

Riverina Medical & Surgical Symposium

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2019

Riverina
Medical &
Surgical
Symposium

Posters & Presentations

- Research Undertaken in the Riverina
- Updates in Practice
- Controversies in Practice

Saturday, 31 August 2019
Wagga Wagga City Council Chambers



Health
Murrumbidgee
Local Health District



Introduction

Welcome to the Riverina Medical and Surgical Symposium! This event showcases research projects and innovations in medical science from the spectrum of medical specialties currently established in the Riverina. The Symposium has been founded to bring medical professionals from across these specialties together to share emerging ideas and innovations and celebrate our achievements as the medical fraternity in the Riverina.

In recognition of these achievements, there are a number of prizes that will be awarded. These include Young Investigator Awards in Orthopaedics, Critical Care, Medicine, Surgery, Radiology, Public Health and Bioethics.

The Overall Young Investigator Award will be selected from the best of these six young investigator awards after a short presentation from each candidate.

Format for the morning

10:00am - Symposium opens

10:00am - Welcome

10:10am - Viewing of posters

11:30am - Young Investigator Award "Five Minute Theses",
presentation of prizes, and symposium summary

12:00pm - Close of Symposium

Congratulations to those presenting at the Symposium today. Thank you to our eminent judges, Professor Philip Crowe and Professor Catherine Harding, for their valuable time. Thanks also to our sponsors for their generosity. We hope you enjoy this event.

RMSS Committee & Convenors

A/Professor Joseph Suttie, Dr Matthew Lennon, Simon Paton, Joy Ross and Jayne Lewis

Abstracts

Quality of Life Outcomes for Patients Undergoing Bariatric Surgery in a Regional Centre

Emma Thomas, Dr Denbigh Symond, Dr Nicholas Williams, Dr Alexa Seal, Dr Richard Harrison

Background

Health-related quality of life outcomes [HRQoL] are used to assess the effectiveness of bariatric surgery.

Current studies focused on patients in major cities, despite the high prevalence of obesity in rural areas.

Aim

To compare effects of different bariatric surgical procedures (LSG, OAGB, RYGB) on HRQoL outcomes and GI symptoms in patients from a regional centre.

Methods

A retrospective analysis of a prospectively maintained database of patients who underwent bariatric surgery in a regional hospital between March 2018 - June 2019 was conducted. All patients who had undergone a 6 month review were included. Results from the SF36, Structured assessment of Gastrointestinal Symptoms [SAGIS] questionnaire and weight loss outcomes pre and post-operatively were analysed.

Results

Patients (n=94; 75 LSG, 13 OAGB, 6 RYGB) achieved an average 67.2%EWL, BMI was reduced from 45.3 ± 8.0 to 35.0 ± 23.9 ($p < 0.001$). There was no difference in BMI between surgical groups at any point.

Improvements in all 8 domains of the SF36 were observed, regardless of surgical procedure ($p < 0.001$). There was no difference in HRQoL between groups at baseline.

All patients experienced earlier satiety, loss of appetite, fewer loose stools, less bloating, increased nausea and feelings of sickness post-operatively.

Conclusion

Bariatric surgery performed in a regional centre, significantly improved HRQoL at 6 months post-op, regardless of surgery type. GI symptom development did not negatively impact HRQoL.

Case Report – Can FTD masquerade as depression?

Meleseini Tai-Roche, Gabriel Sanchez

Clinical Case

Geriatric medicine can be an eclectic mix of pathology coupled with a complex social context. We present a case report which poses the similarities of Frontal Lobe Dementia and Depression in the older patient who presents with features of both. The case highlights the key diagnostic features in both syndromes, and the complexity of clinical care when diagnosis remains uncertain. Discussion will also surround appropriate and evidence-based management for the patient and their family.

The P4 Study: Subsequent Pregnancy Maternal Physiology after Hypertensive and Normotensive Pregnancies

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4. Faculty of Health, University of Technology, Sydney, Australia

Background

Hypertensive disorders of pregnancy (HDP) are amongst the most common serious medical complications of pregnancy and are associated with increased risk of cardiovascular and metabolic disease later in life.

Methods

Prospective sub-study of the P4 Study. Women studied six months after normotensive (NP) versus hypertensive (HP) pregnancy and in the subsequent pregnancy (SP) (11 – 13 weeks gestation).

Results

31 women (21 NP, 10 HP). Women after HP had higher six months postpartum and SP blood pressure (BP). Women of Caucasian ethnicity had higher SP systolic ($p = 0.002$) and diastolic ($p = 0.009$) BP. A longer inter-pregnancy interval (IPI) contributed to poorer fat% in the SP ($p = 0.03$).

Discussion

Women with a history of HDP maintained higher BP than those without. Caucasian ethnicity was associated with higher SP BP,

and longer IPI's with higher fat%. These factors may reflect a higher long-term cardiovascular risk for women with a history of HDP.

Severe mitral regurgitation causing Ortner's syndrome

Hannah Kempton, Lucy McGrath-Cadell, James Nadel, Justin Phan, Ning Song, Kate Kearney, Nicole Bart, Paul Jansz

Clinical Case

A 72-year-old man presented with sudden onset of hoarse voice. Laryngeal endoscopy revealed an immobile left vocal cord during phonation. His relevant cardiac background included non-ischaeamic dilated cardiomyopathy. Transthoracic echocardiography revealed severe mitral regurgitation into a massive left atrium. The severe left atrial dilatation was found to be compressing the recurrent laryngeal nerve, causing vocal cord paralysis, or Ortner's Syndrome. He underwent open mitral and aortic valve replacement, and tricuspid valvuloplasty. Post-operative echocardiogram demonstrated well functioning valve prostheses, though atrial dilatation persisted. Clinically, the patient's hoarse voice persisted. He was referred for consideration for surgical correction of the vocal cord paralysis.

Body Mapping: Piloting an approach to explore the experiences of young people in drug and alcohol residential treatment

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4. Black Dog Institute, Sydney NSW, Australia

5. School of Health, Victoria University of Wellington, New Zealand

Introduction

Commonly employed research approaches do not always provide an in-depth understanding of young people's perspectives and experiences. Arts-based approaches offer an alternate, innovative method. This pilot study examines the utility of body mapping, an arts-based method, as a way to improve understandings of the lives and experiences of adolescents who are admitted to a drug and alcohol residential treatment program.

Design and Methods

Two workshops were held at an adolescent residential treatment facility in Australia. The workshops focused on using body mapping techniques to explore the young people's strengths and support networks. Five male residents and three females participated. Semi-structured follow-up interviews with participants were conducted and triangulated with other data sources to examine the utility and effectiveness of body mapping as a research tool.

Key Findings

The data revealed that body mapping engaged the participants, reduced verbal barriers and facilitated dialogue on their sources of strength and support.

Conclusions

Visual methods, such as body mapping, hold promise for optimising research with younger participants as they are an engaging and less confrontational form of data collection compared with interviews alone.

Profile of people in long-stay residential aged care in the Riverina region of NSW

Professor Paul Finucane, Dr Stephanie Armstrong

Profile

With an elderly population profile that is fourteen years ahead of national Australia, the Riverina region of NSW has the capacity to provide particular insights into the future of Aged Care nationally. We visited a total of 21 facilities over a 3-month period, recorded demographic data on residents, reviewed their medical records, discussed their dependency levels with qualified staff and reviewed their medication charts. The 338 long-term residents across facilities had a mean age of 85.1; 64% were identified as having cognitive impairment; 45% had behavioural disturbance; 87% had impaired mobility and 67% were a falls risk. The average number of medications being prescribed per resident across all facilities was 10.5. 42% of residents were being prescribed opioid medication, 28% benzodiazepines and 25% anti-psychotics. This study provides a snapshot of the people who reside in long-stay in Aged Care facilities in the Riverina Region. Among this highly dependent population, polypharmacy is the norm and the use of opioids, benzodiazepines and antipsychotic medications is particularly prevalent.

A Day in the Life: Recording of resuscitation status among elderly in-patients at a major rural referral hospital

Dr Stephanie Armstrong, Dr William Boneham, Professor Paul Finucane.

Case

Patient autonomy has been a central tenant of medical practice extending to decisions regarding resuscitation. A point prevalence study was conducted examining the resuscitation, baseline cognition and functional status of all admitted patients in the acute services building of Wagga Wagga Rural Referral Hospital. There were 89 patients aged ≥ 65 years in the hospital on the day of the audit. Of these, 28 (31%) were 'young-old' (aged 65-74 years), 37 (42%) were 'older-old' (aged 75-84 years) and 24 (27%) were 'oldest-old' (aged ≥ 85 years). Resuscitation status was documented for 25 (28%) of the 89 patients aged ≥ 65 years. The rate of documentation of resuscitation status increased with chronological age from 5/28 (18%) in the young-old to 12/37 (32%) in the older-old and 8/24 (33%) in the oldest-old. Rates of documentation of resuscitation status was twice as high on medical units (37%) than on surgical units (18%). This study demonstrates the potential underutilization of formal NFR documentation in a population with a large burden of life limiting comorbidities and high risk for experiencing sequelae from invasive procedures.

Surgical treatment of periocular cancers in Wagga Wagga: A retrospective audit

Gabriel Atan Sanchez

Abstract

Non-melanoma skin cancers (NMSC) are predominantly non-fatal. Their presence and treatment in the periocular region can impact patient's quality of life. Most common types are basal cell carcinoma (BCC) [70%] and squamous cell carcinoma (SCC) [30%]. Limited studies in Australia have explored surgical treatment of periocular NMSCs apart from a case-series of 485 patients (Nemet et.al 2006). Aim of this study was to determine surgical treatment outcomes of periocular malignancy in an oculoplastic subspecialty practice within Wagga Wagga, including methods of excision/biopsy and reconstruction, histological diagnosis, % with incomplete excision and recurrences. In 2016-17, average age of patients with an NMSC periocular cancer was 70.5 years and gender ratio were equal (51.8% male.) Most common location was left lower eyelid and most common histological diagnosis were BCCs. Most lesions underwent elliptical excision and most common method of reconstruction was advancement flap. Clear margins in 75.9% and nil recurrence of cancer.

The role of the surgeon in the era of robotics and artificial intelligence

Gabriel Atan Sanchez

Abstract

Since the turn of the 21st Century, an eminent revolution in minimal access surgery challenged the existing laparoscopic method. Beginning with the approval of the Intuitive Surgical's "da Vinci Surgical System" by the American Food and Drug Administration (FDA), the concept of robotic surgery has triggered widespread debate – about how it can be used to best assist patients, and what it might mean for surgeons. It has become a modern icon, representing an aspiration for excellence and a source of competition between the most distinguished medical institutions. As we venture into the unknown, the surgeon will encounter three pivotal roles both as an ethical agent and medical professional. The ethical role between the doctor-patient relationship with respects to informed consent, the ethical role concerning potential conflicts of interest among numerous stakeholders and the role of establishing a robust and effective surgical robotics training program for surgeons of the future.

Updates in Practice - Stillbirth Prevention in Australia

Meleseini Tai-Roche

Abstract

Stillbirth comprises the largest proportion of perinatal deaths in Australia and has been identified as an unaddressed public health problem worldwide (Perinatal Society of Australia and New Zealand [PSANZ], 2018). Six babies are stillborn in Australia every day. This statistic has remained unchanged in almost three decades, despite the fact most Australian women receive a first world standard of antenatal care and steadily increasing rates of medical intervention, including more frequent sonography, earlier inductions and operative deliveries. This poster presentation will provide a snapshot of the public health burden of stillbirth in Australia and present the most recent national approaches to stillbirth prevention.

Floating thrombi in aortic arch & brachiocephalic artery after blunt impact trauma to chest

Grant Elliott, Dr Michael McCready.

Abstract

Intra-luminal or floating aortic thrombus is a rare clinical finding which carries a life-threatening risk of distal embolization.

We report the case of a 53-year-old female who presented with bilateral leg ischemia one week after a blunt impact trauma to the chest. CT-A revealed systemic emboli with right renal infarctions, and bilateral occlusion of both popliteal arteries. Emergency leg re-vascularisation was performed via open bilateral popliteal embolectomies and fasciotomies, with subsequent below knee amputation of the right leg. CT-A and Transthoracic Echocardiography identified the likely embolic source as two large, intraluminal thrombi attached to the proximal aortic arch and the proximal brachiocephalic artery. No evidence of aortic aneurysm, dissection, or atherosclerosis was present. Such intra-luminal thrombi are particularly rare clinical findings in the aorta in the absence of aneurysm or atherosclerosis.

This case demonstrated anticoagulation as an efficacious treatment for aortic thrombi, with near-complete resolution imaged at 4 weeks.

Determinants of trainee satisfaction: An Australian national study

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Objectives

Worldwide specialist trainees wellbeing has become an issue of great concern with reports of overburdensome workloads, burnout, trainee bullying, a lack of employment security and a number of high profile suicides. Ensuring that trainees are satisfied and progress well through their training should be a priority of any health system that seeks to have a future. Despite this there has been little systematic research on specialist trainees which identifies policy-amenable factors and correlates with professional satisfaction. Our project aims to examine potential predictors of trainee professional satisfactions in a national Australian cohort.

Methods

This study used 2008 - 2015 data from the Medicine in Australia: Balancing Employment and Life (MABEL) survey, a national study of doctor demographics, characteristics and professional and personal satisfaction. Our study examined specialist trainees using a repeat cross sectional method pooling first responses across all waves we performed a multivariate logistic regression analysis assessing correlates with professional satisfaction.

Result

The three most strongly correlated factors to specialist trainees being professionally satisfied were feeling well supported and supervised by consultants (OR 2.59; 95% CI 2.42 - 2.77), having sufficient study time (OR 1.54; 95% CI 1.40 - 1.70) and self-rated health status (1.65; 95% CI 1.53 - 1.80). Those working >56 hrs/wk were significantly less professionally satisfied (OR 0.76; 95% CI 0.70 - 0.84) compared to the median number of work hours (45 - 50 hrs/wk). Those earning in the lower quintiles, earlier in their training and trained at an overseas university were also significantly less likely to be satisfied.

Conclusion

Our study suggests that focus on good clinical supervision and support, workload and ensuring trainees have sufficient personal and study time would improve trainee satisfaction, increase training quality, morale and thus the quality of care. It also suggests that a particular consideration of those trainees earlier in their training, those graduating from overseas universities and working >56 hrs/week may be appropriate when considering the development of trainee wellbeing programs and policies.

Mid-life hypertension and Alzheimer's dementia: A systematic review and meta-analysis

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Background

The lack of any current effective treatment means that efforts need to be focused on disease prevention, that is targeting these modifiable risk factors in the pre-disease stages. Hypertension is an established risk factor for stroke and vascular dementia but recent meta-analyses looking at the association between Alzheimer's disease (AD) and hypertension have found no significant association. These meta-analyses included a number of short term studies starting in late life which very likely obscured the real effect of mid-life hypertension. We examined the association of AD with mid-life hypertension, by including only studies with a sufficiently long follow up duration and by clearly defining the type of hypertension.

Methods

Relevant studies were found by searches of MEDLINE, EMBASE and PubMed. Study outcomes were grouped by measures of blood pressure and definition of hypertension (e.g. Systolic hypertension >140 mmHg or >160 mmHg, diastolic hypertension or blood pressure measured in 10 mm Hg increments). We assessed pooled effect size estimates using a random effects model and heterogeneity of pooled estimates was assessed by examining

significance of the I² statistic.

Results

Literature search found 3426 unique publications of which only 7 were eligible studies. There was a significant association between systolic hypertension (>160 mm Hg) and AD (HR 1.25, 95CI 1.06 – 1.47, p=0.0065). Similarly, for systolic hypertension >140 mm Hg there was a smaller but still significant association (HR 1.18, 95CI 1.02 – 1.35, p=0.021). For diastolic hypertension, all four studies found no significant associations between diastolic hypertension and AD, and these data could not be pooled due to heterogeneity in reporting.

Conclusions

Our study found that midlife stage 1 and stage 2 systolic hypertension is associated with increased risk of AD by 18 and 25 percent respectively, although no association was found for diastolic hypertension. If we are to address the growing epidemiological challenge posed to us by AD there needs to be an assertive control of systolic hypertension.

Symptomatic Phenylketonuria

Harry Jude

Case Report

The presenting symptom in this 29-year-old gentleman with phenylketonuria was intermittent anxiety and right sided tinnitus which could be adjusted and induced by rubbing the right side of his face anteriorly to the ear.

An MRI was done which showed diffusion related changes and periventricular high signal changes that are consistent with PKU. There were some atypical findings of T2 signal change in the white matter of his herniated ectopic cerebellar tonsil although this is not of significance.

These findings are consistent with the patients self-reported poor compliance with a PKU friendly diet and an increase in his dietary phenylalanine from age 18. The only other significant history of note is that this gentleman is a heterozygote for two common HFE gene mutations that could predispose him to haemochromatosis.

It is proposed that increased phenylalanine levels can impact brain growth, myelination and neurotransmitter synthesis. Other presentations of PKU include seizures, behavioural abnormalities, microcephaly and skin disease.

Poland Syndrome

George Mallat

Case Report

This is a case of a 71-year-old gentleman with Poland syndrome. His clinical findings include absence of his right pectoralis muscles, shortening of his right arm, and previous webbed fingers in the right hand which have been surgically corrected with a skin graft.

Poland Syndrome (PS) is characterized by unilateral, partial or complete absence of the sternocostal head of the major pectoral muscle and ipsilateral shortened, webbed fingers (brachysyndactyly). In most cases, the pectoralis minor muscle is also absent. Patients will usually have a sunken chest wall, due to hypoplasia of the ribs and cartilage, and may display a high-riding scapula (Sprengel deformity). Dextrocardia, lung herniation, renal, vertebral and lower limb malformations have been described in rare cases.

PS occurs in sporadic fashion, and reported incidence ranges from 1 in 10,000 to 1 in 100,000. The exact cause of PS is unknown; however, the current theory is that it results from an interruption of blood supply to the branches of the subclavian and vertebral arteries, known as "Subclavian Artery Supply Disruption Sequence", during the sixth week of embryogenesis.

Novel Oral Therapy for Fabry Disease in the Riverina Area

Joseph, S

Case Report

Fabry disease is a rare x-linked recessive lysosomal storage disorder due to a deficiency in alpha-galactosidase A enzyme. This deficiency results in the lysosomal accumulation of globotriaosylceramide. Fabry disease is a multisystem disorder that affects the kidneys, heart, brain, nerves and gastrointestinal tract. This case report describes a patient with Fabry disease who has cardiac, renal and neurological manifestations. She was commenced on monotherapy Migalastat 123mg on alternative days after it became available on the Australian Life Saving Drugs Program in November 2018. Migalastat replaced fortnightly infusions of galasidase alfa. The patient described has a genetic mutation making her favorable for this chaperone therapy. Her cells produce some alpha-galactosidase A enzyme that is capable of degrading substrate but is not delivered to lysosomes to reduce globotriaosylceramide. Migalastat binds to and stabilizes alpha-galactosidase A so that it can be trafficked to lysosomes. Once delivered, the alpha-galactosidase A enzyme can degrade the accumulated globotriaosylceramide.

A month of madness Anti-NMDA receptor encephalitis: A literature review

Kirra Parks

Review

Anti-NMDA receptor encephalitis is a potentially devastating and critically time sensitive diagnosis affecting young people. Although rare, it is the most common form of encephalitis in children and young adults and is 4 times more common than HSV encephalitis. First described in 2005 anti-NMDA receptor encephalitis at onset is very difficult to differentiate from new onset psychiatric illness. The consequences of missed or delayed diagnosis include death and significant disability. Approximately 7% of people diagnosed will die, however 80% of those who are treated early will achieve recovery to independent activities of daily living within 1.5yrs. Early initiation of therapy is important given the potentially devastating consequences of missed or delayed diagnosis. Therefore, it is essential that clinicians are aware of this relatively new condition. This literature review aims to describe the illness, its clinical course, diagnosis and most importantly, the treatment regime.

Systematic review of impaired cerebrovascular autoregulation and adverse patient-centred outcomes in critically ill patients and patients after high-risk surgery

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3. St George & Sutherland Clinical School of Medicine, University of New South Wales, Sydney, NSW, Australia.

Background

For patients experiencing critical illness following high-risk surgery, it remains unclear whether impaired cerebrovascular autoregulation (CVAR) is associated with adverse outcomes.

Aim

To evaluate any association between impaired CVAR and adverse outcomes in critically ill patients and high-risk surgical patients.

Methods

MEDLINE, EMBASE and the Cochrane Central Register of Controlled Trials were systematically searched through to 8 March 2019. The primary outcome was acute neurological dysfunction. Risk of bias and the quality of evidence was evaluated using the Newcastle-Ottawa Scale and GRADE approach respectively.

Results

Fourteen quantitative studies and no randomised controlled trials met the inclusion criteria [critical illness (n=8), high-risk surgery (n=6)]. No reliable conclusions

can be drawn from the studies evaluating acute neurological dysfunction due to the high risk of bias and low-quality evidence.

Conclusion

There is no conclusive evidence for any association between impaired CVAR and adverse patient-centred outcomes in critically ill or high-risk surgical patients.

Evaluating the relationship between cerebrovascular autoregulation and postoperative delirium in intensive care unit patients after high-risk, non-cardiac surgery

Nina Li¹, Andrew Cheng^{2,3}

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2. Department of Intensive Care, St George Hospital, Liverpool, NSW, Australia
3. St George & Sutherland Clinical School of Medicine, University of New South Wales, Sydney, NSW, Australia.

Background

An association between adverse outcomes and impaired cerebrovascular autoregulation (CVAR) during cardiac surgery has been documented, but it remains unknown whether an impairment after high-risk, non-cardiac surgery is associated with delirium.

Aim

To evaluate any association between impaired CVAR during the first 24 hours after high-risk surgery and delirium.

Methods

In this prospective cohort study, NIRS-derived regional cerebral oxygen saturation and invasive mean arterial blood pressure (MAP) were analysed to determine the tissue oxygenation reactivity (TOx), an index of CVAR. Delirium was evaluated using the Confusion assessment method for the ICU.

Results

When comparing patients that developed delirium (n=11) to those that did not (n=60),

there was no significant difference in the TOx scores (p=0.12). MAP excursions above the upper limit of normal (ULA) was not associated with delirium (p=0.10).

Conclusions

In this study, delirium appeared to occur independently of postoperative CVAR impairment or MAP deviations above the ULA.

Pulmonary Nodules and Histoplasmosis

Sasongko G, Ho M

Case Report

Histoplasmosis, with *Histoplasma capsulatum* as the causative agent, is an endemic mycosis that is common to be found in North and Central America, but is rare to be found in Australia. In 2011, there were 63 cases reported mainly in Queensland and northern NSW (McLeod et al., 2011). This case report is going to discuss one probable case of histoplasmosis on DE, an 18 year old asymptomatic female with incidental finding of pulmonary nodules on CXR. The full report of the culture is as of current, still pending - but positive for pores leading towards the histoplasmosis diagnosis.

“Do you want an STI screen? We’ll do it now” – a qualitative analysis of promoting sexual health at Aboriginal Medical Services

Alec Hope

Background

Aboriginal Australian people suffer poorer sexual health compared to non-Indigenous Australians. Sexual health interventions such as prevention, targeted screening and treatment are necessary to help reduce this gap. This presentation aims to elucidate potential ways to improve sexual health.

Methods

Eighteen semi-structured interviews with healthcare providers, researchers and health promoters were qualitatively analysed sexual health promotion.

Results

Respondents noted sexual health services must be adaptable to the demands of the community, reflecting the specific risk profiles of the population, creation of community-appropriate health promotion materials and the provision of high quality sexual health assessment and treatment.

Conclusions

Sexual health outcomes for Aboriginal communities demand improved prevention, investigation and management approaches. These approaches will be driven by a combination of specialist sexual health and Aboriginal Medical Services.

What factors encourage and deter student from applying to medicine: Is there a difference in factors between those of first-in-family university students, first-in-family medical students, and those with parents who have previously completed a medical degree?

Kirsten Dukas

Supervisors: Dr Cathy Harding & Dr Joe Suttie

Aim

This study will be looking at the factors that may encourage or deter students from applying to a medical school. Additional analysis will be taken to determine if these factors have a different impact on first-in-family university students, first-in-family medical students, and those with parents who have previously completed a medical degree. This will be completed by distributing a questionnaire to medical students across all four years at the university of Notre Dame Sydney. There is hope that this questionnaire will be distributed at the beginning of 2020s academic year. The questionnaire will involve questions pertaining to mental wellbeing, impact of distance, familial support, financial burden, prior experience within the family (first-in-family students), and prior support and information provided before application.

Improving educational resource for smoking reduction for pregnant Aboriginal Australian and Torres Strait Islander women in rural areas

Adele Evans

Abstract

Currently, 47% of pregnant Aboriginal Australian or Torres Strait Islander women smoke during pregnancy, compared to 9.8% of the general population, this rate is higher in rural communities. Cigarette exposure during pregnancy leads to a multitude of pregnancy complications including lifetime morbidity and mortality for the child. Educational resources specifically tailored for pregnancy have been found to reduce smoking rate. Within the Aboriginal Australian and Torres Strait Islander community, there is preference for culturally targeted message regarding smoking cessation, especially within rural communities. The aim of this study was to explore the evidence for development, implementation and potential outcomes of educational resources to reduce smoking for pregnant Aboriginal Australian and Torres Strait Islander women in rural Australia. A systematised literature review over 12 search engines was conducted resulting in 21127 records identified, in which three studies fulfilled inclusion criteria. Professional perceptions from health professionals working in rural maternal Aboriginal Australian health across Australia were also gathered.

Our findings suggest that community engagement and empowerment are essential to developing relevant and culturally responsive resources. Further that is a large paucity of published research for the development and efficacy of educational

resources for pregnant Aboriginal Australian and Torre Strait Islander women.

3D scanning of chronic leg ulcers: Refinement of quantitative approach to therapy

Suzannah Dewhurst, Indianna Chant, David Airey

Abstract

Chronic lower limb ulcers remain a significant burden on the health system. The Artec Eva scanner has shown promise as a flexible technique through which to scan wounds with sufficient detail to allow robust therapy decisions. Calibrating the accuracy of the scanner in measuring ulcer healing remains a significant challenge.

Using Artec and Rhino 6TM 3D technologies, multiple foot ulcers were scanned then measured. The measuring process was repeated by three program operators, and the rate of healing was graphed for two patients. Patient identification stickers were measured as an objective size to assess the accuracy of the method.

Factors predicting surgery after horse related injuries, a rural hospital's experience

Dr Saksham Gupta, Dr David Buckley

Abstract

Horses are important sources of recreation, companionship and serve as working animals for rural Australians. A 12-month retrospective analysis was performed for all horse-injured patients who presented to Wagga Wagga Base Hospital. The majority of patients were female (67%) and adult (79%). Only 60% wore a helmet, concerning as 20% of injuries involved the head and neck. Seventy-eight percent were injured whilst riding. A logistical regression analysis was performed to examine the probability of a patient requiring surgery which found two variables having significant associations: non-riders were 3.6 times more likely to require surgery (95% CI 1.5-8.3) along with males being 2.7 times more likely (95% CI 1.3-6.0). The most common region injured was the limbs/extremities, injuries which also required the most surgical procedures, usually orthopaedic in nature. The injury severity of the cohort was low with a mean ISS of 3.4, 2.4% ICU admission rate and one mortality.

Billy Goat Went Gruff Case report on a blunt chest injury in a farmyard

Dr Saksham Gupta

Case Report

A 63 year old male presented to our hospital after being pulled over onto his chest by a goat. Computed-tomography revealed a large left extrapleural haematoma with active arterial haemorrhage. He had both ventilatory and circulatory derangements; traditional teaching would advise that his 'B' issues should be addressed before 'C'. However, there was concern that decompressing the haematoma with a chest drain would release its tamponading effect, causing uncontrollable haemorrhage. A thoracotomy was also discussed, but this was considered risky as he was taking apixaban. The decision was made to accept his ventilatory compromise and to address the active bleeding with embolisation first. A thoracotomy was performed 12-hrs post embolisation to clear the haematoma, allowing time for the apixaban to clear from his system. This case highlights how ATLS principles are a guide only and clinicians need to be proactive when the A-B-C framework may need to be modified.

A study of acute surgical patients, prevalence of chronic pain and relationship to length of stay

T. Coles, C. De La Rosa Orjuela, M. Payne

Introduction

Preoperative pain and opioid use have been linked to increased postoperative pain and longer recovery periods. Approximately 20% of Australians suffer from chronic pain and are often prescribed long-term opioids. In 2007, the cost of chronic pain in Australia was estimated to be greater than \$34 billion, \$11 billion due to productivity costs and \$7 billion direct healthcare costs. Length of stay in hospitals is not only an outcome indicator but also a cost index in patient's care. This study aims to examine the relationship between preoperative chronic pain, preoperative opioid and length of hospital stay in acute surgical patients from a three month period in a rural setting.

Methods

Medical records from a 3 month period from 2019 were examined. Cases included in the study were those where an operative procedure took place, namely a laparoscopic or open procedure. Electronic medical records were used to examine whether patients were on opioid medications prior to their hospital admission and whether a diagnosis of chronic pain had been made. This data was assessed in conjunction with length of hospital stay.

Results

Preliminary results have identified 114 patients eligible to be included in the analysis. Of these, 77 (68%) underwent a

laparoscopic abdominal procedure and 26 (22%) had documented preoperative chronic pain. Of the 114 participants only 11% were on opioid analgesics preoperatively. The average length of stay of all participants over the 3 month period was 5 days.

Social Media in Surgery: The Golden Era or the Grey Zone?

Jade Enoch¹, Tayla Coles¹

1. Wagga Wagga Base Hospital, Colorectal Surgery Unit

Aim

Social media (SM) has, quite literally, filtered into medical practice. Platforms such as Facebook, Twitter, Instagram, LinkedIn and ResearchGate have been adopted by individual medical practitioners, group practices, conferences and professional societies to harness the power of engagement with their target audience. The estimated usage of SM by doctors has risen from 40-90%¹; and a recent paper demonstrated 68% of Australian and New Zealand Colorectal Surgeons are using social media². Similarly, patients are increasingly employing SM to research surgical procedures, surgeons and participate in the decision making process.

The concerns with SM use in surgery are vast - privacy and patient confidentiality being at the forefront. The sensationalisation of live-streamed procedures, under the guise of 'education', fails to account for the potential suboptimal surgical outcomes these patients face. Similarly, the impact of the social media imprint left behind for these patients has yet to be quantified. The most recent Royal Australian College of Surgeons position paper on SM remains very vague in defining appropriate SM conduct for fellows and trainees³, but despite this maintains a number of official SM accounts. In contrast, other colleges such as RACGP have actively adopted SM marketing campaigns as a public health movement.

This poster examines whether or not SM is compatible with ethical surgical practice, and reflects on its potential to be used for

collaboration, education and health advocacy.

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Outcomes Following Right Hemicolectomy in the Riverina

Jade Enoch¹, Tayla Coles¹, Stephen Jancewicz¹

1. Wagga Wagga Base Hospital, Colorectal Surgery Unit

Introduction

Wagga Wagga Base Hospital (WWBH) is the largest hospital in the Riverina, providing the majority of major surgical and cancer services to residents. This audit aimed to examine outcomes of patients undergoing right hemicolectomy at WWBH compared to the national standard.

Methods

A retrospective database of all patients undergoing right hemicolectomy (MBS item number 32003) at WWBH between 1st January 2017 to 31st December 2018 was collated and analysed. 3 patients were excluded due to coding error. The CSSANZ Bi-National Colorectal Cancer Audit (2018) was used as the national standard for comparison of outcomes.

Results

The total number of right hemicolectomies performed over 24 months was 79. Average age was 67 years (range 20-88), average operating time in minutes 149.74 (range 40-271), and average LOS 13.02 (3-87). 26.5% were emergency cases for either obstruction, ischaemia, or volvulus. 63.2% of right hemicolectomies were performed for malignancy, with 45.5% being performed laparoscopic or lap-assisted. Total mortality rate over 24 months was 22.7% (N=18). Preliminary subgroup analysis of deaths from malignancy (N=12) identified the majority of cancers being of poor biology, with local invasion, nodal disease, or metastases at time of primary

resection.

Conclusion

The emergency surgery rate for WWBH was higher than the national average (26.5 vs 6%), however this data is likely skewed due to the inclusion of non-cancer right hemicolectomies performed. Mean LOS was also higher (13.02 vs 8.1), possibly attributed to by geographical distribution of patients. WWBH also has a lower rate of lap or lap-assisted RH (45.5% vs 60%). Unadjusted inpatient mortality rate needs to be examined further.

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Morbidity associated with transport specific delays in remote regions: theoretical comparison of transport options specific to Wagga Wagga

Dr Michael Valente, A/Prof Martin Jude

Abstract

Using cases from Wagga Wagga and Canberra Hospitals we are able to estimate the total delay in onset to reperfusion time caused by inter-hospital transport for patients with acute ischaemic stroke. An important treatment for patients with acute ischaemic stroke within 24 hours of onset is endovascular clot retrieval. The benefit of this treatment is highly contingent on how soon it is completed after the onset of the stroke. Even short one to two hour transport delays can significantly reduce the likelihood that a patient returns to functional independence. In this brief literature review we aim to summarise the effect that transport delays have on patients treated in Wagga Wagga. Future investigation should be aimed at determining novel ways to expedite transport of patients to comprehensive stroke centres (were clot retrieval is available) or how we can more easily bring the interventional radiologist to the patient.

Systematic review comparing the use of aspirin with dual antiplatelet therapy for secondary prevention in non-cardioembolic ischaemic strokes

C. Mok, T. Bemand, M. Lennon

Background

Antiplatelet therapy is an essential part of secondary prevention for patients with ischaemic strokes or transient ischaemic attacks with commonly used agents being aspirin, clopidogrel, or dipyridamole. Current Australian guidelines recommend early dual anti platelet therapy and a recent large randomised controlled trial (POINT) was published in 2018 supporting this practise but an updated meta-analysis with pooled effects has not been performed.

Method

Meta-analysis of randomised controlled trials comparing effectiveness of early dual antiplatelet therapy with aspirin monotherapy to prevent repeat stroke or transient ischaemic attack in patients diagnosed with a non-cardioembolic ischaemic stroke or transient ischaemic attack.

Hypothesis

Early dual antiplatelet therapy will be more effective in preventing recurrence of stroke or transient ischaemic attacks than aspirin monotherapy.

Preliminary results

13 articles met inclusion criteria for further analysis.

Patterns of access to Cardiac Magnetic Resonance imaging in the Riverina

Dr Su San Lim, A/Prof Joseph Suttie

Introduction

Cardiac Magnetic Resonance imaging (CMR) has become a valuable diagnostic tool for cardiac conditions. It is the imaging modality of choice for complex congenital heart disease, and particularly useful for diagnosing structural conditions including cardiomyopathies, inflammatory and infiltrative conditions.

CMR imaging first became available in Wagga Wagga in 2013, increasing access to patients in the Riverina who face geographical difficulties in travelling to the city.

Objectives

To evaluate and describe local patterns of access to CMR, and compare the rates of uptake between residents in Wagga Wagga and peripheral towns.

To evaluate level of accessibility to CMR amongst Indigenous patients in the Riverina.

Methods

Retrospective data of 202 patients who had CMR imaging was collected over 5 years from 2013-2017 at the main referral centre, Riverina Cardiology.

Variables analysed included age, sex, distance travelled, Indigenous status and year of presentation.

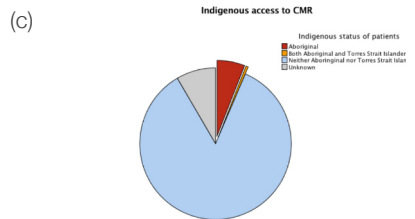
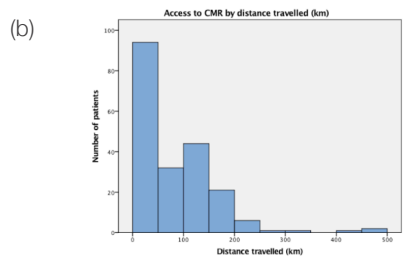
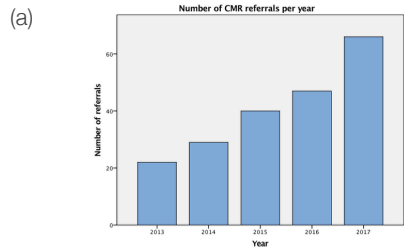
Results:

The number of patients accessing CMR has steadily increased over the years since it first became available (Figure A).

The main indications for referral included investigation of cardiomyopathies, masses, arrhythmias, valvulopathies and ischaemic heart disease.

Rates of access increased with lesser distance required to travel (Figure B). Out of a total of 202 patients, 81 (40%) lived in Wagga Wagga within 15km of the imaging centre. The remaining 121 (60%) lived in peripheral towns beyond 15km of the imaging centre, with the largest number of patients from Young, Tumut, Temora and Griffith.

In terms of Indigenous status, the majority of the patients were non-Indigenous (85.4%), 6.4% of the patients were Indigenous, and the remaining were unrecorded (Figure C).



Conclusions

These results show an encouraging yearly trend of increasing regional access to CMR. A larger proportion of our patient cohort live in peripheral towns, showing that the service has reached a population that faces larger barriers to access from geographical and socioeconomic factors.

Indigenous patients are currently slightly over-represented (6.4% scanned population and 4% in the Riverina as a whole). This might represent a higher prevalence of cardiac disease or improved access due to "Close The Gap" financial initiatives designed to improve patient access.

Given the diagnostic benefits of CMR imaging, ease of access should be increased by de-centralising CMR referrals from cardiologists to other clinicians.

Limitations of this study include difficulties in measuring patient adherence to referrals, loss to follow up, and access to GPs and cardiologists.

Further studies should follow to evaluate the benefits from our local CMR service, in terms of diagnosis and treatment of cardiac conditions, so as to help promote funding of other similar CMR services in regional Australia.

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International Preferred Practice Patterns for Syphilitic Uveitis

Roy M. Stathis¹

1. Wagga Wagga Rural Referral Hospital

Background

Syphilis is re-emerging worldwide, accompanied by advances in diagnostics and treatment. We investigated current practice for syphilitic uveitis amongst uveitis specialists internationally.

Methods

A 25-question survey, focused on presentation and management of syphilitic uveitis, was distributed to 268 members of the International Ocular Inflammation Society (IOIS).

Results

Responses were received from 108 IOIS members (40.3%), who managed 5.8 mean cases of syphilitic uveitis in 2016. 45 of 83 respondents with relevant experience (54.2%) report increased frequency from 10 years prior. 66 of 108 (61.1%) order simultaneous treponemal and non-treponemal serological tests for diagnosis, and lumbar puncture is requested by 98 of 108 (90.7%). HIV testing is ordered by most (103/106, 97.2%). The clinical factor considered best predictive of poor outcome is optic neuropathy (93/107, 86.9%).

Conclusions

Increasing numbers of syphilitic uveitis are being managed by uveitis specialists. Our findings provide a guide for best practice within the ophthalmology community.

OUCH: An evaluation of Opioid Use in Current Hospitalised surgical patients

Claire Mok, Camila De La Rosa, Aishah Bhadelia and Christopher Mumme

Objectives

The rise in use of prescription opioids is well described in Australia, with a five-fold increase seen in the past decade. Literature has described an association between a “trigger” event in opiate naive patients, commonly surgery and the risk of developing long term, persistent opioid use. Unfortunately, there has been burgeoning rates of opioid addiction, dependence and abuse, compounded by adverse effects including opioid induced hyperalgesia, and death.

Design

This project is a retrospective cohort analysis looking at the number of surgical patients who were discharged on opioids and the proportion who were provided a de-prescribing plan over a one month period from January to February 2019. Only patients who underwent a surgical intervention, and had a length of stay of more than 1 day were included. Obstetric and gynaecology patients were not included in this study. From this data, we hope to evaluate the appropriateness of opioid prescription, defined as follows: firsts, a provision of opioids only if they had used prescribed pro-re-nata opioids 24-48 hours prior to discharge; second, prescription of opioids in the context of multimodal analgesia with regular paracetamol and/or NSAIDS; and last, the provision of a de-prescribing plan.

Results

Of the 26 patients identified who were prescribed opioid analgesics on discharge, 8% had a de-prescribing plan in the discharge documentation, 20% had been on opioids prior to admission, and 62% were prescribed concomitant simple oral analgesics.

Conclusion

This project is a pilot study for future research which will aim to estimate and evaluate the magnitude of inappropriate opioid prescription to surgical patients, a problem that is compounded by the lack of opioid de-prescribing plans. Data will be evaluated over a 3-6 month period. This will form the basis of future recommendations in identifying at risk groups, and need for junior doctor education to change prescribing practices to tackle the issue in the local community.

Headache in Patients with Sella Disease: Clinicomorphological Predictors of Secondary Headache and the Outcome of Endoscopic Transphenoidal Surgery

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7. Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia

Objective

Sella pathologies are frequently found as a result of imaging performed to investigate headache. However, both headache and incidental sella lesions are common in the general population. This fosters a complex diagnostic question: are incidental sella pathologies coincidental to primary headache or causing secondary headache? Hence, this study prospectively examined the prevalence, phenotype, burden and predictive factors of secondary sella-related headache in patients with radiologically confirmed sella pathologies and the efficacy of transphenoidal surgical intervention.

Methods

Patients undergoing surgical resection of a sella tumour were consecutively recruited and defined as having headache or not at baseline with headache phenotype characterised using validated questionnaires (HARDSHIP, EUROLIGHT). Headache severity was assessed at baseline and 6-months postoperatively using HIT-6 and MIDAS questionnaires. Tumour characteristics were defined using radiological, endocrine and histological factors.

Results

Of the 60 participants (62% female, 47.1±18.6 years), 63% possessed headache at baseline. HIT-6 scores were higher in younger participants ($R^2=-0.417$, $p=0.010$), smokers (63.31±7.93 vs 54.44±9.21, $p=0.006$), those with family headache history (68.13±7.01 vs 54.94±9.11, $p=0.003$), dural invasion (55.70±12.14 vs 47.18±10.15, $p=0.027$) and sphenoid sinus invasion (58.87±8.97 vs 51.29±10.97, $p=0.007$). Postoperative HIT-6 and MIDAS scores improved more in patients with higher baseline headache severity scores (HIT-6: $R^2=-0.682$, $p<0.001$, MIDAS: $R^2=-0.880$, $p<0.001$) and in those with dural invasion (MIDAS: -53.00±18.68 vs 12.00±17.54, $p=0.003$).

Conclusions

Headaches are common in patients with pituitary pathology. However, surgical intervention is most effective in patients with severe headache at presentation and MRI evidence of dural invasion.

Opioid prescribing practices in postoperative hip/knee joint replacements in a rural setting

C. De La Rosa Orjuela, C. Mok, A. Bhadelia, C. Mumme, I. Lemech

Background

Over-prescription of opioids have triggered an opioid crisis in developed countries. In 2017 the US Department of Health and Human Services declared opioid misuse and opioid-related overdoses a public health emergency. According to Centers for Disease Control and Prevention (CDC), 130 Americans die everyday from opioid overdose.

The Centre for Medicine Use and Safety found that 1.9 million Australians begin taking opioids annually and 2.6% become long-term users. Opioid-related deaths in Australia have doubled in the last 10 years. It is becoming more evident that long-term use of opioids in chronic non-cancer pain is detrimental. This study aims to document the opioid prescription practices in patients undergoing elective hip/knee replacements at Wagga Wagga Base Hospital (WWBH). It will focus on preoperative and postoperative opioid use until week 6.

Objectives

This study aims to document the opioid requirements for patients undergoing elective hip/knee replacements at Wagga Wagga Base Hospital (WWBH). It will focus on preoperative and postoperative opioid use until week 6 post-operatively.

Methods

This audit will look at opioid use at three points on discharge, at two-week and six-week follow-up. Patients booked for elective hip/knee replacements will be recruited at pre-admissions clinic. Data will be collected from electronic medical records (eMR) and patient surveys distributed at follow-up appointments.

Exploring the association between private health insurance and coronary artery disease burden in regional Australia using computed tomography coronary angiography

T. Bemand, H. Kempton, J. Suttie

Background

Private health insurance globally may be associated with a lower risk of overall mortality. However the relationship between burden of cardiovascular disease and health insurance in regional Australia is currently unclear.

Method

A prospective longitudinal study of those undergoing computed tomography cardiac angiography in a single radiology centre in Wagga Wagga. Coronary artery disease was measured by calcium scoring and compared according to health insurance status.

Results

A total of 1436 patients were included in this trial, and 764 (53.2%) had private health insurance. There was no significant difference in the distributions of calcium score between those who did and did not have private health insurance (medians [25th centile - 75th centile] 6 [0-132.5] and 11 [0-136] respectively; Mann-Whitney U $p=0.4$)

Conclusion

Preliminary data suggest there is no association between private health insurance and coronary artery disease burden in regional Australia for the population investigated.

Dobutamine-Induced Eosinophilic Myocarditis in Heart Failure Patient Requiring Urgent Left Ventricular Assist Device Implantation (LVAD): A Case Report

Durre Shahwar

Introduction

Dobutamine is a relatively unrecognised cause of eosinophilic myocarditis (ESM) which can be an especially significant cause for acute decompensation in heart-failure patients who already have a poor cardiac reserve.

Case Anecdote

76 year old woman with end-stage dilated cardiomyopathy was placed on dobutamine to improve renal function and mild hypoperfusion symptoms. Deemed dobutamine dependent, she suffered torsades de pointes cardiac arrest, requiring defibrillation and urgent LVAD. Her ventricular core biopsy showed myocytolysis with eosinophilic infiltrate congruent with ESM, which potentially may have accelerated her clinical deterioration.

Discussion

Although the incidence of ESM remains low, it can be found in 23% of explanted hearts given how frequently inotropic support is used in heart failure (Johnson, 2004), occurring more commonly with dobutamine support (Yoshizawa, 2013). In fact, Takkenburg (2004) reported dobutamine was implicated in 12 out of 14 cases of ESM (86%). Moreover, Johnson (2004), found that ESM patients were not only more likely to be on inotropic support but also progressed to LVAD implantation.

Conclusion

Prolonged continuous intravenous dobutamine administration can cause eosinophilic myocarditis and it should be considered a differential for acute cardiac decompensation in inotropic dependent heart failure.

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Systematic review comparing immediate release nifedipine and labetalol for the urgent treatment of pre-eclampsia with severe hypertension

T. Bemand, C. Mok, M. Lennon

Background

Pre-eclampsia is a disease of abnormal placentation with definitive treatment requiring delivery of the placenta. However in the absence of maternal or foetal indications for delivery, expectant management to promote foetal maturity may be pursued. Options for treatment of severe hypertension in pre-eclampsia include hydralazine, nifedipine and labetalol although it is unclear if one drug is superior in efficacy.

Method

Meta-analysis of randomised controlled trials with a head to head comparison of immediate release nifedipine and labetalol in the treatment of severe hypertension in pre-eclampsia without indications for urgent delivery with outcomes of time to effective blood pressure reduction and proportion of patients achieving effective reduction.

Hypothesis

Immediate release nifedipine will result in a more rapid reduction of blood pressure compared to labetalol but the overall proportion of patients with an effective reduction will be similar.

Preliminary results

6 articles met inclusion criteria for further analysis.

Preventing Osteoporosis in residential and aged care communities: a toolkit for aged care staff

Himasha Nanayakkara

Osteoporosis is a silent disease and presents with no symptoms before causing minimal trauma fractures resulting in prolonged hospital stays and increased mortality. There are many misconceptions around Osteoporosis and many older adults have limited knowledge surrounding the condition. The aim of this project was to create a toolkit for service providers and staff of aged care centres to assist in preventing osteoporosis. By bringing awareness to osteoporosis amongst staff, we aim to support them in promoting preventative strategies within the aged care setting. The booklet comprised of fact sheets on Osteoporosis followed by information about lifestyle prevention strategies, such as calcium, vitamin D and exercise. It also contained a section on practical ways of educating their clients, with focus on education, encouraging consultation with GP's and an exercise program. Using literature on osteoporosis prevention and creating health education material, the booklet was created for aged care staff to educate their residents to improve their bone health.

Valve-in-valve (VIV) transcatheter aortic valve implantation (TAVI) for failing aortic valve prostheses: an Australian interventional experience

James Carroll

Background

Transcatheter aortic valves have become an excellent alternative to failing bioprosthetic surgical valves, avoiding the increased risk of re-entry sternotomy.

Aim

This study aims to retrospectively analyse outcomes of VIV TAVI replacements in a single Australian centre.

Methods

All patients who underwent VIV TAVI replacement between February 2015 and January 2019 were included, Valve characteristics, patient demographics, clinical data and outcomes were all analysed.

Results

A total of 20 patients were included in the VIV cohort. Average pre-operative mean gradient was $27.8\text{mmHg} \pm 18.3\text{mmHg}$. Average post-operative mean gradient was $12.3\text{mmHg} \pm 5.1\text{mmHg}$. There have been no deaths in this cohort. There were three documented complications of the patients studied.

Conclusions

VIV TAVI can be successfully performed, with an acceptable morbidity profile and excellent outcomes, in a TAVI centre for patients who otherwise may have to undergo a high risk re-do sternotomy.

Aortic stenosis (AS) with coronary artery disease (CAD): Is surgical or percutaneous management the correct approach

James Carroll

Background

There is a paucity of literature comparing how patients with surgical management of concurrent AS and CAD compare to patients who are managed with percutaneous TAVI and PCI.

Aim

To determine if TAVI and PCI has comparable outcomes to SAVR and concomitant CABGs.

Method

At a single institution, we retrospectively compared patients who underwent PCI within one month of TAVI between 2013 and 2019 with an age-and sex matched cohort of patients who underwent surgical aortic valve replacement and concomitant CABG.

Results

At follow-up 5 of the 13 SAVR + CABG patients were deceased, all 13 TAVI + PCI patients were alive. 11/15 SAVR + CABG group experienced complications versus 2/15 in the interventional group.

Conclusions

In this single centre study, TAVI and PCI was associated with reduced mortality and fewer complications in comparison to SAVR and CABGs.





The background features a light blue gradient with several large, semi-transparent hexagons in various shades of blue and teal. A network of white lines connects small white circular nodes, creating a web-like pattern across the right side of the image.

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