics that you would like to see covered? What thoughts do you have on the meetings (for example, are the talks too long/short or too basic/advanced)? Do please let us know. Several presentations at the 2014 meeting were prompted by comments received by the BSH Secretariat during the year. Unfortunately, the BSH cannot guarantee the inclusion of all suggestions; however, all will be reviewed by the Programme Directors for the meetings.

In constructing the programme for the Annual Autumn Meeting, we're very conscious that the audience doesn't want to hear the same old speakers talking on the same old topics. We deliberately try to broaden the circle of speakers: this year, for example, 29 of the 39 talks were given by non-Board members, and many of the speakers were at the meeting for the first time. We're very keen to

hear from you if there are particular speakers you would like to see given the opportunity to present.

We also spend a lot of time wondering about the venues for meetings. You'll notice that the Board is certainly not London-centric. However, London is uniformly the easiest centre for people to get to, regardless of starting point. The QEII Centre offers us a good deal and has for many years seemed the right size to keep the atmosphere of the meeting so up-beat. We are, however, taking the training meetings around the country, alternating between London and other venues. If you think you have a good claim to be considered as the right place for one of the training meetings, please contact us!

The Young Investigators' Award also caused some comment this year. However, we can guarantee that the judging process was entirely free of conflict-of-interest: no member of the Board with a 'runner' in the race was allowed to judge the abstracts. We have changed the rules so that previous winners are no longer eligible.

Do please let us know what you think. Please feel free to drop an email to the BSH secretariat at info@bsh.org.uk. Remember: the BSH belongs to its members.

17th BSH Annual Autumn Meeting: acknowledgements

We are very grateful to all our sponsors and the Friends of the Society without whom the meeting would not have been possible.

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