

RCPE symposium – Cardiology

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Cardiology, with its strong foundation of research and evidence-based medicine, continues to challenge our prior knowledge and provide new insights. Atrial fibrillation, coronary disease and heart failure, which are a significant workload not just for cardiologists but for general medicine physicians and general practitioners, have all seen recent advances in treatment. This symposium reviewed these new developments and there were workshops on traditional topics, including congenital heart disease and pregnancy with heart disease, recognising the increasing workload in this area.

Session 1

Atrial fibrillation

The landscape of atrial fibrillation-related stroke risk treatment with the introduction of direct oral anticoagulants (DOACs) has substantially changed. Professor Paulus Kirchhof (Birmingham), provided an overview on the recently updated European Society of Cardiology (ESC) guidelines. Oral anticoagulant therapy is recommended with a CHA₂DS₂-VASc score of ≥ 2 in men and ≥ 3 in women, noting that bleeding scores should be used to modify bleeding risk rather than negate anticoagulation. DOACs now have Class 1A recommendation for first line anticoagulant therapy in preference to vitamin K antagonists.

Heart failure

Professor John McMurray (Glasgow) provided a review on the updated ESC heart failure (HF) guidelines. He highlighted that the PARADIGM HF trial, which compared the angiotensin receptor neprilysin inhibitor sacubitril/valsartan against enalapril (an angiotensin converting enzyme inhibitor), showed a 20% relative risk reduction for cardiovascular death and HF hospitalisation. This is a remarkable achievement

given HF pharmacotherapy has seen little change in the preceding decades. ESC guidelines recommend sacubitril/valsartan instead of angiotensin converting enzyme inhibitors in patients who remain symptomatic despite optimal therapy, and this will be initiated in secondary care. The EMPA-REG trial using empagliflozin, an anti-diabetes drug, has surprisingly shown benefit in heart failure and cardiovascular mortality. Further trials are planned to explore this and the ESC suggests considering empagliflozin in diabetic patients. ESC guidance has urged consideration of intravenous iron therapy for HF patients with iron deficiency anaemia who are symptomatic to improve exercise capacity and improve quality of life. IRON-MAN and Affirm-AHF ongoing trials assessing morbidity and mortality benefit with intravenous iron are awaited.

Aortic stenosis

The journey of transcatheter aortic valve implantation (TAVI) was charted by Professor Bernard Prendergast (London) with a review of recent trials. The TAVI approaches and devices have evolved substantially with improved outcomes. Although initially TAVI was trialled in high risk subjects not suitable for surgical aortic valve replacement (SAVR), the threshold continues to move toward medium to low risk groups in preference to SAVR. It appears that TAVI will be a key growth area for the interventionists in the coming decades.

Session 2

Stable angina and coronary artery disease

Professor Pamela Douglas (North Carolina) delivered the George Alexander Gibson lecture on stable angina and coronary artery disease, focusing on the findings of the PROMISE and SCOT-HEART trials. Both of these trials assessed symptomatic patients with suspected coronary

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artery disease but notably different study populations. The PROMISE trial did not show any outcome difference but CT coronary angiography leads to reduced use of intracoronary angiography for non-obstructive disease, better risk stratification and prognostic evaluation. The SCOT-HEART trial did show reduced death and myocardial infarction after correction for implementation delay. Given these findings it appears that CT coronary angiography weighting on the investigation algorithm for stable angina has been substantially advanced over other non-invasive modalities. Furthermore, the addition of fractional flow reserve to CT coronary angiography adds a functional component, making CT coronary angiography the key non-invasive investigation for stable angina.

Session 3

Adult congenital heart disease

Nikki Walker (Glasgow) presented a case of HF in the context of tetralogy of fallot repair in childhood during the themed cased based session. She highlighted the challenges in assessing these cases and a comparatively evidence free

zone in this area. Cardiology faces a new challenge over the coming decades of increased prevalence of adult congenital heart disease patients surviving into later life. To meet this challenge, the same rigour of research and evidence-based guidance as associated with the core cardiology topics is required.

Take home message

This symposium delivered an excellent update on key core cardiology areas of ischaemic heart disease, atrial fibrillation, valvular disease and heart failure. Imaging in the form CT coronary angiography and technology with advancement of TAVI techniques and experience is challenging our earlier practices. The SIGN guideline now recommends ticagrelor with aspirin as first line dual anti-platelet therapy following myocardial infarction. Heart failure pharmacotherapy which has seen little change until now is likely to see a seismic shift with the introduction sacubitril/valsartan. These new developments have significant financial implications, increasing the impetus for physicians to be ambassadors for advancing patient care.