Welcome to this review of the Cardiac Society of Australia and New Zealand (CSANZ) Annual Scientific Meeting 2015, held Aug 13–16 in Melbourne.

This year’s meeting represented all the current hot topics in AF, arrhythmias and device therapy. While it’s impossible to cover all the excellent presentations, I’ve broken down the material into topics and particularly chosen to report posters rather than keynote lectures.

I hope you enjoy this summary of selected presentations. Please feel free to send us your feedback and comments.

Kind Regards,
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Atrial fibrillation

Safety and satisfaction of day case pulmonary vein isolation for atrial fibrillation

Authors: Cheah S et al.

Summary: This analysis of retrospective data from 72 outpatients versus 153 inpatients (controls) who underwent PVI for paroxysmal AF reported complications among re-presentations within 72 hours and patient satisfaction in a subset of 84 patients from both groups. Compared with the inpatients, the outpatients had a nonsignificantly greater complication rate, and all six acute complications occurred within the postprocedural monitoring period. There were two re-presentations among the outpatients, but neither required admission. The outpatient care satisfaction scores were ≥7/10 in 94%, and 65% of them reported that they preferred day-case PVI to overnight admission.

Comment: This important local report validates this approach, which is in use in various centres around the world – with certain caveats (e.g. not living alone at home, within a certain distance from the ablation centre, routine procedure and recovery, etc). On the other hand, 35% of patients would have preferred an overnight stay; however, more patients feel they recover better at home.

Poster 320

Abstract

Independent commentary by Dr Andrei Catanchin. a cardiologist/electrophysiologist specialising in the management of AF and other arrhythmias in private practice in Melbourne. Dr Catanchin has a particular expertise in the management of AF and other rhythm disorders. He performs catheter ablation for AF and other arrhythmias, implants pacemakers and ICDs (defibrillators) and his research interests include alternatives to warfarin in AF management.
High prevalence of suicidal ideation in AF: influence of psychology, AF symptom severity and AF burden
Authors: Walters T et al.

Summary: The prevalence and predictors of suicidal ideation were evaluated in 47 consecutive patients with paroxysmal AF and 31 with persistent AF. Assessments using validated psychological distress scales revealed that 27% of the patients had thoughts of self-harm, with the difference between paroxysmal versus persistent AF not reaching statistical significance (20% vs. 37% [p=0.21]). Suicidal ideation was more likely in patients with a higher body mass index (p=0.004), but was not influenced by age, gender or cardiovascular morbidities. Suicidal ideation was also associated with greater psychological distress, elevated levels of stress perception, trait anxiety and personal negativity (p<0.0001 for all), and also with more severe AF symptoms, worse QOL and greater AF burden (p<0.05).

Poster 626
Abstract

A study of the psychological predictors of AF severity and quality of life in human AF: personality style is key
Authors: Walters T et al.

Summary: Interactions of psychological factors with AF symptom severity and QOL were evaluated at baseline and every 4 months for 12 months in 58 medically managed patients with AF, 20 undergoing catheter ablation and 25 control patients with supraventricular tachycardia. AF symptom severity, global wellbeing and QOL were independently predicted by psychological distress and all variables of personality style (p<0.05 for all). A multivariate analysis showed that elevated AF burden was the only organic cardiac variable to consistently predict poor QOL (p<0.05). AF burden over 12 months was 51% among the medically managed patients and 0.2% among the catheter ablation group. Only the ablation group experienced significant improvements in AF symptom severity, QOL and psychological distress (p<0.05 for all). Large postablation improvements were predicted by greater baseline distress, severe symptoms and an anxious personality susceptible to perceived stress.

Poster 604
Abstract

Can mobile phone text messaging improve medication adherence to long term therapies?
Authors: Thakkar J et al.

Summary: This was a systematic review and meta-analysis of 15 RCTs investigating phone text (SMS) messaging to promote medication adherence over >4 weeks in chronic diseases, including atherosclerotic vascular disease (four RCTs), in adults; the RCTs varied in interactivity and frequency. Adherence outcomes were significantly improved by SMS versus control interventions (odds ratio 2.17 [95% CI 1.53–3.08]), although the weighted mean effect size was small to moderate (Cohen’s d=0.43). Subgroup analyses showed that interventions that were personalised or contained daily reminders or reminders timed with medication dose had the greatest impact.

Poster 782
Abstract

Comment: These two posters focus on the psychological impact of AF. A number of non-AF related factors were associated with suicidal ideation, and AF certainly contributed. It is very much accepted that AF ablation improves QOL. What remains to be elucidated is why the same arrhythmia affects some people so much more than others — something that continues to intrigue physicians managing the condition; personality type appears to be an important factor.

Comment: This meta-analysis shows a simple and cheap intervention to significantly improve medication adherence. Methods of the included studies varied; however, the overall outcome was positive. As so many of us are inextricably attached to our mobile phones, this represents a very feasible intervention; one wonders if a simple electronic reminder or alarm programmed into the phone might achieve similar results. As strict daily or twice daily dosing is critical, this may have major implications for NOAC use.
Device therapy

Discontinuance of device therapy - recurrent shocks, operations and end-of-life

Speaker: Gould P

Summary/comment: Dr Gould provided excellent and comprehensive coverage of this important area. As the population ages and implant rates rise, we will be faced with this situation increasingly commonly, and there are many considerations including humanitarian, ethical and legal. Several specific situations exist: deactivation of ICD shock capability at a time when this would be futile or no longer desired/appropriate, deactivation of CRT delivery, and deactivation of all pacing support in both pacing-dependent and -nondependent patients. This linked pdf document is endorsed by the NSW Ministry of Health and National Heart Foundation; however, readers should be aware of their local and institutional health policy also.

Heart Failure/EP Joint Session

A retrospective analysis of ECG event loop recorders, diagnostic yield versus duration

Authors: Cleave L et al.

Summary: These researchers analysed data from 228 evaluable ECG event loop recordings for positive (symptom-arrhythmia correlation), negative or incidental findings; 58.4% of the tests were performed over ≤1 week, 36.9% over 2 weeks, 21.1% over 3 weeks and 2.6% over 4 weeks. Incident findings were seen in 6.6% of the tests and positive findings in 35.5%, among which the mean time to positivity was 1.06 weeks. Of 135 analysable tests over ≤1 week, one-third were positive and 58.5% negative, with 8.2% producing incidental findings. A positive outcome was seen for 38.7% of the 93 analysable 2-, 3- and 4-week tests, including 58%, 11% and 3% during the first, second and fourth weeks, respectively.

Comment: In Australia, event monitors are typically worn for 1 week, but some testing services offer up to 1–3 months’ monitoring, and we are likely to see more of this as the technology becomes cheaper and more readily available and indications expand. This report supports the current standard 1-week recommendation.

Other arrhythmia

Epidemiology of cardiac electrophysiology in Australia (1994–2013)

Authors: Ahmad W & Wilsmore B

Summary: These authors analysed data on cardiac electrophysiology from the Australian MBS (Medical Benefits Scheme). Based on the data, they calculated that current MBS funding for just electrophysiological services is $9.6 million. Their analyses showed exponential increases in the number of electrophysiology services per year, noting that the rate of electrophysiology is growing faster than other common medical and cardiology services. They expect the increase in demand for cardiac electrophysiological services to continue to increase exponentially due to the growing ageing population, the increasing incidence and prevalence of AF and the increased number of individuals living with chronic heart failure.

Comment: Although there are differences between the private and public health sectors, the fact that approximately 50% of Australians have private health insurance should hopefully minimise this. The standout findings are the almost exponential rise in ablation procedures over this 10-year period, followed by electrophysiology studies, CRT and pacemaker insertion. Other procedures such as diagnostic testing and coronary angiography have experienced a steady but much less marked increase.

Mitral valve prolapse and sudden death

Authors: Nalliah C et al.

Summary: This systematic review of 29 studies explored the relationship between MVP and sudden cardiac death. The cause for sudden cardiac death remained unidentified in 28.3% of cases in autopsy studies, while in cohorts with unexplained sudden cardiac death, the MVP prevalence was 13.3%. The community prevalence of MVP was 1.7%, and in the MVP population, the incidence of unexplained sudden cardiac death was 0.2%. Patients with sudden cardiac death and MVP often had bileaflet prolapse, mitral regurgitation, ventricular fibrosis or ventricular ectopy.

Comment: This review of this important common condition (MVP) with an uncommon sequel (sudden cardiac death) reminds us of the association and the fact that mitral regurgitation severity does not necessarily predict arrhythmia and sudden cardiac death risk.

Acute Coronary Syndrome Research Review

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Cardiology Research Review

SUBSCRIBE free, Click here and update your subscription now to receive Cardiology Research Review, and many more.
Conscious sedation for electrophysiological procedures

Authors: Markham R et al.

Summary: These authors analysed prospective data from consecutive cardiac electrophysiology procedures performed with the aid of continuous pulse oximetry and end-tidal CO₂ monitoring in 1437 patients by three electrophysiologists from two hospitals. There was no anaesthetist present for 1399 procedures, sedation was supervised by the proceduralist in 1205, 195 were performed with no sedation, a nurse trained in advanced life support was present for all the procedures, and an anaesthetist was selectively present in 36 preselected cases, among which intubation was used in 19. The respective median midazolam and fentanyl doses (in patients who did not receive general anaesthesia) were 2mg and 50µg, and 54 patients received adjuvant diazepam at a median dose of 1mg. There was one adverse event, which required ICU admission. No reversal agents were needed.

Poster 272
Abstract

Physician-led conscious sedation for external direct current cardioversion for atrial arrhythmia

Authors: Naguib Badie T et al.

Summary: In this research, data from 136 patients undergoing cardioversion with physician-led conscious sedation with weight-adjusted midazolam and fentanyl infusion were analysed. The respective mean midazolam and fentanyl doses were 6.4mg and 62µg, and 131 patients received routine reversal agents (flumazenil/naloxone). Sinus rhythm was restored in 96% of the procedures, with doses were 6.4mg and 62µg, and 131 patients received routine reversal agents (flumazenil/naloxone). Sinus rhythm was restored in 96% of the procedures, with two hospitals. There was no anaesthetist present for 1399 procedures, sedation was supervised by the proceduralist in 1205, 195 were performed with no sedation, a nurse trained in advanced life support was present for all the procedures, and an anaesthetist was selectively present in 36 preselected cases, among which intubation was used in 19. The respective median midazolam and fentanyl doses (in patients who did not receive general anaesthesia) were 2mg and 50µg, and 54 patients received adjuvant diazepam at a median dose of 1mg. There was one adverse event, which required ICU admission. No reversal agents were needed.

Poster 566
Abstract

Comment: Owing to limited availability of anaesthetic services (both anaesthetists and anaesthetic nurses), we have for a long time in cardiology performed invasive procedures using operator-directed sedation (including deep sedation for painful procedures and cardioversion/ICD testing). In recent years, limiting directives have been issued restricting its practice although this approach has been validated previously, and it’s reassuring to see this confirmed in almost 1500 contemporary procedures and 136 cardioversions with excellent safety and patient satisfaction outcomes.