RACS NT, SA & WA ANNUAL SCIENTIFIC MEETING 2018
COMBINED WITH RURAL SURGERY & INDIGENOUS HEALTH SECTORS

*Infections: From Head to Toe*

24-25 August 2018
DoubleTree by Hilton, Alice Springs, Northern Territory

**FINAL PROGRAM**


#tristateASM18
Dear Colleagues,

It is with great pleasure that I welcome you to the 2018 joint Annual Scientific Meeting (ASM) of the Northern Territory, Western Australian and South Australian Regions of the Royal Australasian College of Surgeons. The Annual Scientific Meeting is a forum to provide NT, WA, SA Fellows, Trainees and IMG’s with a program whereby presentations, abstracts and interactive panel discussions are delivered to focus on 'Infections: From Head to Toe'.

This is an exciting opportunity to listen to and be involved in discussions and presentations from infectious disease experts, whilst also being involved in the unique experience of a conference dinner at the Alice Springs Telegraph Station, with a stargazing presentation & historical recount of the Station by local experts.

It is with much gratitude that I express my sincere appreciation for the support of all invited faculty including A / Professor Phil Carson, Professor Harvey Coates, Mr Mark Hamilton, Professor Bart Currie, A/ Professor Susan Neuhaus and Professor Cathy Ferguson. The meeting would also not be possible without the support of our trade. I encourage you to network with our exhibitors at the welcome reception and during intervals.

What to pack?

Casual clothing is very much a part of the territory lifestyle. Dress code for our welcome event is casual. Our dinner at the Telegraph Station will be outdoors, we ask you to dress warmly and comfortably. We recommend wearing flat shoes or boots. It will also be dusty.

You can expect average temperatures of around 22 degrees during the day, and temperatures dropping to around 2 degrees in the evening.

We look forward to your participation.

Warm regards,

Mr Ollapallil Jacob, FRACS
Convener 2018
EXHIBITORS

Thank you to the following sponsors for their support of our 2018 RACS NT, SA & WA Annual Scientific Meeting:

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ALICE SPRINGS HOSPITAL

Alice Springs Hospital is the major acute hospital for Central Australia with 183 beds, servicing a population of up to 60,000 people, including visitors to the region. The hospital is part of the Central Australia Health Service. The catchment area covers two-thirds of the Northern Territory and extends into the bordering areas of South Australia and Western Australia.

Among the range of services available are inpatient, outpatient, outreach hospital and specialist services, as well as renal dialysis. There is a strong focus on Aboriginal health and infectious diseases.

The hospital operates a Medical Retrieval and Consultation Centre and has an emergency department providing the only trauma response centre for the area. The main specialist services are medicine, surgery, eye, ENT, orthopaedic, cardiology, paediatrics, obstetrics and gynaecology. The hospital also provides medium level intensive care facilities and supports psychiatric inpatient facilities managed by Mental Health Services. Earlier this year a 10-bed palliative care facility opened on the hospital campus.

Alice Springs Hospital is a teaching hospital and provides an outstanding junior doctor training program with a dedicated team of educators and clinicians who are deeply committed to offering a rich and diverse education and training program. There is a strong culture of research and the hospital works closely with Flinders University and the Baker Institute. The Central Australia Health Service is a member of the Central Australian Academic Health Science Centre, which includes the key research centres in Central Australia.

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Aspen Australia commenced operations in Australia and New Zealand in May 2001. Over 1 in 7 GP prescriptions written in Australia is for a brand supplied by Aspen, making it the number one prescription company in Australia.

Aspen Australia is an affiliate of the International Aspen Group, based in South Africa. With over 500 product lines in Australia, Aspen manufactures, markets and distributes pharmaceutical products in most therapeutic categories. The Aspen range includes Prescription Pharmaceutical brands, Speciality pharmaceutical products, OTC healthcare, and Nutritional products.

With a significant manufacturing facility in Australia, Aspen manufactures almost 2 billion tablets, 73 million effervescent sachets and 1000 tonnes of liquids and semi-solids every year. This translates into nearly 60 million packs of products which are destined for the Australian and export markets. For more details on specific Aspen products or the extensive range of clinical resources to assist your practice, please review the Aspen Australia website. Access details for clinicians and Pharmacists are available from your Aspen representative.

1 Reference 1: IMS AMI June 2016 (as measured by scripts generated)
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MDA NATIONAL
MDA National is a doctor owned mutual that supports, protects and promotes more than 50,000* Members and insureds with extensive professional indemnity insurance.

More than medical indemnity, MDA National provides Members with 24-hour medico-legal support, accredited education, personalised service and extensive Member benefits with local offices in Adelaide, Brisbane, Hobart, Melbourne, Perth and Sydney.

Our recent Member survey* shows 90% of Member participants feel supported by our team of medico-legal experts, and 87% feel we provide exceptional service. MDA National is also recognised as RACS (WA) Preferred Medical Indemnity Provider & Sponsor.

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*MDA National data 2016
*MDA National’s Australia-wide Member survey, February 2017

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COMPANY PROFILES

NATIONAL CRITICAL CARE AND TRAUMA RESPONSE CENTRE

The National Critical Care and Trauma Response Centre (NCCTRC) is the Australian Government’s disaster and health emergency response centre.

Established as a result of the 2002 Bali Bombings, the NCCTRC is strategically positioned in the Northern Territory to rapidly respond to sudden health emergencies both onshore across Australia, and offshore throughout Asia-Pacific.

The NCCTRC provides clinical and academic leadership in trauma and critical care. It builds capacity and capability through strategic partnerships, education and training, research and establishing new clinical standards that drive excellence locally, nationally and internationally.

The NCCTRC prepares Australian clinicians for deployment and local emergencies, through its unique education and training programs, training over 600 doctors, nurses and health logisticians to a national standard as medical disaster responders. As well as ensuring Australia has the best readily deployable medical workforce, the NCCTRC also maintains a fully equipped rapidly deployable field hospital that has an inpatient facility, operating tables, full resuscitation and an outpatient capability.

Within the Northern Territory, the NCCTRC invests in building the trauma, critical care and surgery capacity of the Royal Darwin Hospital to ensure it is prepared and equipped to respond to sudden onset disasters in the region, and it works closely with Northern Territory emergency management stakeholders to support a Territory wide health emergency response.

The NCCTRC conducts research into trauma management and disaster preparedness and response, incorporates its findings into deployment practices and shares its knowledge globally.

Central to its success is the NCCTRC’S relationships with government entities, universities and emergency response organisations both onshore and offshore, including the World Health Organisation (WHO), the Australian Department of Foreign Affairs and Trade (DFAT), the Northern Territory Department of Health (DoH), Top End Health Services, Charles Darwin University (CDU), Menzies School of Health Research and the Northern Territory Medical Program.

NORTHERN TERRITORY CONVENTION BUREAU

The Northern Territory Convention Bureau (NTCB) promotes the NT as one of Australia’s leading business events destinations, in conjunction with our NT industry partners. These include venues and accommodation, activity and experience providers, transport, touring and a range of other specialist suppliers located in our key business event destinations of Darwin, Alice Springs and Uluru.

The NTCB is the dedicated business events unit within the NT Government’s Department of Tourism and Culture and as such, our services are provided on an independent and impartial basis. Business event organisers receive free assistance and advice with planning, bidding and site inspections as well as information on NT destinations. They also gain access to our extensive and invaluable network of local contacts which incorporate Government, the professional sector, business and industry, providing opportunities to greatly enhance a business event held in the NT.

SANOFI

Sanofi is a global life sciences company committed to improving access to healthcare and supporting the people we serve throughout the continuum of care. From prevention to treatment, Sanofi transforms scientific innovation into healthcare solutions, in human vaccines, rare diseases, multiple sclerosis, oncology, immunology, infectious diseases, diabetes and cardiovascular solutions, and consumer healthcare. Sanofi’s 110,000 people, some 820 of them in Australia and New Zealand, are dedicated to making a difference to patients’ daily lives.
INVITED SPEAKERS

KEYNOTE SPEAKER

PHIL CARSON

Associated Professor Phil Carson trained in General surgery and Subspecialty surgery in Adelaide, the Northern Territory and England.

He has practiced in Darwin since 1990 and has had major leadership roles at the Royal Darwin Hospital, throughout the Territory, nationally and internationally via his involvement in the RACS.

He has a substantial interest in surgical education and is concurrently appointed as Associate Professor with the Flinders University Northern Territory Medical Program. His clinical and research interests cover a wide spectrum but currently focus on Breast and Endocrine surgery, Cancer surgery, Thoracic (lung) surgery and the surgery of infectious disease.

In addition he covers urology (kidney and bladder surgery) along with the more traditional areas of general surgery including advanced laparoscopic surgery, hernia and bowel surgery, colonoscopy and gastroscopy.

KEYNOTE SPEAKER

HARVEY COATES

Harvey Coates AO DM MS FRCS(C) FRACS is a Paediatric Otolaryngologist and Clinical Professor at the University of Western Australia, School of Paediatrics and Child Health and University Department of Otolaryngology, Head and Neck Surgery, and former Senior ENT Surgeon at Princess Margaret Hospital for Children.

He is past Chairman of the Aboriginal Sub-committee of the Australian Society of Otolaryngology Head and Neck and Surgery.

His current research interests are chronic rhinosinusitis and adenoid disease, obstructive sleep disorder and newborn hearing screening and Indigenous children’s ear disease.

He was appointed an Officer of the Order of Australia in 2005 for his work and research in paediatric otolaryngology and ear disease in Aboriginal children. Professor Coates spends six to eight weeks a year in remote Aboriginal communities and urban outreach clinics for Aboriginal children.
INVITED SPEAKERS

KEYNOTE SPEAKER

BART CURRIE
Infectious Diseases Physician, Royal Darwin Hospital and Menzies School of Health Research, Darwin, Northern Territory, Australia

Director, RHD Australia and HOT NORTH

Bart Currie leads the Tropical and Emerging Infectious Diseases team of the Global and Tropical Health Division at Menzies. He is also an infectious diseases physician at the Royal Darwin Hospital and since 2000 Professor in Medicine at the Northern Territory Medical Program through Flinders University. He is Adjunct Professorial Fellow, Charles Darwin University and Adjunct Professor, College of Public Health, Medical and Veterinary Sciences, James Cook University. He is Director of RHD Australia; the National Coordination Unit for Australia’s Rheumatic Fever Strategy and also leads the new NHMRC-funded Tropical Disease Research Regional Collaboration Initiative (HOT NORTH).

Bart’s passion is coordinating links between clinicians, public health colleagues and other service providers, laboratory scientists and community. His research has involved improving prevention and treatment of specific illnesses; through a better understanding of the epidemiology and underlying disease processes, with development of diagnostic and treatment guidelines.

KEYNOTE SPEAKER

SUSAN NEUHAUS
Susan Neuhaus works in private surgical practice, and holds academic positions within the University of Adelaide as Clinical Associate Professor of Surgery and Associate Professor, Conflict Medicine. She is appointed to the Royal Australasian College of Surgeons Court of Examiners in General Surgery.

Susan completed a PhD in laparoscopic tumour surgery in 2000 and post Fellowship training in surgical oncology at the Royal Marsden Hospital, London. She has specialty interests in melanoma and soft tissue tumours. Susan has been the recipient of the Royal Australasian College of Surgeons (RACS) Lumley Exchange Fellowship, and the RACS Younger Fellows Leadership Exchange Scholarship.

Susan also completed an Army career spanning over 20 years, in both the Regular Army and Army Reserve, and is a Graduate of the Australian Defence Force Staff College (Res). She has served in Cambodia, Bougainville and Afghanistan. Susan was the Commanding Officer of one of the Australian Army’s three deployable hospitals (3HSB) from 2007-9 and promoted to Colonel in 2008. In 2009 she served as Clinical Director of the NATO Role 2 health facility in Tarin Kowt Afghanistan.

Her military service was recognized with the award of the Conspicuous Service Cross in the Queen’s Birthday Honours List in 2009.

Susan is an experienced non-executive director and a Fellow of the Australian Institute of Company Directors (FAICD). She is the current President and Board Chairman of Minda Inc, South Australia’s largest non-government disability provider and a director of the Cancer Council SA. Susan is a member of Federal Council of the Australian Medical Association (AMA) and Chairs the Health Financing and Economics Committee.

In 2012, Susan was South Australian finalist for Australian of the Year.
INVITED SPEAKERS

KEYNOTE SPEAKER

MARK HAMILTON
Mark Hamilton is an ex-patriate kiwi FRACS Vascular and Endovascular surgeon trained in both Australia and NZ, who currently practises as the sole vascular surgeon in the NT, covering 1.5 million square km, and approximately 250,000 patients.

He has worked in Hamilton NZ, Adelaide, Hobart, Alice Springs and Darwin as a consultant and has a well founded appreciation of the complex issues facing regional surgeons across Australia. His particular interests are complex aortic and visceral surgery, renal access surgery and complex diabetic foot.

He is the author of several textbook chapters on diabetic foot, vascular trauma, aortic dissection and connective tissue disorders and compartment syndromes and is currently supervising several research projects in the areas of diabetic foot, renal access and indigenous health through the Menzies School of Health Research and RDH.

He also works in Tasmania where he is a senior lecturer in surgery for the University of Tasmania and has an active role in curriculum development and teaching in the University of Tasmania.

VICE PRESIDENT

CATHY FERGUSON
Cathy Ferguson is an Otolaryngologist, Head and Neck Surgeon from Wellington New Zealand. She has been a generally elected Councilor for the Royal Australasian College of Surgeons for the past 7 years, and is currently the Vice President.

She has previously held the portfolios of Chair of the Professional Development and Standards Board, (which has oversight of the Professional Standards, Fellowship Services, Professional Development, Research and Academic Surgery and External Affairs portfolios), Chair of Professional Standards, Chair of Fellowship Services and Chair of The Post Fellowship Education ad Training Committee. She was NZ Censor for the College from 2009 – 2016, and prior to that served 9 years on the New Zealand National Board of the College, with 2 years as its Chair. She is currently an Examiner for the College in Otolaryngology, Head and Neck Surgery.

Dr Ferguson was invited to become a member the RACS Expert Advisory Group (EAG) appointed by the College in 2015 to investigate and advise the College on the issues of discrimination, bullying and sexual harassment.

From there an Action Plan has been developed to address the issues over the next few years. As part of this, Dr Ferguson was involved in a revision of the College’s Code of Conduct and a review of the College CPD program, as well as advising on the activities of the Education Board. She continues to champion the College ‘Lets Operate with Respect’ activities.
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FINAL PROGRAM

Program correct at time of circulation

ANZASM SYMPOSIUM

DOUBLETREE BY HILTON, BALLROOM A

THURSDAY 23 AUGUST 2018

4:30pm  Topic: The Changing Face of Infectious Disease  Chair: John North, QLD

MASTERCLASS
PANEL DISCUSSION
Q&A with audience

Phil Carson, NT
Necrotising Fasciitis Issues

Harvey Coates, WA
Otitis Media and Sequelae

Saliya Hewagama, NT
Staph infections

Mark Hamilton, NT
Diabetes patients/Diabetic feet

Discussion

6:30pm  Symposium Close
Welcome Function Commences
(Kindly Supported by National Critical Care and Trauma Response Centre)
Poolside - DoubleTree by Hilton Hotel
Traditional welcome by Drum Atweme
Entertainment from traditional Indian dancers Vismaya and Krishnapriya

8:00pm  Welcome Function Concludes
Evening at Leisure

Photo credit: Nick Pincott/Tourism NT
FINAL PROGRAM
Program correct at time of circulation

Annual Scientific Meeting (ASM)

DOUBLETREE BY HILTON, BALLROOM A & B

FRIDAY 24 AUGUST 2018

7:30am Registrations Open
8:00am Welcome Ollapallil Jacob - Convener, NT
8:25am Taking Consent: Reversal of Roles Aboriginal Liaison

Session 1: 8:45am - 10:00am Chair: Mahiban Thomas, NT
8:45am Weight Loss Surgery in Aboriginal People John Treacy, NT
9:00am Abdominal Vascular Catastrophes Mark Hamilton, NT
9:15am More than Skin Deep - Sepsis & ICU Paul Secombe, NT
9:30am Keynote Presentation: Tropical Infections in the HOT NORTH Bart Currie, NT
Via Video Link from Royal Darwin Hospital
9:55am Questions / Panel Discussion

10:00am Morning Tea with Industry (Ballroom C)

Session 2: 10:30am - 12:00pm Chair: Mary Theophilus, WA
10:30am Keynote Presentation: Henry Windsor Lecture Susan Neuhaus , SA
Damage, Destruction and the Battlefield Surgeon
10:55am Deep Seated Infections of Head Neck Mahiban Thomas, NT
11:10am Meningococcal Outbreak in CA Keshan Satharasinghe, NT
11:25am Clavicle Fracture Management: A Comparison of a Tertiary Hospital John North, QLD
and Rural Telehealth Sites
11:40am The Finke Desert Race Michelle Withers, NT
11:55am Questions / Panel Discussion

12:00pm Lunch with Industry (Ballroom C)
### Session 3: 1:00pm - 3:00pm

**Chair:** John Treacy, NT

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<tr>
<th>Time</th>
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<tr>
<td>1:00pm</td>
<td>Signing the MOU RACS &amp; NT Health Discrimination, Bullying &amp; Harrassment</td>
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<tr>
<td>1:30pm</td>
<td><strong>Keynote Presentation:</strong> Compartment Syndromes - An Update</td>
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<td>1:50pm</td>
<td>Challenges in Renal Replacement Therapy in Remote Australia</td>
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<td>2:05pm</td>
<td>Chronic Post-Surgical Pain</td>
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<td>2:20pm</td>
<td><strong>Margorie Hooper Scholarship</strong> &lt;br&gt;The Long-Term Results of Non-Invasive Extendable Endoprostheses in the Treatment of Paediatric Lower Limb Bone Tumours in Paediatric Patients</td>
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<td>2:40pm</td>
<td>Questions / Panel Discussion</td>
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<td>2:55pm</td>
<td>Foundation for Surgery NT Research, Education and Training Fund</td>
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### Session 4: 3:30pm - 4:30pm

**Chair:** Phil Worley, SA

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<th>Time</th>
<th>Event</th>
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<tr>
<td>3:30pm</td>
<td>Traditional Healers of Central Australia</td>
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<td>4:00pm</td>
<td>Case Series of Invasive Fungal Rhinosinusitis</td>
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<td>4:05pm</td>
<td>More than “Just Another Runny Ear”. Surgical Incidence of Cholesteatoma in the Top End Northern Territory</td>
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<td>4:10pm</td>
<td>Soft Tissue Infections from Fish Spike Wounds: Normal Commensal Bacteria are more Common than Marine Pathogens</td>
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<td>4:15pm</td>
<td>Major Amputations in Far North Queensland</td>
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<td>4:20pm</td>
<td>A New Era of Reconstruction Options Following Necrotising Faciitis: A Case Series Using a Biodegradable Temporising Matrix (BTM)</td>
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<tr>
<td>4:25pm</td>
<td>Free Tissue Transfer to Diabetic Foot Wounds as a Means of Limb Salvage: A Retrospective Review of 10 Cases</td>
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### 2018 ASM ANNUAL DINNER

**Telegraph Station** Stargazing Presentation

*Please note that transport will depart the DoubleTree Hotel at 5:15pm transporting guests, delegates and industry supporters to Telegraph Station. Return coach to the Hotel at approximately 10:30pm.*
SATURDAY 25 AUGUST 2018

Session 1:

Part One  9:00am - 9:15am
FREE PAPERS

9:00am  Severe Soft Tissue Infections in Alice Springs  Jessica Turner, NT
9:05am  Appendicectomies in the Northern Territory - Causes, Complications & a Role for Prevention  Daniel Ng Ying Kin, VIC
9:10am  Contemporary Management of Empyema: A Comparison of Medical and Surgical Management  Edward Wang, WA
9:15am  Potential Management of Acute Pancreatitis at Enhanced Outpatient Care  Vineeth Kumar, NT

Part Two  9:20am - 10:10am
FREE PAPERS

9:20am  Tubo-Ovarian Abscess: To Drain or Not to Drain  Basil Lyngdoh, NT
9:30am  Peer Audit Groups  John Treacy, NT
9:40am  Teaching in PNG  David Hamilton, NZ
9:50am  Hand Assisted Laparoscopic Cholecystectomy  Radhakrishnan Nair, NT
10:00am  Use of Remote Controlled Carbon Dioxide Expanders in Breast Reconstruction  Vanitha Budhavaram, NT
10:10am  Questions / Panel Discussion

10:20am  Morning Tea with Industry  (Ballroom C)

Session 2:  10:40am - 12:00pm

10:40am  Time Taken to Long Term Intravenous Access in Hand Infections at Royal Darwin Hospital  Brian Barker, NT  Kate Wilson, NT
10:45am  Metalwork Infections in Trauma Patients in Alice Springs in 2017  Jacqueline Clee, NT
10:50am  Characteristics of Necrotising Fasciitis Deaths Identified Through Surgical Mortality Audit  Sasha Stewart, SA
10:55am  Hand Infections in Central Australia: A 5 Year Follow Up of Incidence, Patient Demographics & Infection Trends  Blake Fidock, NT
11:00am  Septic Arthritis of the Hand: A Regional Problem in the NT  Anthony Penna, NT
11:05am  An Observational Update on the Surgical Management of Carbuncles in Central Australia  Shaveen Kanakaratne
11:10am  RACS Update  Cathy Ferguson, NZ
11:30am  Questions
11:40am  Prize Presentation for Best Paper & Poster

11:50am  Closing Remarks  Ollapallil Jacob, NT

12:00pm  Lunch with Industry  (Ballroom C)

FINAL PROGRAM
Program correct at time of circulation

Optional Tour: Alice Springs Hospital
**ABSTRACTS**

Program correct at time of circulation

1. **MARGORIE HOOPER SCHOLARSHIP**  
The Long-term results of Non-invasive Extendable Endoprostheses in the treatment of paediatric lower limb bone tumours in paediatric patients.  
*S Hussienbocus¹, C Gray Stephens¹, R Pollock¹, A Johnston¹, W Aston¹, C Gerrand¹, S Cannon¹, G Blunn², T Briggs¹, P Gikas¹.¹RNCH, Stanmore, ²Brockley Hill, Stanmore, HA7 4LP.

2. Case Series of Invasive Fungal Rhinosinusitis  
**Dr Che-Jen Wang¹, Dr Shanan Woo², Dr Arkar Aung¹, Dr Bing Teh²**  
¹Alfred Hospital, Melbourne, Australia, ²Austin Hospital, Melbourne, Australia

**Dr Nayellin Reyes-Chicuellar¹, Dr Graeme Crossland¹, Dr Hemi Patel¹**  
¹Royal Darwin Hospital, Lyons, Australia

**Dr Hannah Collins¹, Dr Kin Mun Lee¹, Dr Paul T-Y Cheng⁵, Ms Sarah Hulme¹**  
¹Middlemore Hospital, Auckland, New Zealand

5. Major Amputations in Far North Queensland  
**Dr Alexander Nesbitt¹, Mr Vrushank Bakshi¹, Dr Katherine Goodall¹, Dr Sherab Bhutia¹**  
¹Cairns Hospital, Cairns North, Australia

**Dr Ingrid Salna¹, Dr Marcus Wagstaff¹, Professor John Greenwood¹, Dr Yugesh Caplash¹**  
¹Royal Adelaide Hospital, Adelaide, Australia

7. Free Tissue Transfer to Diabetic Foot Wounds as a Means of Limb Salvage: A Retrospective Review of 10 Cases  
**Dr Louis Connell¹, Dr Jeremy Rawlins, Dr Edmund Fitzgerald-O’Connor**  
¹Royal Perth Hospital, Perth, Australia

8. Severe Soft Tissue Infections in Alice Springs  
**Dr Jessica Turner¹, Dr Katharine Guggenheimer¹, Dr Justine Moffat¹, Dr Claire Chandler¹**  
¹Alice Springs Hospital, NT, Australia

9. Appendicectomies in the Northern Territory: Causes, Complications and a Role For Prevention  
**Dr Daniel Ng Ying Kin¹, Dr Katharine Guggenheimer**  
¹Alice Springs Hospital, The Gap, Australia
ABSTRACTS
Program correct at time of circulation

10 Contemporary Management of Empyema: A Comparison of Medical and Surgical Management
**Dr Edward Wang**, Dr Killian Daly, Mr Chris Merry
1Fiona Stanley Hospital, Perth, Australia

11 Potential Management of Acute Pancreatitis at Enhanced Outpatient Care
**Dr Vineeth Kumar**, Dr John Tracey, Dr Mingao Li
1Royal Darwin Hospital, Darwin, Australia

12 Tubo-Ovarian Abscess: -To Drain Or Not To Drain
**Dr Basil trench Lyngdoh**
1Alice Springs Hospital, Alice Springs, Australia

13 Use of Remote Controlled Carbon Dioxide Expanders in Breast Reconstruction
**Dr Vanitha Budhavaram**, Dr Bindu Kunjuraman, Dr Farah Abdul Aziz
1Royal Darwin Hospital, Darwin, Australia

14 Time Taken to Long Term Intravenous Access in Hand Infections at Royal Darwin Hospital
**Dr Brian Barker**, Dr Kate Wilson, Mr Shiby Ninan
1Department of Surgery Royal Darwin Hospital, Tiki, Australia

15 Metalwork Infections in Trauma Patients in Alice Springs in 2017
**Dr Jacqueline Clee**
1Alice Springs Hospital, Alice Springs, Australia

16 Characteristics of Necrotising Fasciitis Deaths Identified Through Surgical Mortality Audit
**Ms Sasha Stewart**, Mr Glenn McCulloch
1Royal Australasian College Of Surgeons, North Adelaide, Australia

17 Hand Infections in Central Australia: A 5 Year Follow-Up of Incidence, Patient Demographics and Infection Trends
**Dr Blake Fidock**, Ms Sylvia Goedegebuur, Dr Kanishka Williams, Dr Narlaka Jayasekera, Professor Ruurd Jaarsma
1Orthopaedic Department, Alice Springs Hospital, NT Department of Health, Alice Springs Hospital, Alice Springs, Australia, 2Flinders University, Bedford Park, Adelaide, Australia, 3Flinders Medical Centre, Bedford Park, Adelaide, Australia

18 Septic Arthritis of the Hand: A Regional Problem in the Northern Territory
**Dr Anthony Penna**, Dr Oliver Angliss, Dr Jeeth Jacob, Dr Shiby Ninan
1Department of Plastic and Reconstructive Surgery, Royal Darwin Hospital, Darwin, Australia

19 An Observational Update on the Surgical Management of Carbuncles in Central Australia
**Dr Shaveen Kanakaratne**, Dr Chandika Liyanage, Dr Radhakrishnan Nair, A/Professor Fiona Stewart, Dr Gayatri Asokan
1Alice Springs Hospital, Alice Springs, Australia, 2Royal Prince Alfred Hospital, Camperdown, Australia
ABSTRACTS
Program correct at time of circulation

1 MARGORIE HOOPER SCHOLARSHIP
The Long-term Results of Non-invasive Extendable Endoprostheses in the Treatment of Paediatric Lower Limb Bone Tumours in Paediatric Patients.
S Hussenbocus1, C Gray Stephens1, R Pollock1, A Johnston1, W Aston1, C Gerrand1, S Cannon1, G Blunn2, T Briggs1, P Gikas1.
1RNOH, Stanmore, 2Brockley Hill, Stanmore, HA7 4LP.

Biography:
Dr Saleem Hussenbocus is an Orthopaedic Surgeon specializing in Bone & Soft Tissue Tumour Surgery, Joint Replacement & Limb Salvage, Metastatic Bone Disease, and Trauma.

Introduction: Limb salvage surgery is now the treatment of choice for the management of bone sarcomas affecting the limbs. This is due to advances in endoprosthetic replacements, as well as availability of effective adjuvant therapy. Extendable Endoprostheses are useful in lower limb reconstruction in skeletally immature patients where the growth plate is involved by the tumour and needs to be removed in the limb salvage surgery. Previously, Extendable prostheses were lengthened using minimally invasive growers, whereby lengthening was achieved by making a small incision and turning the lengthening mechanism. The current non-invasive growers can offer more frequent growing potential, of smaller amounts. The lengthening process is achieved without the need for surgery, hence avoiding the anaesthetic and surgical risks associated with multiple surgical procedures.

Method: We present long-term follow up of 94 patients who had non-invasive growing Endoprostheses in the lower limb. Revision was divided by cause: to increase growing potential, failure of growing mechanism, aseptic loosening, fracture, tumour recurrence and arthrosis. Functional outcome score was sent by post for this study to patients and parents - the musculoskeletal tumour scoring system (MSTS) – results being collected.

Results: Histopathological diagnosis included osteosarcoma (72), Ewing's sarcoma (19), and one case each of aneurysmal bone cyst, chondrosarcoma and metastatic retinoblastoma. Of the 94 patients, 25 have passed away. The average age was 11.04 at operation. Time from documented diagnosis to death was 12.75 months. Of the 69 remaining patients, the average age was 11.14 at operation, with an average follow up of 74.91 months (range 6-124 months). Survival analysis (looking at first revision operation) showed that 76% of prostheses had been revised at 8 years (n=8 at 8 years) with revision reasons being infection, aseptic loosening, fracture, tumour recurrence and arthrosis. Functional maximum lengthening capacity. Removing ‘reaching maximum lengthening capacity’ as a criterion reduced this to 46% revision rate at 8 years. It was noted that 4 patients had revisions for arthrosis of the acetabulum in proximal femoral replacements (addition of acetabular component). This was deemed an acceptable cause of revision in order to maximise the time before revision of the acetabular component in a paediatric population. 14 further operations were required for recurrence and metastasis, ranging from thoracotomies to amputations. One patient had a tibialis posterior to tibialis anterior transfer for foot drop. We are awaiting results of up to date functional outcome scores and leg length discrepancies.

Conclusion: The use of non-invasive extendable endoprostheses in the treatment of paediatric bone tumours of the lower limb allows multiple repeated atraumatic lengthening without the need for surgery and anaesthesia, thus reducing the morbidity associated with multiple operative procedures. However, the need for revision surgery would suggest more work needs to be done in attempting to prolong the longevity of the implants.
Case Series of Invasive Fungal Rhinosinusitis

Dr Che-Jen Wang¹, Dr Shanan Woo², Dr Arkar Aung¹, Dr Bing Teh²

¹Alfred Hospital, Melbourne, Australia, ²Austin Hospital, Melbourne, Australia

Biography:
Che-Jen (Jarren) Wang is a surgical resident at Alfred Health who has developed a keen interest in research and teaching. Jarren graduated from dentistry in 2008 from Melbourne University and spent time working for the Royal Dental Hospital and Royal Children’s Hospital in Victoria before embarking on a career in medicine. Jarren completed his medical training in 2015 from Monash University and continued his internship and residency at the Alfred Hospital. Jarren enjoys teaching anatomy for the graduate diploma students at the University of Melbourne and maintains his dental skills by working as a part-time dentist and mentor for final year dental students. During his previous experience working as an unaccredited Oral and Maxillofacial registrar, Jarren developed an interest in head and neck infections and has sustained that interest with research projects based in this area.

Invasive fungal rhinosinusitis is a fungal infection with histopathological invasion through mucosa and is associated with high mortality when untreated. This study aims to review the clinical, imaging and treatment features in patients so contemporary trends may be identified.

Retrospective chart review of patients in Alfred and Austin hospitals between 2011-2016. Patient selection was based upon ICD-10 coding (J010, J011, J012, J013, J014, J018, J019, J320, J321, J322, J323, J324, J328, J329).

8 of 2347 patients met study requirements, median age 53 years, with 6 males and 2 females. 62.5% of patients presented with facial pain, orbital swelling and pain, 37.5% had proptosis and diplopia, nasal discharge and headaches. 50% of patients had diabetes, 37.5% had hematological malignancies or immunosuppressive therapy. 75% of patients showed features on flexible naso-endoscopy, including necrotic or ischemic mucosa, mucopus and polypoid mucosa (25% each). All patients had positive CT findings whilst 87.5% showed positive histology. The most common fungal organism was A. Fumigatus (50%), most common bacteria Staphylococcus aureus (25%). All patients were treated with voriconazole, median duration 89.5 days. All patient’s had surgical debridement with hyperbaric oxygen therapy the most common adjunct (25%). No deaths were noted, 62.5% of patients had no recurrence, 25% had recurrence and 12.5% lost to follow-up. Invasive fungal rhinosinusitis is an uncommon condition, high index of suspicion should be maintained in patient’s presenting with facial pain, orbital swelling, proptosis and diplopia. Combined imaging and histology should be used for diagnosis.
More Than “Just Another Runny Ear”. Surgical Incidence of Cholesteatoma in the Top End Northern Territory.

Dr Nayellin Reyes-Chicuellar1, Dr Graeme Crossland1, Dr Hemi Patel2

Royal Darwin Hospital, Lyons, Australia

Indigenous Australians suffer the highest rate of otitis media in the developed world. (1)

A common conception is that Indigenous Australians commonly develop mucosal chronic ear disease (a discharging perforation) rather than squamous ear disease (Cholesteatoma), which is relatively rare in this group (7,8)

Cholesteatoma is an abnormal, non-cancerous, skin growth in the middle ear, commonly caused by chronic ear infections.

The importance of early identification of Cholesteatoma is related with the consequences of leaving it untreated as it may cause local bone erosion and destruction of adjacent structures causing deafness, vertigo, facial weakness and potentially fatal complications such as sigmoid sinus thrombosis, meningitis and brain abscess.

A prospective data collection of the surgically confirmed cases of Cholesteatoma has been identified during a period of 5 years (2012 to 2017) in the Top End including 3 main Hospitals and 72 communities.

A total of 749 ear surgeries were listed during these 5 years of study of which 160 patients identified themselves as non-Aboriginal (nATSI) and 589 Aboriginal and Torres Strait Islanders (ATSI). The surgical incidence of Cholesteatoma identified was 1.61 among nATSI and 2.56 among ATSI Fisher exact test value= 0.0084 (p<0.01).

In conclusion, contrary to the common belief, the surgical incidence of Cholesteatoma among ATSI is higher than the one among nATSI. This data contradicts the current established dogma; therefore, medical practitioners involved in Ear Health should increase the clinical suspicion in every ATSI patient complaining of Chronic Suppurative Otitis Media aiming to identify Cholesteatoma and prevent its consequences.


**ABSTRACTS**

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4 Soft Tissue Infections From Fish Spike Wounds: Normal Commensal Bacteria Are More Common Than Marine Pathogens

Dr Hannah Collins\(^1\), Dr Kin Mun Lee\(^1\), Dr Paul T-Y Cheng\(^1\), Ms Sarah Hulme\(^1\)

\(^1\)Middlemore Hospital, Auckland, New Zealand

**Biography:**
Hannah Collins is a surgical registrar in the Auckland region currently working in Middlemore Hospital’s intensive care unit. She completed her house officer years in Tauranga and has experience as a non-training registrar in orthopaedic surgery, plastic surgery, general surgery and urology. She plans to pursue a career in urology.

**Purpose of Study**
A fish spike injury can be sustained by anyone handling fish; during fishing, meal preparation or in retail. Case reports of fish spikes inoculating victims with virulent marine-specific pathogens and causing systemic illness led the authors to question whether empirical treatment of these injuries with amoxicillin and clavulanic acid is adequate.

**Methods**
This 2-year prospective observational study was conducted at Middlemore Hospital, Auckland, New Zealand. Wound swabs and tissue samples belonging to patients presenting to the Department of Plastic and Reconstructive Surgery with an upper limb fish spike injury were sent to the laboratory (n = 60). A series of stains and cultures were performed to look specifically for marine bacteria not typically isolated in other soft tissue injuries. Patient demographic data and injury details were collected.

**Results**
Of the patients with adequate microbiology samples, 12% (6/50) grew clinically relevant bacteria resistant to amoxicillin and clavulanic acid. These included methicillin-resistant Staphylococcus aureus (8%, 4/50), Enterobacter cloacae (2%, 1/50) and an anaerobic sporing bacillus (2%, 1/50). Only one patient grew a true marine-specific bacteria, Photobacterium damselae, which was susceptible to amoxicillin and clavulanic acid.

**Conclusion**
The authors concluded that amoxicillin and clavulanic acid is an adequate first-line antibiotic for fish spike injuries but that flucloxacillin may be more appropriate given most bacteria were from patients’ own skin flora. The authors suggest that clinicians consider the presence of resistant marine-specific bacteria in cases where there is sepsis or inadequate response to initial therapy.
**Major Amputations in Far North Queensland**

**Dr Alexander Nesbitt¹, Mr Vrushank Bakshi¹, Dr Katherine Goodall¹, Dr Sherab Bhutia¹**

¹Cairns Hospital, Cairns North, Australia

**Biography:**
Alexander Nesbitt is working as a Principal House Officer in urology and general surgery at Cairns Hospital. He believes all doctors and healthcare workers should be encouraged to work in rural and remote settings to realise some of the inequality and imbalances in access to health care in our country.

**Purpose**
Major lower limb amputations (MLLA) can be devastating procedures for patients and are commonly a result of complications from diabetes mellitus. Cairns Hospital serves a unique population, with the highest proportion of Indigenous residents in Queensland. The aim of this study was to define the population of patients undergoing MLLA in this area, and to identify any discrepancies between Indigenous and non-Indigenous cohorts.

**Methods**
A retrospective clinical audit identified 51 major lower limb amputations performed on 46 patients between January 2015 and January 2017. Statistical analyses were performed to compare the Indigenous and non-Indigenous subgroups, and a literature review was undertaken to identify similar Australian studies.

**Results**
Nearly half (45.1%) of the amputations were for Indigenous patients. All but two of those Indigenous patients (91.3%) had diabetes, compared to 65% of non-Indigenous amputees (p=<0.01). The average age of Indigenous patients was 54.6 ± 11.4 years, versus 63.5 ± 15.9 for non-Indigenous patients (p=0.02). The most common indication for amputation in the whole cohort was arterial ulcer/gangrene (53%). Indigenous patients had sepsis or infection as an indication for amputation in 48% of cases, compared to 7% of non-Indigenous patients (p=<0.01).

**Conclusion**
Patients undergoing MLLA in Far North Queensland are younger than both the Queensland and Australian average. Indigenous patients were younger, more likely to be diabetic, and far more likely to have sepsis as the indication for amputation.
ABSTRACTS
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6 A New Era of Reconstruction Options Following Necrotising Fasciitis: A Case Series Using A Biodegradable Temporising Matrix (BTM)
Dr Ingrid Salna1, Dr Marcus Wagstaff1, Professor John Greenwood1, Dr Yugesh Caplash1
1Royal Adelaide Hospital, Adelaide, Australia

Biography:
Dr Ingrid Salna is a current Unaccredited Plastic & Reconstructive Surgery Registrar at the Royal Adelaide Hospital. She has successfully completed an undergraduate degree including a Health Science Honours and subsequently a Doctor of Medicine at Flinders University in 2013. She has since been working in the Central Adelaide Local Health Network as a surgical medical officer and registrar in both general and plastic surgery, and has ongoing interests in multiple fields of Plastic & Reconstructive Surgery research.

Necrotising fasciitis (NF) is a rare, life-threatening, soft-tissue infection characterised by rapidly spreading inflammation and necrosis of the skin, subcutaneous fat, and fascia. Despite the uncommon nature of this condition, over the last decade, there has been a five-fold increase in its incidence. After suitable debridement and control of the wound, NF can often leave a wound bed with limited or very complex reconstruction options.

Dermal substitutes allow for reconstruction of the dermis by providing a scaffold that promotes new tissue in growth, temporary wound closure, slow fluid loss and create a physical barrier to external pathogens. First applied in burns patients, Biodegradable Temporising Matrix (BTM) is a novel, fully synthetic dermal template in the form of a biodegradable polyurethane foam with a temporary non-biodegradable polyurethane seal. It is inexpensive to produce and avoids the risk of cross-species immune rejection or disease transmission, as well as circumventing ethical and cultural objections to using animal-derived products.

Proof-of-concept studies have determined its safety and ability to provide permanent wound closure when combined with a split thickness skin graft in a two-stage procedure in sheep, pigs and humans. Over the last two years, there have been six cases of NF successfully reconstructed using BTM at a tertiary hospital, with good functional outcomes and patient satisfaction. The indication for and steps of BTM application will be presented, which shows that BTM may have an ongoing role in the wound reconstruction ladder post NF.
Free Tissue Transfer to Diabetic Foot Wounds as a Means of Limb Salvage: A Retrospective Review of 10 Cases

Dr Louis Connell¹, Dr Jeremy Rawlins, Dr Edmund Fitzgerald-O’Connor

¹Royal Perth Hospital, Perth, Australia

Biography:
Resident Medical Officer at Royal Perth Hospital with a career interest in Plastic and Reconstructive Surgery.

Authors: *CONNELL Louis, Rawlins J, Fitzgerald-O’Connor E, Oshin F, Altaf N

Purpose
The role of free tissue transfer for limb salvage in patients with diabetes. The experience at RPH and a proposed algorithm for appropriate patient identification and reconstructive management

Methodology
A retrospective case review was undertaken of all patients with diabetes related lower limb wounds treated with free tissue transfer at the RPH. Hospital operative databases were interrogated to identify patients.

Results
Between 2015 and 2018, 10 patients underwent limb salvage surgery for the treatment of diabetes related foot ulcers. 5 men and 5 women with an average age of 51 years (24-73) and with a follow-up period between 32 and 1 month. In all cases diabetes was poorly controlled at admission with an average HBA1C of 10.8%. In 9 of the 10 cases the defect was distal to metatarsals in one case the defect was over the lateral malleolus. In 5 of 10 cases there was microbiological or radiological evidence of osteomyelitis. 3 gracillis flaps and 7 ALT flaps where undertaken. 1 flap was lost due to arterial thrombosis on day 3 post op. Limb salvage rate of 90% was achieved with 90% of patients progressing back to full ambulation.

Conclusion
Diabetic foot salvage with free tissue transfer leading to a return to full ambulation is an achievable goal in the Australian population. Coordinated care using a multidisciplinary diabetic foot care team including plastic surgeons can help to improve limb salvage rates and improve patient outcomes and quality of life.
ABSTRACTS
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8 Severe Soft Tissue Infections In Alice Springs

Dr Jessica Turner¹, Dr Katharine Guggenheimer¹, Dr Justine Moffat¹, Dr Claire Chandler¹
Alice Springs Hospital, NT, Australia

Biography:
Junior medical officer completing internship in Alice Springs hospital, has a background in occupational therapy and an interest in indigenous and public health.

Soft tissue infections are an alarmingly common condition in the admitted patients of Alice Springs Hospital, with over 1300 cases per year treated at a significant cost to the healthcare system. Many of these cases are not simply treated with antibiotics alone, the severity is such that surgical intervention is required. The authors have undertaken a retrospective audit of these severe soft tissue infections that required operative management by the general surgical team, close to 1000 procedures in 650 patients over 14 months from 1/1/2017 to 1/3/2018 were reviewed, initial antibiotic treatment and discharge medication was also reviewed. Surgical de-identified audit data was reviewed and data points collected to form a database reflecting surgically managed soft tissue infections over the audit period. Demographics, comorbidities and geographical location were investigated to identify trends and correlations – females>males, children represented over 20% those requiring surgical management, diabetic patients made up 40% of those requiring surgery, antibiotic allergies <10%. The causative organisms and sensitivities were identified from intraoperative cultures taken routinely in almost all procedures (>90%) – skin flora was the most commonly grown organism cultured, most commonly with antibacterial resistance, over 10 other organisms cultured. An analysis of the scope of practice, treatment and outcomes is presented.
Appendicectomies in the Northern Territory - Causes, Complications and a Role For Prevention

Dr Daniel Ng Ying Kin¹, Dr Katharine Guggenheimer

¹Alice Springs Hospital, The Gap, Australia

Biography:

I am Daniel Ng, a Non-Accredited General Surgical Registrar under the current employment of Austin Health, Melbourne. I was raised in Mauritius and completed my MBBS with Monash University, Melbourne. My interest lies in General Surgery and still undecided between Colorectal and Hepatobiliary surgery.

The purpose of the study is to assess the causes and outcomes of patients who underwent an appendicectomy in Alice Springs Hospital, a regional hospital with a large catchment area in the Northern Territory of Australia. Retrospective data of patients who underwent an appendicectomy were extracted from the local database for a duration of 39 months (2015-2018). A total of 315 cases were collected and data regarding the demographics, location, biochemistry, imaging, histopathology and complications of each patient were analyzed. Out of 315, the Male:Female distribution was comparable (165:150). A large proportion of patients (215) underwent a modality of imaging (Ultrasound, CT scan or MRI) prior to surgery. The majority underwent laparoscopic surgery (261), while 8 cases were converted, and 46 had a planned open procedure. There were 60 histologically normal appendixes, including 7 en-passant appendicectomies, to reveal a negative appendicectomy rate of 16.8%. 11/150 females were noted to have Pelvic Inflammatory Disease (PID), 18/315 showed worms, the majority being in children, and there 4 cases of incidental carcinoid tumour. There were 54/315 post operative complications, including 17 cases of infection, 4 return to theatre and 2 radiological interventions. The high incidence of negative appendicectomy due to PID could indicate a role for investigation/treatment to avoid unnecessary surgery. Moreover, deworming could reduce hospital presentation amongst the paediatric population. The significant post-operative infection (wound, pelvic collection) may indicate benefit from a course of post-operative antibiotics.
10 Contemporary Management of Empyema: A Comparison of Medical and Surgical Management

Dr Edward Wang, Dr Killian Daly, Mr Chris Merry

1Fiona Stanley Hospital, Perth, Australia

Introduction
Thoracic empyema is a major infection that traditionally was treated with open thoracotomy and decortication. The goals of therapy in empyema management are to drain sepsis and re-expand collapsed lung. With the advent of pleural fibrinolytic agents that can be inserted via tube thoracostomy and thoracoscopic surgery there are less invasive options available to clinicians. There is no consensus in the literature as to the best way of managing empyema. This study sought to assess contemporary empyema management in our institution and compare patient outcomes.

Methods
A retrospective case review of all patients treated for empyema at Fiona Stanley Hospital was completed. Empyema presentation, patient comorbidities, treatment strategy and patient outcomes were investigated.

Results
187 patients treated for empyema were identified in this study. 92% of patients were treated with tube thoracostomy, 20% fibrinolysis and 32% with open decortication. The most common intercostal catheter size inserted with 18 french. Decortication was associated with a higher likelihood of complete lung expansion OR 1.56, but associated with 4 days longer length of stay. There was no differences seen in rates of sepsis control or complications.

Conclusion
Preliminary results from the study suggest tube thoracostomy, fibrinolysis and decortication achieve sepsis control in patients with empyema. There is however a suggestion that operative management of empyema with decortication improves the rates of full lung expansion compared with the use of antifibrinolytics. Further research is required to better match patients to appropriate management strategies.
ABSTRACTS

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11 Potential Management of Acute Pancreatitis at Enhanced Outpatient Care

Dr Vineeth Kumar¹, Dr John Tracey¹, Dr Mingao Li¹
¹Royal Darwin Hospital, Darwin, Australia

Biography:
Currently works as a senior surgical registrar at the RDH. I have been practicing in NT for the last 4 years including Alice Springs, Katherine and Darwin. I am interested in Rural & Indigenous health.

Background
Acute pancreatitis (AP) is a common cause for hospital admission, but some patients have a prolonged stay. The aim of this study was to identify patients with mild AP who had a prolonged hospital stay, who potentially could be discharged at day 2 to enhanced outpatient care.

Methods
Data was retrospectively collected on all patients admitted to the Royal Darwin Hospital between May 2016 and February 2017 with a diagnosis of mild AP to identify factors that may safely predict early discharge to enhanced outpatient care.

Results
Of 115 admissions, 62% were male, 50% indigenous and alcohol was causative in 53%. A total of 75 (65%) patients stayed more than 2 days and used 342 bed-days. Factors identified in the first 2 days of admission associated with a length of stay more than 2 days ($R^2=0.56$, $P<0.0001$) included pain score $>5$ ($P=0.034$), temperature $\geq 38^\circ C$ ($P<0.0001$), white blood cell count $>18$ ($P=0.036$), not tolerating oral diet by day 2 ($P=0.002$), severe pancreatitis on imaging ($P=0.008$) and readmission in the previous 30 days ($P=0.035$). Using these criteria, 57% of all admissions and 87% of admissions greater than 2 days could potentially have been transferred to enhanced outpatient care at day 2 for management. This would have saved 277 inpatient bed-days and an estimated $122,771 over the 9-month study period.

Conclusion
A significant proportion of patients admitted with mild AP, who stay longer than 2 days in hospital, could potentially be identified and discharged early to enhanced outpatient care.
Tubo-Ovarian Abscess: -To Drain Or Not To Drain

Dr Basil trench Lyngdoh

Tubo ovarian abscesses (TOA) are characterized by a walled off inflammatory mass in the Adnexa. These can be due to past PID infections or from diverticulitis, appendicitis, inflammatory bowel disease, gynaecologic or obstetric surgery and sometimes pelvic surgery.

Most of the women are in their reproductive ages hence a conservative approach is always the first line of management. TOA used to have a high incidence of mortality but with the introduction of new generation antibiotics and tools of early diagnosis this has decreased. Morbidity however is still significant with long term complications like infertility, ectopic pregnancy, chronic pelvic pain, pelvic thrombophlebitis and ovarian vein thrombosis.

Treatment involves the use of antibiotics, minimally invasive procedures for drainage or a combination of these. Although 70% of cases can be treated with conservative medical management using antibiotics, 25 – 30% of cases still fail this conservative treatment and land up in a surgical approach. The surgery can range from a simple drainage up to a hysterectomy with bilateral salpingo-oopherectomy which can be associated with complications.

The aim of the talk is to explore if these abscesses can be tackled upfront with surgery. To reflect on patient selection and to evaluate who will benefit from earlier surgical procedures.
13 Use of Remote Controlled Carbon Dioxide Expanders in Breast Reconstruction

Dr Vanitha Budhavaram, Dr Bindu Kunjuraman, Dr Farah Abdul Aziz

Royal Darwin Hospital, Darwin, Australia

Background and purpose: Mastectomy is done for about 25-30% of the patients diagnosed with breast cancer. Two staged reconstruction with saline expanders have been in use for many years. Multiple hospital visits, patient anxiety, infection, leakage have been major disadvantages of saline tissue expander. Patients in regional Australia with diagnosis of breast cancer face the challenge of multiple visits to the hospital for adjuvant treatment. The added visits for saline expansion can be a deterrent to breast reconstruction. We present our initial experience with Carbon dioxide based remote controlled, needle free expander used in two stage implant based breast reconstruction.

Methods: We present our initial experience with the use of Carbon dioxide based expander in breast reconstruction performed by a single breast surgeon based in a tertiary referral centre since December 2016. Patients were selected on the basis of suitability and after obtaining patient consent for a new device procedure. Patients underwent delayed or immediate reconstruction. 32 procedures in 28 patients were done over the period of 18 months. The variables measured were breast and device related adverse events, time from insertion to full expansion and interval for definitive implant exchange. Number of clinic visits, infections, challenges faced by patients during expansion were recorded.

Results: Significantly shorter median time to full expansion was noted. Shortened interval to second surgery was seen in patients undergoing delayed reconstruction. Patient directed expansion was found to be safe.

Conclusion: Our initial experience with CO2 expanders have shown promising results. The device should be considered as an option for well-motivated patients.
ABSTRACTS
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14  Time Taken to Long Term Intravenous Access in Hand Infections at Royal Darwin Hospital

Dr Brian Barker¹, Dr Kate Wilson¹, Mr Shiby Ninan¹
¹Department of Surgery Royal Darwin Hospital, Tiwi, Australia

Biography:
Started career as Radiographer before returning to study post-graduate medicine at Flinders University. Now working as a Service Registrar at the Royal Darwin Hospital where he has been for three years. Looking to pursue a career in General Surgery, with an interest in continuing work in regional areas.

In the treatment of septic arthritis, tenosynovitis and osteomyelitis of the hand the administration of a long course of intravenous antibiotics is recognised as best practise to prevent reinfection and permanent disability¹⁻⁵. At the Royal Darwin Hospital (RDH) a 2 week (septic arthritis, tenosynovitis) to 4 week (osteomyelitis) course is protocol and in line with Australian Therapeutic Guidelines⁶. Hand injury patients are often well suited to outpatient administration of intravenous antibiotics, but for long term intravenous access the insertion of a peripherally inserted central catheter (PICC) is standard. In our setting the utilisation of available outpatient services is a particularly beneficial for remote Indigenous Australians, many of whom can find the hospital environment unfamiliar and threatening⁷.

This study was a retrospective analysis of serious hand infections to determine if improved access to this service could minimise the duration of inpatient admission. In all 1546 records were examined and 36 accepted for further analysis. The results identified the cohort to be most often young (median age 32) and male (30/36- 83.3%), with the median time to PICC insertion 5 days. A common mechanism of introduction of infection was the “punch-bite” injury.

Septic arthritis, tenosynovitis and osteomyelitis are essentially intraoperative clinical diagnoses. The study proposes that insertion of a PICC at the time of operation could reduce unnecessary delays and optimise available outpatient services.

References:
**15 Metalwork Infections in Trauma Patients in Alice Springs in 2017**

Dr Jacqueline Clee

1 Alice Springs Hospital, Alice Springs, Australia

**Biography:**
Orthopaedic Registrar Alice Springs. Locum Orthopaedic Registrar for 6 months each in Bega NSW and Geraldton WA. Locum Gen Surg and Emergency Registrar in rural NSW for a decade.

**Introduction**
The Orthopaedic Department at Alice Springs Hospital provides services to an area of Central Australia greater than 1 million square kilometres including many remote communities.

The purpose of this study was to determine to number of post operative infections in patients in whom metalware was inserted for fixation of traumatic fractures and to identify the organisms responsible as well as examine to demographic data of the patient population.

**Methods**
The pathology result of all patients who underwent open reduction/internal fixation ORIF for trauma in Alice Springs Hospital from between Jan 1st 2017 and December 31st 2017 were reviewed excluding hand operations. The locality of origin of each patient was also noted from the theatre booking records.

**Results**
In total 185 operations involving insertion of metalware for trauma were reviewed that were performed in Alice Spring in 2017. These ranged from distal radius fractures to ankle fractures, clavicle, distal humerus, talus, tibial shaft, neck of femur, olecranon and forearm fractures as well as fractures of the foot. Positive culture of organisms from the site of operation at a later date were found in five ankle and two forearm fractures. The organisms included MRSA, S. aureus, mixed coliforms, enteric flora, streptococcus group F, Bacillis and coliform species. Localities from which patients originated included Hermannsburg, Yambah, Ampilatwatja, Epenarra, Yuendumu, USA, Lucy Creek, Docker River, Ti Tree, Gol Gol, Tennant Creek, Larapinta, Ali Curang, Canteen Creek, Sadadeen, Utopia, Longreach and Alice Springs.

**Conclusion**
No correlation between community of origin and post operative infection.
ABSTRACTS

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16 Characteristics of Necrotising Fasciitis Deaths Identified Through Surgical Mortality Audit

Ms Sasha Stewart¹, Mr Glenn McCulloch¹

¹Royal Australasian College Of Surgeons, North Adelaide, Australia

Biography:
Sasha Stewart is the Project Manager for the South Australian Audit of Surgical Mortality (SAASM). She holds a Bachelor of Science and a Graduate Diploma in Public Health from the University of Adelaide. With extensive research experience, she has an interest in utilising surgical mortality data to improve the quality and safety of surgery.

Purpose
Necrotising fasciitis (NF) is a rare but devastating condition and there is some evidence that its prevalence is increasing. The purpose of this study is to identify characteristics of NF cases identified through the Australian and New Zealand Audit of Surgical Mortality (ANZASM).

Methods
The study analysed data from a peer review audit of surgical deaths in Australian hospitals (excluding New South Wales) from January 2009 to February 2018, identifying cases of NF using a key word search of surgeons’ case reports. There were 290 necrotising fasciitis cases identified.

Results
The comorbidities of cardiovascular issues (NF=51%, non-NF=61%) and advanced age (NF=35%, non-NF=52%) were less prevalent among those patients diagnosed with NF (compared with surgical mortality cases not involving NF). The median age of patients with NF was slightly lower (NF= 67 years, non-NF=78 years). Diabetes was more than twice as common among NF cases (NF=41%, non-NF=17%). In 16% (45/290) of NF cases, the assessor identified one or more areas for improvement in patient management (compared with 9% of non-NF cases). The most common preventable issue was delay in diagnosis.

Conclusion
NF is a severe and often fatal condition; the findings of this study suggest that NF is associated with diabetes but not necessarily with increasing age. Timely diagnosis is a potential area for improvement.
17 Hand Infections in Central Australia: A 5 Year Follow-Up of Incidence, Patient Demographics and Infection Trends

Dr Blake Fidock, Ms Sylvia Goedegebuur, Dr Kanishka Williams, Dr Narlaka Jayasekera, Professor Ruurd Jaarsma

1 Orthopaedic Department, Alice Springs Hospital, NT Department of Health, Alice Springs Hospital, Alice Springs, Australia, 2 Flinders University, Bedford Park, Adelaide, Australia, 3 Flinders Medical Centre, Bedford Park, Adelaide, Australia

Biography:
Blake Fidock an Orthopaedic Registrar at Alice Springs Hospital for 2018. He has worked in Adelaide at Flinders Medical Centre, and in NSW in Newcastle and at various other hospitals throughout the Hunter New England Health network.

Background
Hand infections are a diverse spectrum of clinical presentations, ranging from severe limb threatening systemic illness to localized innocuous collections. In central Australia, approximately half of all emergency orthopaedic procedures are related to hand trauma and infection. Human bite injuries make up 10% of all hand infections, and rates of MRSA hand infections have previously been reported at approximately 25%.

Aims and Method
Our aim was to conduct a 5-year follow-up study of hand infections in central Australia. We conducted a 12-month retrospective cohort review of patients admitted to Alice Springs Hospital with hand infections in 2017. Data was compared to a similar study done at Alice Springs Hospital in 2012. Patient demographics (including indigenous vs. non-indigenous heritage), mechanism of injury, infectious organism, medical comorbidities, operative interventions and length of stay were investigated.

Results
We identified over 400 patients who were admitted to Alice Springs Hospital in 2017 with hand injuries. Approximately 25% of these were due to infection. This rate is similar to results in 2012. Preliminary analysis indicate higher rates of MRSA related infection compared to 2012.

Conclusion
Hand infections remain a significant component of the orthopaedic trauma service in central Australia. Increasing rates of MRSA hand infections have ongoing implications for empirical antibiotic therapy and antibiotic resistance.

18 Septic Arthritis of the Hand: A Regional Problem in the Northern Territory

Dr Anthony Penna¹, Dr Oliver Angliss¹, Dr Jeeth Jacob¹, Dr Shiby Ninan¹

¹Department of Plastic, Reconstructive and Hand Surgery, Royal Darwin Hospital, Darwin, NT

Biography:
I am a Plastic Surgery Registrar at the Royal Darwin Hospital in 2018. This topic was chosen due to the significant case load encountered at our institution in an effort to improve outcomes.

Purpose
Population and environmental factors result in a high burden of septic arthritis in the Northern Territory. This study analysed patterns of presentations to improve outcomes.

Method
Retrospective record analysis was conducted on 62 consecutive patients who presented to the Royal Darwin Hospital with ICD-coded pyogenic arthritis of the hand(M000-4) between April 2016 and December 2017. 35 patients met the inclusion criteria of a confirmed breach of joint capsule in the presence of a cultured joint swab or visualized contamination intraoperatively. Presence of osteomyelitis was defined as intraoperative bone changes with culture, or radiological changes.

Results
Patients were male (80%), young (mean: 36yrs) and of Aboriginal decent (74%). 43% were referred from regional centers or remote communities. Etiologies included clenched fist bite injuries and penetrating injuries by foreign bodies (51%, 17%), with the MCPJ of the middle finger most affected (31%) and injury to bone or tendon common (43%). Median time till presentation (4 days) and length of stay (6.5 days) were independent of injury type or ethnicity. Gram-positive skin organisms were grown in 63% of cultures. Empiric antibiotics were continued in 45% of cases, with Tazocin used most. 20% of Aboriginal patients took their own leave prior to scheduled discharge. Those that left required higher rates of readmission (40% vs 10.3%). 23% of patients had evidence of osteomyelitis, with median time till presentation identified as a significant risk factor for development (3 vs 6.5-days, p= 0.017).

Conclusion
Septic arthritis remains a significant issue in the Northern Territory. Education on early presentation may reduce rates of osteomyelitis and prophylactic measures should be considered to prevent patients leaving hospital prior to discharge.
An Observational Update on the Surgical Management of Carbuncles in Central Australia

Dr Shaveen Kanakaratne 1, Dr Chandika Liyanage 2, Dr Radhakrishnan Nair 1, A/Professor Fiona Stewart 2, Dr Gayatri Asokan 1

1Alice Springs Hospital, Alice Springs, Australia, 2Royal Prince Alfred Hospital, Camperdown, Australia

Biography:
Shaveen Kanakaratne is working as an Acute surgical registrar at Lyell Mckewin Hospital in Adelaide, SA. He is currently undertaking a Masters of Colorectal Surgery by Dissertation, though University of Sydney. Shaveen has a keen interest in general surgery and has been involved in various clinical based research.

Purpose
Soft tissue infections, furuncles and carbuncles form the majority of general surgical operative cases at Alice Springs Hospital (ASH). Previous studies have shown a higher incidence in the indigenous population. Carbuncles are a primary pyoderma involving the dermis and deeper skin, appearing as a collection of inflamed hair follicles, discharging pus in a single inflammatory mass. Carbuncles can cause significant morbidity to indigenous patients in Central Australia and can have several medical, cultural and social repercussions.

Methodology
A literature review was conducted to assess the current management of carbuncles. An observational account of the management of carbuncles during a 3-month surgical term at ASH was undertaken.

Results
Operator logbook review showed furuncles and carbuncles represented 66 of 68 of the cases performed. Five cases required excision of carbuncles. All patients were indigenous. Literature review confirmed the association of carbuncles with risk factors including bacteraemia, diabetes mellitus, intravenous drug use, skin injury, acne, eczema, poor personal hygiene and low socioeconomic factors. Mainstay management of carbuncles remains a combination of antibiotic therapy, incision and drainage of 'central area' necrosis, or excision of the entire carbuncle followed by dressing changes or vacuum-assisted negative pressure healing devices. Promising outcomes have followed selective primary or delayed split skin grafts.

Conclusion
Carbuncles pose a high disease burden for the central Australian indigenous population. Their prevention includes maintenance of personal hygiene and control of risk factors such as diabetes. A randomised control trial is needed to determine which surgical management is superior.
POSTERS

Program correct at time of circulation

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   Royal Darwin Hospital, Darwin, Australia

2. Audit of Telehealth Skin Lesion Excisions at a Major Tertiary Hospital for a 12 Month Period
   Dr Phillip Cantwell, Mrs Beth Sperring, Mr Jeremy Rawlins
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3. Surgically Managed Soft Tissue Infections of Paediatric Patients in Alice Springs
   Dr Claire Chandler, Dr Katharine Guggenheimer, Dr Justine Moffat, Dr Jessica Turner
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4. The Role of Free Tissue Transfer Alongside Antibiotic Eluting Calcium Sulphate Beads in Multi Drug Resistant Osteomyelitis
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6. Analysis of Antibiotic Treatment of Severe Soft Tissue Infections in Alice Springs
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7. Evaluating the Causes and Management of Pancreatitis in the Northern Territory of Australia
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8. Surgical Management of Primary Cutaneous Mycobacterium Avium Complex Infection: A Useful Treatment Adjunct to a Rare Disease
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10. Cutaneous Basal Cell Carcinoma Requiring Limb Amputation
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11. Mesenteric Venous Thrombosis Managed with Damage Control Surgery in a Rural Hospital
    Janine Vu
    University of Adelaide
Improving ERCP with the Hybrid Theatre – Northern Territory Royal Darwin Experience

Dr Asiri Arachchi, Mr Mark Stewart, Mr Phillip Toonson

Royal Darwin Hospital, Darwin, Australia

Biography:
Mark Stewart, MB ChB FRACS.
Mark completed general surgical training in New Zealand. Throughout his training he gained interests in rural and remote general surgery, and in the epidemic of obesity. He was a fellow in rural general surgery at Royal Darwin Hospital in 2017, with exposure to an extended scope of practice including thoracic surgery, neurotrauma, burns management, and remote outreach visits in the Northern Territory. He led the training registrar academic teaching programme for the Northern Territory throughout the year. He is currently the upper gastrointestinal/bariatric surgery fellow at Joondalup Health Campus, WA.

Introduction
Endoscopic retrograde cholangiopancreatography (ERCP) can prove technically challenging secondary to distorted anatomy or impacted stones. With the increased availability of hybrid theatres it is now possible to obtain high resolution (high-res) fluoroscopic images and C-arm computed tomography (CT) images at ERCP. There is scant literature on the use of these novel techniques (1) and as yet no published data regarding their utility in the management of specific pathologies.

Aim
To review the use of hybrid theatre ERCP (H-ERCP) at Royal Darwin Hospital (RDH); and to determine whether CT-ERCP increases the detection of choledocholithiasis compared to high-res ERCP.

Methods
Review of all H-ERCP cases performed in the RDH hybrid theatre since its inception in 2015. Cases of choledocholithiasis were identified, the rate of CT-ERCP use was determined and findings were compared with those at high-res ERCP. Results: 86 H-ERCPs were performed. Choledocholithiasis was demonstrated in 42 cases (49%), 6 (14%) of which were identified by both modalities. Stones were identified only with the addition of CT-ERCP in 1 (17%) case. The endoscopist’s indication for utilizing CT-ERCP was to detect unseen stones in 1 (17%) case, and to navigate bile duct strictures in 5 (83%) cases.

Conclusion
The hybrid theatre provides radiological adjuncts to ERCP that resolve technical challenges and improve diagnostic yield in cases of choledocholithiasis. CT-ERCP is a useful adjunct in improving stone detection compared to high-res ERCP. This is the first published data on the use of these modalities.
Audit of Telehealth Skin Lesion Excisions at a Major Tertiary Hospital for a 12 Month Period

Dr Phillip Cantwell, Mrs Beth Sperring, Mr Jeremy Rawlins

1 Royal Perth Hospital, South Perth, Australia

Biography:
Phillip Cantwell is a service surgical registrar at Royal Perth Hospital. Dr Cantwell has degrees in chemical and biomolecular engineering, and medicine. He has a research interest in skin cancer and services to remote communities.

Purpose of study
The purpose of this study was to identify whether telehealth was a viable means for working up rural patients for skin cancer excisions. This study audited 2017 telehealth patients at Royal Perth Hospital for skin cancer lesions.

Previous studies have demonstrated conflicting results for the effectiveness of teledermatology.

Statement of Methods
Telehealth patients who underwent skin lesion excisions in 2017 were retrospectively identified through hospital data. Patient records were used to identify patient characteristics, the number of lesions excised, the number of cancerous lesions in that population, and the number of incomplete excisions.

Summary of results
In 2017, 230 telehealth patients were assessed through the telehealth plastic surgery team at Royal Perth Hospital for management of skin lesions. The average patient distance from Perth was 1001km (95%CI 700-1302km) and average patient age was 63 years old (95%CI 61-65years). In total, 211 lesions were excised, 12 melanomas, 168 NMSCs (Non-melanoma Skin Cancer), and 30 benign lesions. The average lesion clearance was 3.3mm (95%CI 2.6-4mm), and 93% of lesions were excised completely. 158 lesions (75%) were biopsied prior to review, and of the lesions which were not biopsied, they were predominantly located in sensitive areas (for example eye canthus, digits).

Conclusion
These results indicate that telehealth is a suitable service to successfully treat cancerous skin lesions.
Surgically Managed Soft Tissue Infections of Paediatric Patients in Alice Springs

Dr Claire Chandler1, Dr Katharine Guggenheimer1, Dr Justine Moffat1, Dr Jessica Turner1

1Alice Springs Hospital, NT, Australia

Biography:
Junior medical officer, a local NT resident who has completed internship and residency in Alice Springs, interests in paediatrics, rural and remote medicine and indigenous health.

Soft tissue infections in the paediatric population of Alice Springs (under 16 years of age) are the most common cause of surgical admission. These infections that require surgical intervention represent the vast majority of paediatric surgery performed by the Alice Springs general surgical department. The authors have undertaken a retrospective audit of paediatric surgical practice using a prospectively designed database populated with de-identified data. The soft tissue infections of the paediatric population were then reviewed using the collected data points to examine the data trends and correlation, then contrasted with the adult population. Paediatric patients made up 20% of the surgically treated soft tissue infections, rates of diabetes significantly lower in paediatric patients. Patient were aged from less than 1 year old with incidence increasing with age. Rates of resistant organisms were similar between adults and children (MRSA or nmMRSA) cultured in approximately 36%, prescribing patterns also differed significantly between the adult and paediatric patients. An analysis of the scope of practice and outcomes is presented.
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The Role of Free Tissue Transfer Alongside Antibiotic Eluting Calcium Sulphate Beads in Multi Drug Resistant Osteomyelitis

Dr Louis Connell,1 Dr Jeremy Rawlins, Dr Edmund Fitzgerald-O’Connor

1Royal Perth Hospital, Perth, Australia

Biography:
Resident Medical Officer at Royal Perth Hospital with a career interest in Plastic and Reconstructive Surgery.

Authors: *CONNELL Louis, Rawlins J, Fitzgerald-O’Connor E, Gosh M, Frost N

Purpose
Infected non union is a painful debilitating condition which is associated with high rates of limb amputation. The Orthoplastic multidisciplinary team at Royal Perth hospital has developed experience in the management of these complex patients. The purpose of this study was to evaluate the efficacy of antibiotic void filling beads in conjunction with vascularised free tissue transfer.

Methodology
A prospective case series review was undertaken from patients treated by the Orthoplastics multidisciplinary team at the Royal Perth Hospital. 5 Patients who had clinical, radiological and microbiologically identified infected non union of lower limb fractures were included.

Results
Bone and soft tissue debridement was undertaken as a joint procedure on all patients. Methicillin resistant Staphylococcus Aureus was present on bone samples in all 5 patients. 4 ALT and 1 gracillis flap were undertaken in conjunction with 10cc of calcium sulphate (STIMULAN) mixed targeted antibiotic therapy. 100% flap survival was achieved with evidence of radiological bone healing within the first 3 months post operatively.

Conclusion
The management of osteomyelitis with concomitant soft tissue defects requires a joint orthopaedic and plastic surgery approach. STIMULAN can aid the eradication of deep space infections along side vascularised free tissue transfer.
Novel Use of Patent Blue V Dye to Manage Lymph Leak After Groin Debridement in the Setting of Fournier’s Gangrene

Dr Soumya Hariswamy 1, Dr Paul Lambrakis

1 Liverpool Hospital, Strathfield, Australia

Biography:
Dr Soumya Hariswamy is an aspiring general surgeon currently working at Liverpool Hospital as an unaccredited general surgical registrar. She is undertaking a Master of Surgery with the University of Sydney and is a Conjoint Associate Lecturer and a Women in Medicine mentor with the University of New South Wales.

This case describes the novel utilisation of Patent Blue V in identifying and facilitating repair of disrupted lymphatics following groin debridement in the setting of Fournier’s gangrene.

A 59-year-old man was admitted to the ICU with sepsis of unknown source and diabetic ketoacidosis. Over 3 days, he developed right groin and scrotal cellulitis. A diagnosis of Fournier’s gangrene was made.

Extensive debridement was performed involving the scrotum, perineum and right groin including the tissue surrounding the great saphenous vein. Repeat debridement and negative-pressure dressings were undertaken. By day 5, fluid output measuring approximately 750mls/day was noted from the negative-pressure device. No focal source could be identified on wound inspection.

A lymph leak was suspected. To identify the leakage, in the operating theatre, 2ml of Patent Blue V was injected intra-dermally distal to the wound. Within 5 minutes, 2 areas of blue stained lymphatic leakage were identified at the wound edge. The disrupted and now visible lymphatics were ligated with a dissolvable monofilament suture. There was an immediate reduction in blue stained lymph leaking into the wound and also a reduction in fluid output post-intervention to approximately 55mls/day.

A review of the literature reveals that this is the first case describing the use of Patent Blue V for the management of a lymph leak following wound debridement. For this patient, this technique proved to be an easy and efficient method to manage a problematic wound and to prevent the potential complications of a persistent lymphatic leak.
6 Analysis of Antibiotic Treatment of Severe Soft Tissue Infections in Alice Springs

Dr Justine Moffat1, Dr Katharine Guggenheimer1, Dr Jessica Turner1, Dr Claire Chandler1

1Alice Springs Hospital, 6 Gap Road, Australia

Biography:
Junior medical officer completing internship in Alice Springs.

Alice Springs hospital is a uniquely positioned hospital, the geography and population demographics are very different to all other hospitals, Australia and worldwide. A major proportion of the healthcare cost is consumed treating soft tissue infection. The soft tissue infections seen and treated in Alice Springs hospital are not simple uncomplicated infections – in the space of 2 years over 24,000 hospital bed days and almost 3500 procedures and 13000 ICU hours have been required. Antibiotics are a vital adjunct to treatment of these severe soft tissue infections and thus the antibiotic management of the severe infections requiring surgery treated between 1/1/2017 – 1/3/2018 has been examined, numbering close to 1000, the initial antibiotic treatment and discharge medication have been reviewed.
Evaluating the Causes and Management of Pancreatitis in the Northern Territory of Australia

Dr Daniel Ng Ying Kin, Mr Daniel Shea, Dr Katharine Guggenheimer

1Alice Springs Hospital, The Gap, Australia, 2Flinders University, Bedford Park, Australia

Biography:
I am Daniel Ng, a Non-Accredited General Surgical Registrar under the current employment of Austin Health, Melbourne. I was raised in Mauritius and completed my MBBS with Monash University, Melbourne. My interest lies in General Surgery and still undecided between Colorectal and Hepatobiliary surgery.

Acute pancreatitis is a potentially life-threatening condition that is noted to be prevalent in the Northern Territory. Due to the socioeconomic situation of the local population, alcohol and gallstone disease are still the leading cause of acute pancreatitis. However, other rarer causes were regularly identified and early recognition could improve patient management and their follow-up. A retrospective data collection was performed to include patients who were admitted to Alice Springs Hospital with acute pancreatitis between January 2017- April 2018. A total of 103 patients were individually assessed showing a higher Male:Female distribution (60:43). The average age was 46 years old (10-83) and the average length of stay was 5.45 days (0-62). It was noted that 10/103 required HDU/ICU admission and one patient had to be transferred to a tertiary hospital. Alcohol contributed to 45% (46/103) and gallstone 22% (23/103). Other rarer causes of acute pancreatitis were also identified such as medication-induced (1), blunt trauma (1), pancreatic cancer (1), hyperlipidaemia (1), post-procedure (2), autoimmune (3) and idiopathic (14). There were 22/103 complications related to the management of acute pancreatitis directly and indirectly related to the disease. However, no death occurred during that study period. The results of the study show that patients with acute pancreatitis present with varying degree of severity and morbidity. It was interesting to see that patients in the Northern Territory present with a vast array of rarer causes. Therefore, clinicians should investigate further before labelling the cause to be idiopathic.
Surgical Management of Primary Cutaneous Mycobacterium Avium Complex Infection: A Useful Treatment Adjunct to a Rare Disease

Dr Ingrid Salna 1, Dr Marcus Wagstaff 2, Dr Yugesh Caplash 1

1Royal Adelaide Hospital, Adelaide, Australia

Biography:

Dr Ingrid Salna is a current Unaccredited Plastic & Reconstructive Surgery Registrar at the Royal Adelaide Hospital. She has successfully completed an undergraduate degree including a Health Science Honours and subsequently a Doctor of Medicine at Flinders University in 2013. She has since been working in the Central Adelaide Local Health Network as a surgical medical officer and registrar in both general and plastic surgery, and has ongoing interests in multiple fields of Plastic & Reconstructive Surgery research.

Primary cutaneous Mycobacterium avium complex (MAC) infection is a rare entity in immunocompetent individuals, with only a few cases reported in the literature. It results from either haematogenous dissemination from pulmonary lesions or direct invasion from traumatic inoculation to the skin. Cutaneous manifestations of MAC disease present a wide range of patterns with multiple differential diagnoses: papules, nodules, ulcers, pustules and leprae, lupus and rosacea-like granuloma. Thus, its diagnosis requires a series of laboratory tests to identify and exclude suspicious diagnoses that may later affect treatment. Identification of MAC by conventional examinations, including acid-fast staining, in vitro culture, and histopathology, is difficult. Regarding therapy, there are no standard protocols and the necessity for prolonged treatments has been reported. We present two immunocompetent males aged 61 and 71 years requiring surgical debridement for primary cutaneous MAC infections resistant to medical management. One required four surgical debridements of his left upper limb over approximately three years, despite being on long-term clarithromycin and rifampicin and intermittent treatments of moxifloxacin, ethambutol and linezolid. The other required three debridements of his right upper limb over three years despite similar medical management. Both had good aesthetic outcomes and control of their disease progression.
Introduction
Sternoclavicular Joint septic arthritis is an uncommon infection that can present with anterior mediastinal abscess. There is no consensus in the literature as to the best way to manage this infection, and in contemporary practice it is often a condition were several specialities may have an interest in its management.

Methods
A retrospective case series of patients with sternoclavicular joint septic arthritis and anterior mediastinal abscess was undertaken at Fiona Stanley Hospital.

Results
15 patients with sternoclavicular joint septic arthritis were identified. The patients were treated under either cardiothoracic surgery or orthopaedic surgery. Most cases were from haematogenous spread of infection and several in the setting of intravenous drug use. All patients underwent operative management and joint washout, but timing of surgery and operative approach varied greatly.

Conclusions
Full results of this case series are pending and will be available prior to conference presentation.
Cutaneous Basal Cell Carcinoma Requiring Limb Amputation

Dr Matthew Watson, Associate Professor Matthias Wichmann, Dr Timothy Ganguly

Mount Gambier And Districts Health Service, Mount Gambier, Australia

Purpose
a) Case report of a 52yo male with an infected ulcerating lesion of the right forearm and hand that was infested with fly larvae. The patient underwent an above elbow upper limb amputation with histopathology confirming an infected giant basal cell carcinoma (BCC). Staging computer tomography at the time of diagnosis revealed axillary lymphadenopathy.

b) A literature review was undertaken focusing on the incidence of giant and metastatic BCC and the role of limb amputation for the treatment of BCC.

Methods
a) Literature review via PubMed.

Results
a) 1% of BCCs become a giant BCC prior to diagnosis, with these often being neglected by the patient.

b) Metastatic BCC has an incidence ranging from 0.003% to 0.55%, with lymph nodes being the most common site of spread.

c) 85% of metastatic BCCs arise from the head and neck, with metastases from extremities rare.

d) There are few published cases where upper limb amputation has been used as treatment for BCC.

e) Indications for limb amputation in the setting of malignancy include the inability to achieve resection margins via wide local excision and pre-existing functional impairment of the limb.

Conclusions
a) Giant BCC and metastatic BCC are not common clinical entities.

b) Indications for limb amputation for BCC are similar to those for other primary malignancies.
Mesenteric Venous Thrombosis Managed with Damage Control Surgery in a Rural Hospital

Janine Vu | University of Adelaide

Background
Mesenteric venous thrombosis (MVT) is a rare cause of acute mesenteric ischaemia (AMI), accounting for less than 10% of all cases. When there is clinical suspicion of bowel infarction, resection of necrotic bowel is mandated. This can be achieved with damage control surgery (DCS), which involves resection of necrotic bowel with no attempt at primary anastomosis or abdominal closure. DCS serves as a temporising measure, which can be performed in a resource-limited hospital, before definitive management in a tertiary centre.

Case Presentation
A 36-year-old man presented to a rural South Australian hospital with acute abdominal pain of increasing severity, after one week of vomiting and diarrhoea. Venous phase post-contrast CT scans of the abdomen revealed a thrombus within the superior mesenteric vein. Initial management was commenced with nasogastric tube placement, IV fluids and heparin infusion. However, due to the development of haemodynamic instability and peritoneal signs, an emergency laparotomy with a damage control approach was performed – 200 cm of necrotic small bowel was resected without primary anastomosis or abdominal closure. Following transfer to a tertiary hospital as a direct ICU admit, he underwent second-look laparotomy at 48 hours. Further workup revealed no predisposing thrombophilia. The patient was discharged on long-term thromboprophylaxis with Apixaban.

Discussion
This case offers an approach to managing the critically ill patient with AMI in a rural setting where tertiary supports, including ICU and specialist vascular expertise, are largely unavailable. Furthermore, it highlights the value of DCS in stabilising critically ill patients, particularly for general surgeons operating in rural communities.
Robots and other computer-aided technologies are rapidly invading our operating theatres, and threaten to displace traditional ‘human’ techniques in many surgical disciplines. Join us in the seafood capital of Australia, Pt. Lincoln, as we explore the impact of these new technologies on surgery as we know it- or should that be ‘as we knew it’?

Just as Pt. Lincoln has come a long way, since being named by Matthew Flinders in 1802, settled in 1839, and then developing into the ‘tuna industry led millionaire capital of Australia’, robots and other computer-aided technologies have rapidly gained a foothold in our modern surgical practice. They have been riding a wave of enthusiasm of tsunami proportions, and threaten to swamp the tried and tested techniques handed down from previous generations of ‘manual’ surgeons.

Are we in danger of replacing the traditional qualities associated with being a good surgeon- they being the possession of: the eye of an eagle, the heart of a lion and the hand of a lady with: a GPS localisation device, the logic of an Intel processor and a claw with 7 degrees of freedom?

Can we learn from our mistakes of the past, when we dived head first into laparoscopic surgery, only to discover that “to he with a hammer, not everything he sees is actually a nail!”? How should these new technologies be learnt, taught, introduced, evaluated, funded and regulated?

Pt. Lincoln provides us with a beautiful coastal setting, with beaches, national parks and the entertainment and sustenance of the pristine waters of Spencer Gulf. Kicking the meeting off with the annual symposium hosted by the South Australian Audit of Surgical Mortality on the Thursday afternoon followed by a welcome reception at the Pt Lincoln Hotel showcasing local fresh produce straight from the sea, and local wines straight from the vines!

In the idyllic setting of Peter Teakle’s vineyard / restaurant The Line & Label, Friday evening will be a truly memorable experience as we will host the Annual Anstey Giles Lecture delivered by Dr Richard (Harry) Harris OAM, SC, South Australian Anaesthetist and cave diver, who was instrumental in the recent rescue of the Thai Wild Boar soccer team.

Make your plans now to meet up with colleagues from South Australia, Western Australia and Northern Territory and be prepared to learn, laugh, relax and enjoy the SA,WA,NT tri-state ASM!

For more information please contact the RACS SA Regional Office on 08 8239 1000 or college.sa@surgeons.org.

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