

# 49th St Andrew's Day Festival Symposium – Updates on Acute Medicine report

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## INTRODUCTION

The St Andrew's Day Festival Symposium is one of the highlights of the RCPE annual educational programme and, as usual, provided a varied and thought-provoking collection of updates on a broad range of acute medical specialties. A variety of presentation styles, including lectures, interactive Turning Point sessions and role play, were used over the two-day event, keeping attendees entertained and engaged. This review summarises the key sessions and will highlight a number of 'take-home' learning points.

## KEY POINTS: DAY ONE

Dr Michael Mullen (Royal Brompton Hospital, London) opened the symposium with a presentation on recent therapeutic advances in the management of aortic stenosis. He described the first transcatheter aortic valve implantation (TAVI) in 2002 in a patient with multiple co-morbidities unfit for valve replacement, who had previously undergone unsuccessful balloon valvuloplasty.<sup>1</sup> Since then, confidence and expertise in TAVI have grown exponentially and it has now been performed in 109 European centres and more than 10,000 patients worldwide. The key to success at the Royal Brompton Hospital is the pooling of knowledge and expertise with cardiothoracic surgeon colleagues to foster a collaborative working environment.

Professor Martin Cowie (Royal Brompton Hospital, London) continued the cardiological theme with a talk on newer treatment options for heart failure, such as electrical device therapy, and how their impact on survival demonstrates that a diagnosis of heart failure is no longer a 'death sentence'. The 15% in-hospital mortality of heart failure is being tackled from several angles, with pharmacological neurohormonal antagonism added to cardiac resynchronisation therapy. New heart failure management programmes incorporating tele-monitoring initiatives are not only popular with patients but also reduce mortality.

Dr Gordon Scott (Royal Infirmary of Edinburgh) spoke about the re-emergence of syphilis and the historical peaks

of incidence in relation to world events such as the Second World War and the collapse of the former Soviet Union. The non-genital features of syphilis, such as meningism, rash and hepatitis, along with treatment doses of benzathine penicillin (one shot of 2.4 mega units intramuscularly is usually sufficient for early syphilis, with three shots for late presentations) were discussed in addition to the more familiar presenting features of primary infection, such as painless chancres and localised lymphadenopathy.

Dr Jon Stone (Western General Hospital, Edinburgh) guided us through the difficulties of recognising and managing functional disorders. He discussed common conditions such as dissociative seizures (one in seven 'first fits') and functional weakness (as common as multiple sclerosis), with tips on how to differentiate these from organic pathology, including the value of listing all current symptoms (the longer the list, the more likely it is that the primary symptom will not be due to a recognised disease). He also advised on how to discuss these phenomena with patients, for example using analogies of hardware versus software in computers (i.e. a problem with how the system is working, akin to a software bug, rather than pathological damage to the computer hard drive/central nervous system), to explain and persuade.<sup>2</sup>

Dr Stone highlighted the danger of misinterpreting 'exaggeration to convince' as 'exaggeration to deceive' (as a patient who groans and sighs excessively is likely to do so to convince their doctor how bad their symptoms are rather than make up new symptoms in an attempt to deceive), and outlined how diagnosis must be based on recognising a familiar history and positive signs rather than on normal investigation results or unexplained signs. Features that suggest a functional disorder include symptoms of dissociation, the presence of other functional syndromes such as fibromyalgia and irritable bowel syndrome, Hoover's sign (weakness of hip extension which returns to normal with contralateral hip flexion against resistance), tremors that disappear with distraction, and a 'give-way' quality to weakness.

The Sydney Watson Smith Lecture, given by Professor Colin Robertson (Royal Infirmary of Edinburgh), considered the topical issue 'Pandemic flu: snuffle or

whimper?' Pandemic influenza was first described by Hippocrates, and reappears episodically when antigenic shift occurs (>30% change in haemagglutinin [H] or neuraminidase [N] antigens). It is highly unpredictable, with the 1918 'Spanish flu' H1N1 pandemic resulting in up to 200 million deaths compared with the 1997 avian flu H5N1 outbreak which proved highly virulent for birds but killed only six humans before being entirely controlled by mass poultry slaughter. There is great variation in mortality, severity, pattern and age affected, with the 2009 H1N1 pandemic causing millions of cases worldwide but relatively few deaths. Most pandemics occur in waves, with greatest mortality beyond the first wave, and identifiable risk factors include obesity/metabolic syndrome, pregnancy and belonging to an indigenous population.

This lecture was followed by a contentious discussion on how the National Health Service (NHS) may be staffed in the future, with thought-provoking presentations of the problems faced from the perspective of a medical director (Dr Charles Swainson, NHS Lothian) and a chief executive (Mr George Brechin, NHS Fife). They highlighted issues such as reductions in budgets paired with rising salary costs, extending working lives (encouraged by the NHS but perhaps less so by its workers), and a shift of the balance of care into the community (beneficial economically and clinically, with the aim of reducing unscheduled inpatient care).

Discussion then focused on the controversial four-hour target (at least 98% of patients attending Accident and Emergency [A&E] to be assessed and admitted or discharged within four hours), with Professor Derek Bell (Imperial College, Chelsea and Westminster Hospital, London) asking: Is it good for patient care and can it be maintained? Patient surveys identify long waiting times and delays in healthcare as a major concern,<sup>3</sup> hence the adoption of this unscheduled care target across the UK and further afield. Following the introduction of the target, formal complaints to some hospitals have halved, and patients and carers report 90% satisfaction. The risks of 'hitting the target but missing the point' (including concerns about A&E departments potentially inappropriately admitting or discharging patients without full assessment in order to comply with the target) were considered, but the overall evidence to support the initiative is good and suggests it is sustainable.

Professor Paul Padfield (Western General Hospital, Edinburgh) opened the final session with an interactive presentation on hypertension, a condition affecting more than 50% of the population aged over 60 years. The caveats of monitoring were discussed, with high variability in blood pressure (BP) measurements, meaning that BP taken in the clinic poorly reflects actual BP, and home monitoring may be considerably more accurate.<sup>4</sup> There is excellent evidence for treating hypertension, including a 40% relative risk reduction for stroke, yet the Scottish

Health Survey demonstrated that only around 50% of hypertensive individuals are properly treated.<sup>5</sup> Risk stratification based on the probability of cardiovascular disease can be done using calculator tools (which take into account other risk factors including age, sex, smoking status and cholesterol level) and those with a ten-year risk of cardiovascular disease of >20% should be targeted with antihypertensive and statin therapy.

Dr Ian Penman (Western General Hospital, Edinburgh) outlined exciting new developments in the management of Barrett's oesophagus and oesophageal cancer, with new techniques such as autofluorescence and narrow band imaging allowing earlier detection of dysplasia (noting an estimated risk of progression to cancer of 1% per year in low-grade dysplasia and 10% per year in high-grade dysplasia),<sup>6</sup> and emerging endoscopic management techniques including endoscopic mucosal resection and radiofrequency ablation offering comprehensive endoscopic therapy for early neoplasia in Barrett's.<sup>6</sup> In terms of prevention of oesophageal adenocarcinoma, there is suspicion that aspirin may be chemoprotective in Barrett's oesophagus (as there is some epidemiological evidence demonstrating that aspirin use may be associated with a decreased incidence of oesophageal cancer), and the AspECT trial studying esomeprazole and aspirin in 2,500 patients with Barrett's is under way.<sup>7</sup>

## KEY POINTS: DAY TWO

The second day of the symposium opened with a lecture from Dr Catherine Calderwood (Royal Infirmary of Edinburgh) on general medical aspects of maternal medicine. Thromboembolic disease, the most common cause of direct maternal death, may present differently in the pregnant population. In pregnancy, a striking 85% of deep vein thromboses are left-sided – possibly due to the gravid uterus causing compression of the left iliac vein by the right iliac artery as they cross – and 72% are iliofemoral (compared with just 9% in the non-pregnant population).<sup>8</sup>

Dr Kirsty Boyd (Royal Infirmary of Edinburgh) discussed end-of-life care, an issue of major relevance to all physicians as 30% of total bed days are occupied by patients in the last phase of their lives. She helpfully included sensitive yet probing questions for use in everyday practice, such as 'what do you think about the future?', to encourage patients to discuss end-of-life issues and facilitate improved sharing of ideas and concerns.

The session ended with a presentation on the exciting developments in stem cell therapy for chronic liver disease by Professor Stuart Forbes (MRC/University of Edinburgh). Stem cells from various sources, including adult skin cells, are currently being tested as a source of hepatocyte-like cells for use in extracorporeal bioreactors ('liver machines') and possibly even hepatocyte transplant for decompensated cirrhosis.

Dr Nik Hirani (Royal Infirmary of Edinburgh) gave a clinically orientated lecture on interstitial lung diseases (ILD), a group of conditions with an acute exacerbation mortality rate of more than 90%. A case study of cryptogenic organising pneumonia, with the classic migratory chest X-ray changes, set the scene for a discussion on the classification of ILD and a useful algorithm for the treatment of diffuse radiographic infiltrates and acute respiratory failure.<sup>9</sup>

Dr Bob Hoffman (New York City Poison Control Centre) delivered a captivating James Cameron Lecture on 'Toxicology from across the pond' and his review of the subject follows this article on page 152.

A comprehensive review of 'New horizons in anticoagulation' by Dr Henry Watson (Aberdeen Royal Infirmary) summarised the caveats of current anti-coagulants in clinical practice (including unpredictable dose effects necessitating frequent monitoring, and complex drug interactions with warfarin) and outlined developments in the search for oral anticoagulants with predictable dose effects and minimal drug interactions that require no monitoring. Drugs such as dabigatran and rivaroxaban may meet this criteria while proving, in certain settings, at least as efficacious as warfarin,<sup>10</sup> raising the hope that international normalised ratio monitoring could one day become a thing of the past.

Dr Maggie Hammersley (John Radcliffe Hospital, Oxford) considered the inpatient management of diabetic patients, highlighting the adverse clinical outcomes and patient experience associated with hyper- and hypoglycaemia. Hyperglycaemia is identified in approximately 40% of acute hospital admissions (26% previously undiagnosed) and is associated with increased mortality in medical units, intensive care units and some surgical settings.<sup>11</sup> In many disease states acute intensive insulin therapy has been shown to reduce morbidity and mortality (including in critical illness and myocardial infarction). The goals of inpatient care should include avoidance of hypoglycaemia, individualised care plans, good nutrition, supporting

patient self-care where appropriate and ensuring access to specialist diabetes teams.

The final discussion was delivered by the then RCPE President, Professor Sir Neil Douglas, who highlighted flaws in postgraduate medical training including the inadequate priority given to training by Trusts, poor selection processes and matching of numbers of applicants to posts, lack of training/career structure flexibility, tick-box assessments, and the use of junior doctors as 'rota fodder' (i.e. to fill gaps in medical on-call rotas without sufficient training opportunities). As a result, trainees rarely feel valued or empowered; suggestions for consideration that may improve the current situation include: 'slower' rotations with greater use of a base unit/firm, training only where training is good (and introducing quality of training into chief executive officers' targets), the use of applied knowledge testing to shortlist for selection into core medical training, and increasing consultant numbers. Trainees also need to be given mechanisms to effect change, including using the national training surveys by the Postgraduate Medical Education and Training Board, the independent regulatory body responsible for UK postgraduate medical training.

As a fitting close, Dr Graham Nimmo (Western General Hospital, Edinburgh) used a simulated scenario of a shocked patient teamed with audience diagnostic 'betting' to highlight aspects of clinical decision-making.<sup>12</sup> The detrimental effects of interruptions, the importance of handover and the roles of stress and fatigue were discussed, along with the more complex concept of cognitive bias (the tendency to make errors of judgement as a result of ingrained and automatic ways of processing thoughts).

The St Andrews' Day Festival Symposium once again proved to be an outstanding event, with sessions highlighting our diverse and fascinating profession – ever changing, growing and challenging. We would like to thank all speakers and attendees.

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