ANNOUNCEMENT

Malaysian Society of Intensive Care

ASMIC 2024

ANNUAL SCIENTIFIC MEETING ON INTENSIVE CARE

6th-8th September 2024

Precongress 5th September 2024

Shangri-La Kuala Lumpur, Malaysia

Featuring minilFAD on Sunday 8th Sept 2024

mini #iFAD

www.msic.org.my

Malaysian Society of Intensive Care (MSIC) Executive Committee 2023-2025

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Dr Shanti Rudra Deva

Coopted Executive Committee Members
Dr Fong Kean Khang
Dr Nahla Irtiza Ismail

ORGANISING COMMITTEE

Dr Noor Airini Ibrahim *(Chairperson)*
Dr Louisa Chan Yuk Li
Dr Tang Swee Fong
Professor Dr Gan Chin Seng
Dr Premela Naidu Sitaram
Dr Lavitha Vyveganathan
Dr Fong Kean Khang
Dr Asmah Zainudin

WELCOME MESSAGE

Friends and colleagues

On behalf of the Organising Committee I am delighted to invite you to the hallmark event in the calendar of the Malaysian Society of Intensive Care (MSIC), the Annual Scientific Meeting on Intensive Care (ASMIC 2024) which will take place on 6th to 8th September 2024 in Shangri La Kuala Lumpur, Malaysia.

We look forward to meeting intensivists, anaesthetists and other healthcare personnel involved in the management of critically ill patients for the sharing of knowledge, experience and insights throughout this three-day event. Through such collaborative endeavours, we aspire to push against the boundaries of our specialty to provide the best possible care to our patients.

We hope that the comprehensive programme planned will be a valuable source of educational enrichment and professional growth for the delegates and everyone involved. It is an excellent opportunity to host and learn from local and international experts. An exciting addition to the ASMIC 2024 programme is the inaugural International Fluid Academy Day (IFAD) Malaysia. This highly interactive one-day programme (IFAD Mini) will cover all aspects of fluid management including fluid stewardship, phases of fluid management, monitoring devices and goals of treatment.

Finally, I warmly welcome all of you to the ASMIC 2024. Please help us to spread the word and we look forward to seeing you come September in Kuala Lumpur.

Dr Noor Airini Ibrahim
Organising Chairperson
Annual Scientific Meeting on Intensive Care 2024

INVITED SPEAKERS

Australia
David Pilcher
David Sturgess

Hungary
János Fazakas

India
Arun Bansal
Dileep Raman
Sheila Myatra

Indonesia
Sidharta Kusuma Manggala
Faisal Muchtar

Philippines
Karl Evans R Henson

Poland
Manu Malbrain

Singapore
Faheem Ahmed Khan
Lee Jan Hau
Loh Sin Wee
Monika Gulati Kansal
Siti Nur Hanim Buang
Tan Chee Keat
Judith Wong

Thailand
Rujipat Samransamruajkit

United Kingdom
Mark Peters
Adrian Wong

USA
Nilesh Mehta

Malaysia

Adlina Hisyamuddin
Ahmad Shahir Mawardi
Ahmad Shaltut Othman
Aliza Mohamad Yusof
Alzamani Idrose
Anis Siham Zainal Abidin
Anis Suraya Ghani
Ariffin Marzuki
Azmin Huda Abdul Rahim
Chin Ji Zhang
Chong Lee Ai
Chor Yek Kee
Gaithridevi V Singam
Idawina Mat Ludin
Ismail Tan Mohd Ali Tan
Joyce Darshini
Julie Eileena Abdul Razak
Erwin Khoo
Kogulakrishnan Kaniappan
Koo Thomson
Lavitha Vyveganathan
Olive Lee
Lee Pei Chuen
Lee Zheng Yii
Richard Lim
Janis Lim Jun June
Lim Shyang Yee
Looi Chu Li
Low Lee Lee
Mahazir Kassim
Mohamed Hassan Mohamed Ariff
Mohd Basri Mat Nor
Mohd Ridhwan Md Noor
Muhamad Hafizzi Mohd
Nahla Irtiza Ismail
Nor'azim Mohd Yunos
Omar Sulaiman
Patrick Periasamy
Poh Yeh Han
Pon Kah Min
Pravin Sugunan
Rafidah Atan
Rahela Ambaras Khan
Ruzanah Mohd Noor
Seethal Padmanathan
Sheshendrasurian Visvalingam
Soo Kok Wai
Srirao Siva
Tan Hui Jan
Vimala Ramoo
Wan Nasruddin Wan Ismail
Andrew Yem Weng Hoong

PROGRAMME SUMMARY

Date / Time	6th September 2024 (Friday)	7th September 2024 (Saturday)	8th September 2024 (Sunday)
0800 - 0830	Registration	0745 - 0900 Coffee with the Expert 1 2 3	0745 - 0900 Coffee with the Expert 4 5
0830 - 0900			
0900 - 0930	PLENARY 1	PLENARY 2	PLENARY 4 *(IFAD-Mini)*
0930 - 1000	OPENING CEREMONY	PLENARY 3	PLENARY 5 *(IFAD-Mini)*
1000 - 1030	Tea / Visit to Trade Exhibition	Sponsored Tea Symposium 2	T Sachithanandan Best Oral Paper Presentation Award and Best Poster Award Tea / Visit to Trade Exhibition
1030 - 1100		Tea / Visit to Trade Exhibition	
1100 - 1130	SYMPOSIA	SYMPOSIA	IFAD MINI SYMPOSIA 17 18
1130 - 1200			
1200 - 1230	1 2 3 4	9 10 11 12	
1230 - 1300	Lunch / Friday Prayers / Visit to Trade Exhibition	Sponsored Lunch Symposium Tea / Visit to Trade Exhibition	Official Poster Round
1300 - 1330			Lunch
1330 - 1400			
1400 - 1430			IFAD MINI
1430 - 1500	SYMPOSIA	SYMPOSIA	
1500 - 1530			
1530 - 1600	5 6 7 8	13 14 15 16	
1600 - 1630	Tea Symposium 1	Tea / Visit to Trade Exhibition	1600 - 1620 Closing Quiz (Post-Test), Prize Giving and Wrap it Up 1620 - 1630 Wrap it Up 1630 - 1635 Group Photo IFADmini Delegates
1630 - 1700	T Sachithanandan Oral Free Paper Presentation	Annual General Meeting of the Malaysian Society of Intensive Care	
1700 - 1730	Tea / Visit to Trade Exhibition		
1730 - 1800			
1800 - 1830			

PRE-CONGRESS WORKSHOP
5th September 2024 (Thursday)

1. Optimising Antimicrobial Therapy in The Critically Ill

(Limited to 40 participants only)

Chairperson: Azmin Huda Abdul Rahim

Venue: Grand Johor Room

Antimicrobial therapy is one of the important components in the management of sepsis in ICU. However, prescribing antimicrobials without appropriate stewardship may lead to emergence of resistant organisms. Hence, this workshop is drawn up to further elucidate and discuss how to optimise antimicrobial therapy in the critically ill based on the latest evidence and guidelines available. The target participants of this workshop will be specialists, trainees and clinical pharmacists.

Programme

0900 - 0915	Principles of Antimicrobial Therapy in ICU *Azmin Huda Abdul Rahim*
0915 - 0945	Understanding PKPD of Antibiotics *Rahela Ambaras Khan*
0945 - 1015	Duration of Antibiotics: Are we Doing it Right? *Lavitha Vyveganathan*
1015 - 1045	Augmented Renal Clearance ..is it a Myth? *Koo Thomson*
1045 - 1115	Break
1115 - 1145	Prolonged Infusion of Antibiotics…is the Way to go? *Rahela Ambaras Khan*
1145 - 1215	Hypoalbuminaemia and Beta Lactam *Poh Yeh Han*
1215 - 1245	Combination Therapy in MDR Organisms...What are the Evidence? *Azmin Huda Abdul Rahim*
1245 - 1400	Lunch
1400 - 1430	Case Discussion: Invasive Candidiasis *Shanti Rudra Deva*

PRE-CONGRESS WORKSHOP
5th September 2024 (Thursday)

1430 - 1500	Case Discussion: sCAP ***Azmin Huda Abdul Rahim***
1500 - 1530	Case Discussion: CNS Infections ***Poh Yeh Han***
1530 - 1600	Case Discussion: Intrabdominal Infections ***Koo Thomson***
1600 - 1630	Wrap Up / Evaluation Form

PRE-CONGRESS WORKSHOP
5th September 2024 (Thursday)

2. Essentials of Mechanical Ventilation in Adults *(only for doctors)*

(Limited to 40 participants only)

Chairpersons: Premela Naidu Sitaram, Yap Mei Hoon

Venue: Selangor Room / Perak Room

Mechanical ventilation is often necessary in cases of respiratory failure, circulatory failure, altered conscious state and cardiac arrest. This workshop covers the essential modes of ventilation, interaction of the patient with the ventilator, various ventilator strategies and best weaning strategies. This comprehensive workshop is ideal for doctors working in the critical care units.

Programme (Morning Session)

0800 - 0820	Registration
0820 - 0830	Welcome Address and Housekeeping Rules *Premela Naidu*
0830 - 0900	Basic Principles of Mechanical Ventilation *Khoo Tien Meng*
0900 - 0930	Conventional Modes of Ventilation: Controlled Modes and Assist Modes *Yap Mei Hoon*
0930 - 1000	Non-Invasive Strategies - HFNO, NIV, Helmet *Lee See Pheng*
1000 - 1030	Tea break
1030 - 1100	Patient - Ventilator Interaction *Gaithridevi V Singam*
1100 - 1130	Sedation - Ventilation Interaction *Faheem Ahmed Khan*
1130 - 1200	Readiness Testing for Weaning *Nahla Ismail*
1200 - 1230	Ultrasound to Assess Failure to Wean *Calvin Wong*
1230 - 1300	Ventilating the Obese Patient *Faheem Ahmed Khan*
1300 - 1400	Lunch

PRE-CONGRESS WORKSHOP
5th September 2024 (Thursday)

Programme (Afternoon Session)

1400 - 1440	Skill Station 1 *Yap Mei Hoon / Nahla Ismail*
1440 - 1520	Skill Station 2 *Lee See Pheng*
1520 - 1600	Skill Station 3 *Khoo Tien Meng*
1600 - 1640	Skill Station 4 *Calvin Wong / Gaithridevi*
1640 - 1700	Tea Break & Closing

PRE-CONGRESS WORKSHOP
5th September 2024 (Thursday)

3. Mechanical Ventilation for Nurses

(Limited to 40 participants only)

Chairperson: Lavitha Vyveganathan

Venue: Melaka Room

Overview

This one-day programme is designed to help ICU nurses revise and update their knowledge on managing critically ill patients on the mechanical ventilator. The programme emphasises the basic concepts of mechanical ventilation with topics that are clinically relevant to bedside nursing care. The programme comprises of lectures in the morning followed by practical group discussions in the afternoon.

Programme

0800 - 0830	Registration
0830 - 0915	Mechanical Ventilation - The Basics *Kee Pei Wei*
0915 - 1000	Ventilator Modes - Management and Monitoring *Muhammad Hafizzi Mohd*
1000 - 1030	Tea Break
1030 - 1115	Basic Waveform Analysis *Yap Pey Y'ng*
1115 - 1200	Care of Patient with Non Invasive Ventilation *Tan Yu Hui*
1200 - 1230	Optimize your Pulse Oximetry Monitoring *Muhammad Hafizzi Mohd*
1230 - 1330	Lunch
1330 - 1400	Weaning from Mechanical Ventilation *Kee Pei Wei*
1400 - 1615	Workshop and Group Discussion
1615 - 1630	Feedback and Wrap Up Session

PRE-CONGRESS WORKSHOP

5th September 2024 (Thursday)

Topic	Simple Waveform Analysis and Basic Modes	Non Invasive Ventilation	Optimizing Pulse Oximetry in ICU	Asthma and ARDS
Fascilitator	Yap Pey Y'ng	Tan Yu Hui	Muhd Haffizi Mohd	Kee Pei Wei
1400 - 1430	Group A	Group B	Group C	Group D
1430 - 1500	Group D	Group A	Group B	Group C
1500 - 1515	Tea Break			
1515 - 1545	Group C	Group D	Group A	Group B
1545 - 1615	Group B	Group C	Group D	Group A

PRE-CONGRESS WORKSHOP
5th September 2024 (Thursday)

4. Paediatric - Haemodynamic Monitoring in The Critically Ill Child

(Limited to 32 - 36 participants only)

Chairpersons: Tang Swee Fong, Gan Chin Seng

Venue: Sarawak Room

Circulatory instability and shock is not uncommon in children and poses a challenging management situation. The current guidelines for shock focuses mainly on early recognition and treatment but do not specify the type of monitoring technology that should be used in various circumstances. Haemodynamic monitoring should ideally be able to accurately determine not only the severity of circulatory derangements, but also the underlying pathophysiological mechanisms, to enable clinicians to choose the most appropriate therapy. There are a wide range of techniques and devices available to monitor haemodynamic status and an increasing number is available for use in children. This workshop will cover the basis and basics of haemodynamic monitoring as well as the use and limitations of various methods.

Programme

0800 - 0830	Registration
0830 - 0845	Welcome
0845 - 0915	Haemodynamic Monitoring in Critically Ill children - An Overview *Arun Bansal*
0915 - 0945	The Physiological Basis of Circulatory Shock *Pravin Sugunan*
0945 - 1015	Heart-Lung Interactions in Circulatory Shock *Chor Yek Kee*
1015 - 1045	Coffee Break
1045 - 1115	Fluid Resuscitation and Fluid Responsiveness *Chong Jia Yueh*
1115 - 1145	Monitoring Cardiac Output *Pon Kah Min*
1145 - 1215	Monitoring the Microcirculation *Gan Chin Seng*

PRE-CONGRESS WORKSHOP
5th September 2024 (Thursday)

1215 - 1230	Q&A
1230 - 1400	Lunch
1400 - 1700	Skill Station 1: How I Administer Fluids and Monitor Responsiveness *Chong Jia Yueh / Lee Siew Wah*
	Skill Station 2: Use of Echocardiography to Monitor Fluid Responsiveness *Chor Yek Kee / Pon Kah Min*
	Skill Station 3: Monitoring Tissue Perfusion and Oxygenation *Pravin Sugunan / Lee Pei Chuen*
	Skill Station 4: Minimally Invasive Methods for Haemodynamic Monitoring in Children *Arun Bansal / Gan Chin Seng*
1700	End of Programme and Tea Break

DAILY PROGRAMME
6th September 2024 (Friday)

0800 - 0900 Registration

0900 - 0945 **PLENARY 1** *Sabah Room*

Chairperson: Nahla Irtiza Ismail

The Malaysian Registry of Intensive Care: Over a Decade, What have we Achieved
Mohd Ridhwan Md Noor

0945 - 1015 **OPENING CEREMONY** *Sabah Room*

1015 - 1100 Tea / Visit to Trade Exhibition

1100 - 1240 *Sabah Room*	1100 - 1240 *Johor Room*	1100 - 1240 *Melaka Room*	1100 - 1240 *Sarawak Room*
SYMPOSIUM 1 ***Haemodynamics*** ***Chairpersons:*** ***Kee Pei Wei /*** ***Seethal Padmanathan*** What's New in Heart Failure *Kogulakrishnan Kaniappan* ECMO: What is the Evidence So Far *David Pilcher* Echocardiography in Acute Coronary Syndromes *David Sturgess* Improving Vasopressor Use: An Update *Adrian Wong*	**SYMPOSIUM 2** ***Respiratory / Ventilation*** ***Chairpersons:*** ***Fong Kean Khang /*** ***Idawina Mat Ludin*** Videolaryngoscopy: Standard of Care in ICU *Mahazir Kassim* Optimising PEEP *Sidharta Kusuma Manggala* ARDS Mimics *Dileep Raman* Training the Inspiratory Muscles *Faisal Muchtar*	**SYMPOSIUM 3** ***Intensive Care Nursing I*** ***Chairpersons:*** ***Lavitha Vyveganathan /*** ***Chong Su Jen*** Medication Error in the ICU - Prevention is Better Than Cure *Andrew Yem Weng Hoong* Achieving Glycaemic Control: Challenges *Chin Ji Zhang* Nursing Role in Trauma Resuscitation *Adlina Hisyamuddin* Essential Selflessness - Care for the Caring *Vimala Ramoo*	**SYMPOSIUM 4** ***Paediatric: Sepsis*** ***Chairperson:*** ***Pon Kah Min*** Clinical Signs in Sepsis: Are they still Relevant? *Mark Peters* Haemodynamic Monitoring in Sepsis: Applying the ESPNIC 2023 Guidelines *Arun Bansal* POCUS in Sepsis *Chor Yek Kee* Fluids in Sepsis: Where do we Stand in 2024? *Mark Peters*

1240 - 1430 Lunch / Friday Prayers / Visit to Trade Exhibition

DAILY PROGRAMME
6th September 2024 (Friday)

1430 - 1610 *Sabah Room*	1430 - 1610 *Johor Room*	1430 - 1610 *Melaka Room*	1430 - 1610 *Sarawak Room*
SYMPOSIUM 5 ***Infection / Sepsis*** ***Chairpersons:*** ***Asmah Zainuddin / Aliza Mohd Yusof*** Procalcitonin Use in ICU - What is the Evidence ***Patrick Periasamy*** Evidence on Prolonged Infusion of Beta-Lactam Antibiotics and How to Translate into Practice ***Rahela Ambaras Khan*** Are we Overusing the Novel Antifungals ***Low Lee Lee*** Revisting Blood Purification in Sepsis ***Rafidah Atan***	**SYMPOSIUM 6** ***Organisation*** ***Chairpersons:*** ***Nor'Azim Mohd Yunos / Adlina Hishamuddin*** Insights from the Australian ICU Registry ***David Pilcher*** Mainstreaming Palliative Care: The New Norm in ICU ***Tan Chee Keat*** Reducing Human Errors in the ICU ***Adrian Wong*** Teletechnology: The Future in ICU ***Dileep Raman***	**SYMPOSIUM 7** ***Nutrition*** ***Chairpersons:*** ***Mohd Basri Mat Nor / Chin Ji Zhang*** Nutritional Requirements in the Critically Ill: An Update ***Lavitha Vyveganathan*** Sarcopenia in the Critically Ill ***Lee Zheng Yii*** Feeding the Post-Surgical Critically Ill Patient ***Lim Shyang Yee*** Supplemental Parenteral Nutrition: Is it Underused? ***Ahmad Shaltut Othman***	**SYMPOSIUM 8** ***Paediatric: Respiratory*** ***Chairperson:*** ***Chor Yek Kee*** Biomarkers in ARDS - Ready for Clinical Use? ***Judith Wong*** Are Current Ventilator Strategies Really Lung Protective in Mechanically Ventilated Children? ***Rujipat Samransamruajkit*** Steroids in Paediatric Respiratory Failure: Yes, No or Maybe ***Pon Kah Min*** Chest Physiotherapy: How does it Affect Oxygenation and Haemodynamic Stability? ***Anis Siham Zainal Abidin***

1610 - 1645 **Tea Symposium 1 *(Pfizer Malaysia Sdn Bhd)*** *Sabah Room*

Chairperson: Azmin Huda Abdul Rahim

Early Diagnosis and the Management of Multidrug-Resistant Organisms (MDRO) Infections in the ICU

Karl Evans R Henson

1645 - 1745 **T Sachithanandan Oral Free Paper Presentation** *Melaka Room*

Tea / Visit to Trade Exhibition

DAILY PROGRAMME
7th September 2024 (Saturday)

0745 - 0900 *Penang Room*	0745 - 0900 *Johor Room*	0745 - 0900 *Melaka Room*
COFFEE WITH THE EXPERT 1 ***Moderator:*** ***Gaithridevi V Singam*** How do I Communicate with Families Better? *Monika Gulati Kansal*	**COFFEE WITH THE EXPERT 2** ***Moderator: Yap Mei Hoon*** How do I Wean my Patients Better *David Pilcher*	**COFFEE WITH THE EXPERT 3** ***Moderator: Lee Siew Wah*** How do I Manage the Child with Raised Intracranial Pressure? *Olive Lee*

0900 - 0930 **PLENARY 2** *Sabah Room*

Chairperson: Tang Swee Fong

Liberal vs Conservative Oxygen Targets in the Critically Ill Child

Mark Peters

0930 - 1000 **PLENARY 3** *Sabah Room*

Chairperson: Gan Chin Seng

Nutrition for the Critically Ill Child: Enhancing Clinical Practice from Research

Nilesh Mehta

1000 - 1045 **Sponsored Tea Symposium 2 *(Pharmaniaga Sdn Bhd)*** *Sabah Room*

Chairperson: Asmah Zainuddin

From Transfusion to Bloodless Management in Intensive Care

János Fazakas

1045 - 1115 Tea / Visit to Trade Exhibition

DAILY PROGRAMME
7th September 2024 (Saturday)

1115 - 1255 *Sabah Room*	1115 - 1255 *Johor Room*	1115 - 1255 *Melaka Room*	1115 - 1255 *Sarawak Room*
SYMPOSIUM 9 ***Surgical Critical Care*** ***Chairpersons:*** ***Mahazir Kassim /*** ***Poh Yeh Han***	**SYMPOSIUM 10** ***Organ Donation*** ***Chairpersons:*** ***Rafidah Atan /*** ***Koo Thomson***	**SYMPOSIUM 11** ***Neurology*** ***Chairpersons:*** ***Amelia Mohamed Ain /*** ***Julie Eileena Abdul Razak***	**SYMPOSIUM 12** ***Paediatric: Nutrition*** ***Chairperson:*** ***Chong Jia Yueh***
Abdominal Compartment Syndrome; How to Ventilate ***Mohd Basri Mat Nor***	Update on Consensus Statement on Brain Death 2023 ***Ahmad Shahir Mawardi***	Preventing Delirium - A Change in Sedation Practice ***Monika Gulati Kansal***	Assessing the Nutritional Status of the PICU Patient ***Pravin Sugunan***
The Patient with Massive Bleeding - Pitfalls and Pearls ***David Sturgess***	Update on Donor Maintenance - The Secret Recipe ***Nahla Irtiza Ismail***	Traumatic Brain Injury: Do Sodium Levels Really Matter ***Muhamad Hafizzi Mohd***	Managing Nutrition Intolerance ***Nilesh Mehta***
The Morbidly Obese Surgical Patient - Challenges and Outcome ***Wan Nasruddin Wan Ismail***	End of Life Care: Organ Donation in ICU ***Azmin Huda Abdul Rahim***	Subarachnoid Haemmorrhage: What's New in the 2023 Guidelines ***Aliza Mohamad Yusof***	Ensuring Adequate Calorie and Protein Requirements ***Lee Jan Hau***
The Polytrauma Patient with Crush Injury - "What's New" ***Faisal Muchtar***	Increasing the Donor Pool - Intensivist as Organ Transplant Coordinator ***Omar Sulaiman***	Hypoactive Delirium in the ICU may be Missed - So What? ***Sidharta Kusuma Manggala***	Nutritional Recovery After Critical Illness ***Nilesh Mehta***

DAILY PROGRAMME
7th September 2024 (Saturday)

1255 - 1340 *Sabah Room*
Sponsored Lunch Symposium *(Philips Healthcare)*
Chairperson: Fong Kean Khang

The Future: Monitoring for Tomorrow
Suhaini Kadiman

1340 - 1430
Tea / Visit to Trade Exhibition

1255 - 1430 *Johor 3 & 6*
Official Poster Round

1430 - 1610 *Sabah Room*
SYMPOSIUM 13
Resuscitation
Chairpersons:
Ismail Tan Mohd Ali Tan / Looi Chu Li

Emerging Ideas for Management of Cardiac Arrest
Alzamani Idrose

Extracorporeal CPR
Ariffin Marzuki

Post Anoxic Cardiac Arrest - So we Limit Oxygen?
Gaithridevi V Singam

Neuroprognostication After Cardiac Arrest - Easier Said Than Done?
Tan Hui Jan

1430 - 1610 *Johor Room*
SYMPOSIUM 14
Ethics, Law & Communication
Chairpersons:
Wan Nasruddin Wan Ismail / Muhamad Hafizzi Mohd

Advance Care Planning as a National Policy - It's About Time
Richard Lim

Transforming Care at the End of Life in the ICU: The Compassionate Discharge Response Team
Tan Chee Keat

Effective Family Oriented Communication - Do's and Dont's
Monika Gulati Kansal

Being an Expert Witness: Not for Everyone?
Mohamed Hassan Mohamed Ariff

1430 - 1610 *Melaka Room*
SYMPOSIUM 15
Intensive Care Nursing II
Chairpersons:
Lavitha Vyveganathan / Aizad Azhar

Achieving the Silent ICU - Nurses' Role
Julie Eileena Abdul Razak

Patient Mobilisation - How can we Improve
Seethal Padmanathan

Delivering Aerosolized Medication During HFNC and NIV
Koo Thomson

Post Intensive Care Syndrome - What can Nurses do About it
Idawina Mat Ludin

1430 - 1610 *Sarawak Room*
SYMPOSIUM 16
Paediatric: Ethics & Palliative Care
Chairperson:
Olive Lee

Palliative and Critical Care: Working Together
Siti Nur Hanim Buang

Care of the Child with Medical Complexity: If we can, does not Mean we Should
Erwin Khoo

The Art and Science of Terminal Discharge
Loh Sin Wee

Bereavement Care Services in PICU: Supporting Family and Staff
Chong Lee Ai

1610 - 1630 Tea / Visit to Trade Exhibition

1630 - 1830 **Annual General Meeting of the Malaysian Society of Intensive Care** *Melaka Room*

DAILY PROGRAMME
8th September 2024 (Sunday)

0745 - 0900 *Johor Room*	0745 - 0900 *Melaka Room*
COFFEE WITH THE EXPERT 4 ***Moderator: Chin Ji Zhang*** Point of Care Ultrasound in the ICU *Adrian Wong*	**COFFEE WITH THE EXPERT 5** ***Moderator: Gan Chin Seng*** How do I Feed my Child with Acute Kidney Injury? *Olive Lee*

0900 - 0930 **PLENARY 4 *(IFAD-Mini)*** *Sabah Room*
Introduction to Fluid Stewardship
Manu Malbrain

0930 - 1000 **PLENARY 5 *(IFAD-Mini)*** *Sabah Room*
Fluid Responsiveness - Asking the Wrong Question
Sheila Myatra

1000 - 1010 T Sachithanandan Best Oral Paper Presentation Award and Best Poster Award

1010 - 1040 Tea / Visit to Trade Exhibition

1040 - 1220 *Sabah Room*	1040 - 1220 *Johor Room*	1040 - 1220 *Sarawak Room*
IFAD MINI ***Fluids are Drugs*** What's New in Resuscitative Fluids - What, How When? *Poh Yeh Han* Maintenance Fluids - Lessons from the OR and Ward *Nor'azim Mohd Yunos* Creep Fluids and Fluid Accumulation Syndrome - The Role for Big Data *Manu Malbrain* Panel Discussion - Is There still a Place For Colloids? *Manu Malbrain* Q&A	**SYMPOSIUM 17** ***Intensive Care Nursing III*** ***Chairpersons:*** ***Lavitha Vyveganathan / Idawina Mat Ludin*** Dengue the Silent Killer *Looi Chu Li* Pressure Ulcers in ICU - The Forgotten Enemy *Janis Lim Jun June* Persistent Fever in the Critically Ill *Sheshendrasurian Visvalingam* Palliative Care in ICU: Nurses Role *Ruzanah Mohd Noor*	**SYMPOSIUM 18** ***Paediatric: Cardiology*** ***Chairperson:*** ***Chuah Soo Lin*** Management of Hypertensive Crisis *Lee Pei Chuen* Managing the Child with Pulmonary Hypertension in the PICU *Joyce Darshini* Starting an ECMO Service: Pearls and Pitfalls *Anis Suraya Ghani* Long-Term Morbidities After Cardiac Surgery *Soo Kok Wai*

1220 - 1320 Lunch

DAILY PROGRAMME
8th September 2024 (Sunday)

1320 - 1600 *Sabah Room*

IFAD MINI

Appropriate Fluid Management

Fluid Management - Challenges in the Emergency Department
Srirao Siva

De-Resuscitation - What, How, When?
Adrian Wong

Panel Discussion - What Haemodynamic Monitor should we be Using
Sheila Myatra

Fluid Stewardship - Defining Good Practice/KPIs from a LMIC Perspective
Sheila Myatra

Fluid Stewardships - Lessons from Indonesia
Sidharta Kusuma Manggala / Faisal Muchtar

Panel Discussion - How are we Going to Implement Fluid Stewardship?
The Malaysian Chapter of IFA with Adrian Wong

1600 - 1620
Closing Quiz (Post-Test), Prize Giving and Wrap it Up
Manu Malbrain

1620 - 1630
Wrap it Up
Adrian Wong

1630 - 1635
Group Photo
IFADmini Delegates

DAILY PROGRAMME
8th September 2024 (Sunday)

IFAD Mini Workshop in conjunction with ASMIC 2024

We cordially invite colleagues to join us at the inaugural International Fluid Academy Day Malaysia. The goals of International Fluid Academy (IFA) workshops are to help participants gain an in-depth understanding of fluid therapy and its consequences in the care of critically ill patients and foster collaboration with colleagues across the IFA network. This one-day programme (IFADmini) will cover all aspects of fluid management including fluid stewardship, phases of fluid management, monitoring devices and goals of treatment. This highly interactive day includes the opportunity to discuss key topics with international and regional experts and speakers.

Our honourable speakers and facilitators will be:

Manu Malbrain *(Poland)*
Adrian Wong *(United Kingdom)*
Sheila Myatra *(India)*
Sidharta Kusuma Manggala *(Indonesia)*
Faisal Muchtar *(Indonesia)*
Srirao Siva *(Malaysia)*
Nor'azim Mohd Yunos *(Malaysia)*
Poh Yee Han *(Malaysia)*

Tentative plenary and symposium topics are as follows:

- The 7Ds of fluid stewardship - how do we break bad habits and improve clinical practice and patient outcomes through a multidisciplinary team approach.
- Test your knowledge of fluid management in our International Fluid Academy and a chance to win a prize.
- What are the best tools to help guide management - arterial line? Point-of care ultrasound? Body impedance monitoring? Join the discussion with our panel and share your thoughts and experiences.
- Regional experts from various specialties will share their own experiences on how to improve fluid practices in their own institution. Learn top tips on how to actually make it happen in your department!

CONGRESS INFORMATION

REGISTRATION FEES

Category	On or Before 15th July 2024	From 16th July to 31st August 2024	On-Site
Local *(Main Conference + IFAD Mini)*			
MSIC Member	RM 1100	RM 1200	RM 1300
Non-MSIC Member	RM 1200	RM 1300	RM 1400
Medical Officer	RM 1000	RM 1100	RM 1200
Nurse / Allied Health Professional	RM 950	RM 1000	RM 1050
Local *(IFAD Mini only - 8th September 2024)*			
Delegate	RM 500	RM 550	RM 600
Overseas *(Main Conference + IFAD Mini)*			
Delegate	USD 450	USD 500	USD 550
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PRE-CONGRESS WORKSHOPS *(5th September 2024, Thursday)* *(subject to availability of places at the workshops)*	On or Before 15th July 2024	From 16th July to 31st August 2024	On-Site
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2. Essentials of Mechanical Ventilation in Adults	RM 400	RM 450	RM 500
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COFFEE WITH THE EXPERT SESSIONS	**RM 20 per person**

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CONGRESS INFORMATION

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CONGRESS INFORMATION

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Authors whose abstracts are not short-listed for the Oral Free Paper can opt for the poster presentation.

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This abstract receipt deadline will remain firm and any abstracts received after the deadline will not be accepted.

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- Papers to be submitted must be intensive care related topics.
- No limit is imposed on the number of abstracts submitted by an individual.
- Abstracts are to be submitted in English only.
- Submitted abstracts should include unpublished data.
- Abstracts previously presented will not be accepted.
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- Summary of the results obtained.
- Statement on the conclusion reached.

FREE COMMUNICATIONS

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ORAL PRESENTATIONS

ID 12 MORTALITY ASSOCIATED RISK FACTORS AMONG INTENSIVE CARE UNIT (ICU) PATIENTS REQUIRING CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT)

Akita Yvonne Koh, Khoo Tien Meng, Jerry Liew Ee Siung

Department of Anaesthesia and Intensive Care, Hospital Queen Elizabeth, Sabah, Malaysia

ID 24 ICU SURVIVORS' AND CAREGIVERS' EXPERIENCES OF IN-PATIENT CARE: EXPLORATORY QUALITATIVE STUDY

Nur Nabila Qaisha Aswandi[1], Mior Mohamad Arif Mior Hasafi[1], Julia Patrick Engkasan[2], Jia Hui Ng[1], Rafidah Atan[1]

[1]Department of Anaesthesiology, Universiti Malaya, Kuala Lumpur, Malaysia
[2]Department of Rehabilitation Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

ID 30 HEAD-TO-HEAD COMPARISON OF JAFRON HA330 AND OXIRIS HAEMADSORPTION FILTERS: IMPACT ON VASOACTIVE-INOTROPIC SCORES AND BIOMARKER KINETICS IN SEPTIC SHOCK PATIENTS

Surrej Darshain Singh Sran[1], Mohd Basri Bin Mat Nor[1], Azrina Binti Md Ralib[1], Fai'iza Binti Abdullah[2], Mohd Hamzah Bin Mohd Nasir[3]

[1]Department of Anaesthesiology and Intensive Care, International Islamic University Malaysia, Kuantan, Malaysia
[2]Kulliyah of Medicine, International Islamic University Malaysia, Kuantan, Malaysia
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ID 44 THE HARMONY PROJECT: IMPROVING OPERATING ROOM TO PAEDIATRIC INTENSIVE CARE UNIT (PICU) HANDOVER - PHASE 2 REPORT

Kevin Ng[1], Yun Shan Chee[2], Soo Lin Chuah[3], Nur Syairah Ishak[1], Hasnita Mohd Tarik[1], Chin Seng Gan[3]

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ID 12

MORTALITY ASSOCIATED RISK FACTORS AMONG INTENSIVE CARE UNIT (ICU) PATIENTS REQUIRING CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT)

Akita Yvonne Koh*, *Khoo Tien Meng*, *Jerry Liew Ee Siung
Department of Anaesthesia and Intensive Care, Hospital Queen Elizabeth, Sabah, Malaysia

OBJECTIVES

To assess clinical outcomes of Acute Kidney Injury (AKI) patients on CRRT in the ICU, estimate in-hospital mortality rates, and investigate mortality-related risk factors among ICU patients who had undergone CRRT.

METHOD

A retrospective cohort analysis of 253 patients who underwent CRRT in ICU Hospital Queen Elizabeth between January 2021 and January 2024.We compared baseline characteristics of in-hospital survivors and non-survivors in this patient cohort. A subgroup analysis was done to further identify mortality predictors between in-hospital survivors and non-survivors.

RESULTS

The in-hospital mortality rate was 61.7%. When we divided these individuals into two groups (survivors and non-survivors), there was no significant difference in gender or comorbidities. The non-survivors had a greater mean age (54.95±15.04) than the survivor group (48.08±14.64). In terms of clinical conditions, non-survivors had a higher proportion of arrhythmias, cardiogenic shock, acute coronary syndrome (ACS), and acute respiratory distress syndrome (ARDS). Interestingly, fluid overload was shown to be more prevalent in the survivor group. Meanwhile, the median lactate level was significantly higher in the non-survivor group. Multivariate logistic regression analysis further revealed ARDS, higher APACHE II score significantly increase risk of mortality with odds ratio (OR) 4.17, 95% confidence interval (CI) 1.24-4.04, P=0.021, and OR 1.50,95% CI (1.34-1.68), p<0.001 respectively.

CONCLUSION

We found a high in-hospital mortality rate following CRRT initiation. We also observed several mortality associated risk factors in patients undergoing CRRT. Fluid overload as an indicator of CRRT appears to be a better predictor of survival in patients receiving CRRT. Although these factors may not be used to determine CRRT initiation, they may still be useful in predicting mortality outcomes despite ongoing active CRRT treatment.

ID 24

ICU SURVIVORS' AND CAREGIVERS' EXPERIENCES OF IN-PATIENT CARE: EXPLORATORY QUALITATIVE STUDY

Nur Nabila Qaisha Aswandi[1], Mior Mohamad Arif Mior Hasafi[1], Julia Patrick Engkasan[2], Jia Hui Ng[1], Rafidah Atan[1]

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[2]Department of Rehabilitation Medicine, Universiti Malaya, Kuala Lumpur, Malaysia

OBJECTIVES

To explore patients' and caregivers' experiences throughout ICU admission to hospital discharge to identify areas for improvement.

METHODS

This was a qualitative study conducted at the University Malaya Medical Centre (UMMC) Post-intensive Care Clinic from June 2023 until March 2024. Face-to-face interviews were conducted using a semi-structured questionnaire involving ICU survivors and their caregivers. The interviews were transcribed verbatim and analysed using thematic analysis (Braun and Clark).

RESULTS

A total of 12 patients and 12 caregivers were interviewed. Two main themes emerged: recognition of potential sources of discomfort and intensive care service requirements. The findings underscored the importance of appropriate pain management and enhanced communication between healthcare providers and caregivers. Immobility and physical restraints were the other reasons of physical discomfort. In addition, noises from ventilator alarms, interruptions by staff, and having bright lighting had caused sleep disturbances to the patients at night. ICU admission can also cause significant psychological impacts on patients and their caregivers.

CONCLUSION

Exploring first-hand experiences from patients and caregivers regarding ICU care is beneficial in establishing patient and family-centred ICU services. We recommend emphasizing adequate analgesia for patients during daily rounds. The need for physical restraints should be based on local protocols and of patients' best interest. Patient's condition should be updated daily to the primary caregiver to reduce miscommunication. Minimising late-night procedures and using acoustic earplugs may mitigate disruptive environmental factors that potentially disturb sleep. Religion and spiritual support may serve as protective factors against adverse psychological outcomes including anxiety, fear, and depression. Other methods such as ICU support groups and counselling sessions may be equally useful.

ID 30

HEAD-TO-HEAD COMPARISON OF JAFRON HA330 AND OXIRIS HAEMADSORPTION FILTERS: IMPACT ON VASOACTIVE-INOTROPIC SCORES AND BIOMARKER KINETICS IN SEPTIC SHOCK PATIENTS

Surrej Darshain Singh Sran[1], Mohd Basri Bin Mat Nor[1], Azrina Binti Md Ralib[1], Fai'iza Binti Abdullah[2], Mohd Hamzah Bin Mohd Nasir[3]

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OBJECTIVES

To compare the efficacy of Jafron HA330 and Oxiris haemoadsorption in septic shock patients by evaluating their impact on vasoactive-inotropic scores (VIS) and biomarker kinetics.

METHODS

This prospective, randomized study included 40 septic shock patients equally divided between Jafron HA330 and Oxiris haemadsorption filter groups. VIS was calculated at 0, 12, 24, and 48 hours. Biomarkers (pro-inflammatory IL-6, anti-inflammatory IL-10, procalcitonin) were measured pre- and post-treatment. Hemodynamic parameters and SOFA scores were also assessed.

RESULTS

Both groups showed significant reductions in VIS (Jafron: 20.80 to 0.00, Oxiris: 24.00 to 3.00; $p<0.001$) at 48 hours. The Jafron group demonstrated greater IL-6 reduction (-64.6% vs -25.6%), while the Oxiris group showed more pronounced procalcitonin decrease (-53.7% vs -38.6%). Both filters significantly lowered IL-10 levels (Jafron: -50.3%, Oxiris: -41.0%; $p<0.05$). SOFA scores decreased significantly in both groups (Jafron: 9.0 to 6.0, Oxiris: 10.0 to 8.0; $p<0.001$).

CONCLUSION

Both Jafron HA330 and Oxiris haemadsorption filters effectively reduced VIS and modulated inflammatory biomarkers in septic shock patients. The Jafron filter showed superior clearance of pro-inflammatory IL-6, while Oxiris demonstrated better procalcitonin removal. Both filters exhibited comparable efficacy in reducing anti-inflammatory IL-10. These findings provide insights into the specific strengths of each filter, potentially guiding personalized treatment strategies in septic shock management.

ID 44

THE HARMONY PROJECT: IMPROVING OPERATING ROOM TO PAEDIATRIC INTENSIVE CARE UNIT (PICU) HANDOVER - PHASE 2 REPORT

Kevin Ng[1], Yun Shan Chee[2], Soo Lin Chuah[3], Nur Syairah Ishak[1], Hasnita Mohd Tarik[1], Chin Seng Gan[3]
[1]Anaesthesiology, Universiti Malaya, Kuala Lumpur, Malaysia
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OBJECTIVES

The transfer of a patient from the Paediatric Operating Theatre to PICU is a critical transition point in the continuity of care. The aim of this quality improvement (QI) project was to audit the current handover process before designing and implementing a structured handover proforma to improve communication between the teams.

METHODS

This QI project was divided into 3 phases, where phase 1 and 2 were focused on determining the satisfaction with the current post-operative handover process and the designing of the structured handover proforma. The satisfaction was studied using the Pediatric Expedited Transfer Provider Satisfaction Survey (PETPSS).

RESULTS

110 respondents answered the PETPSS, 74 from the Anaesthesiology team and 36 from the Paediatric team. The Anaesthesiology team were more satisfied with the overall handover process (74.4% versus 38.9%, $p<0.001$) and the communications done during the handover (77.1% versus 41.7%, $p=0.001$). With regards to handover safety, 83.8% of the Anaesthesiology team were satisfied, while only 58.3% of the Paediatric team felt similarly ($p=0.003$). A proposed handover proforma was circulated and feedback was received from the respondents on the desired handover information. A handover proforma was created and will be implemented in phase 3 followed by a re-audit.

CONCLUSION

There was a significant difference observed in the satisfaction between the teams with regards to the handover process. This shows the need for the implementation of a standardized handover proforma to address this gap and improve the satisfaction of the receiving team with the aim to improve patient care.

POSTER PRESENTATIONS

ID 02 PROCALCITONIN AS A PROGNOSTIC MARKER FOR HOSPITAL MORTALITY IN CRITICALLY ILL ELDERLY PATIENTS: A CASE-CONTROL STUDY

E Li L[1,2], Philip Rajan D[1], Wan Mohd Nazaruddin W H[2], Wan Fadzlina W M S[2]

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ID 09 UNMASKING THE SILENT THREAT: A RETROSPECTIVE ANALYSIS OF UNPLANNED EXTUBATION INCIDENTS IN THE INTENSIVE CARE UNIT, SARAWAK GENERAL HOSPITAL

Farah R[1], Hidayatur Afifah S[2], Marvina T[3], Jamaidah J[2], Teo Shu Ching[2]

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[3]Unit Kualiti, Sarawak General Hospital, Sarawak, Malaysia

ID 14 PAEDIATRIC ACUTE LIVER FAILURE IN PICU, UNIVERSITI MALAYA MEDICAL CENTRE: A REVIEW

Claudia S F Lim, S L Chuah, Y S Chee, Michelle S Y Low, C S Gan

Paediatric ICU, Department of Paediatrics, Universiti Malaya Medical Centre, Kuala Lumpur, Malaysia

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Mei Ling Tan, Pravin Sugunan

Pediatric Intensive Care Unit, Hospital Raja Permaisuri Bainun, Ipoh, Perak, Malaysia

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Diatrie Anindyajathi[1], Anna Rozaliyani[2], Rismala Dewi[2]

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[2]Department of Microbiology, Cipto Mangunkusumo Hospital, Jakarta, Indonesia
[3]Department of Child Health, Cipto Mangunkusumo Hospital, Jakarta, Indonesia

ID 32 THE EMPIRICAL USE OF ANTIFUNGAL IN NON-NEUTROPENIC CRITICAL CARE PATIENTS: ASSOCIATED FACTORS AND TREATMENT OUTCOME

Vishaaliny Permalu[1,2], Mohd Makmor Bakry[2], Aliza Alias[3], Yeh Han Poh[1]

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[3]Hospital Shah Alam, Selangor, Malaysia

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ID 47 A CASE REPORT: A SUCCESSFUL AND EFFECTIVE INTERVENTION FOR TANDEM CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT) AND THERAPEUTIC PLASMA EXCHANGE (TPE) ON AN INFANT WITH ACUTE LIVER FAILURE

Nur Fatin Amirah Razak, Tengku Ashikin Tengku Ahmad, Mira Edura Mohammad, Kumudah a/p Murugasu, Hasimah Zainol, Chuah Soo Lin

Department of Nursing, Universiti Malaya Medical Centre, Kuala Lumpur, Malaysia

ID 50 MULTILINGUAL EMPATHIC 30 SCORE AS A TOOL FOR PARENTAL SATISFACTION IN A FAMILY CENTERED CARE PICU: A PILOT STUDY

Tee May Fung[1], Farawaty Md Jelan[1], Amy Ng[1], Goh Yea-Ning[1], Shaidatul Shahfinaaz Tasmimuddin[2], Anis Siham Zainal Abidin[1]

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ID 03 EXCHANGE TRANSFUSION IN CRITICAL PERTUSSIS: A SINGLE-CENTRE EXPERIENCE

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ID 04 A CASE REPORT OF COMPLETE TRACHEAL RING IN ADULT, COMPLICATED WITH POST-INTUBATION TRACHEAL STENOSIS

Alexander Soo Qwan Yew, Wong Phei Yi, Fong Kean Khang

Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia

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Syakila Izrah binti Dato' Amir Firdaus[1], Afiqah binti Mohd Yusoff[2], Fauziah binti Ahmad[2]

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ID 06 A MIRACULOUS TURNAROUND: LEVOSIMENDAN ROLE IN STABILIZING A HEMODYNAMICALLY UNSTABLE PREGNANT CARDIOMYOPATHIC PATIENT

Noor Farra Hanum Sobari, Nurul Husna Azizan, Asmah Zainudin, Nazuha Mohd Najid

Anesthesiology and Critical Care Department, Hospital Sultanah Bahiyah, Kedah, Malaysia

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Nurbayani I M, Nur Aisyah K, Zayuah M S

Department of Anaesthesia and Critical Care, Hospital Sultan Haji Ahmad Shah, Temerloh, Pahang, Malaysia

ID 08 **RHINO-ORBITAL-CEREBRAL MUCORMYCOSIS IN A DENGUE CHILD, A RARE AND FATAL OCCURRENCE**

Lydia Toon, Louise Ngu, Nisah Abdullah

Pediatric Department, Hospital Sultanah Aminah Johor Bahru, Johor, Malaysia

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Ang Y E, Zayuah M S, Nurbayani I M

Department of Anesthesiology & ICU, Hospital Sultan Haji Ahmad Shah, Temerloh, Pahang, Malaysia

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Abdul Muhaimin bin Hamzah[1], Gaithridevi A/P V Singam[2]

[1]Anaesthesia and Intensive Care, Hospital Pulau Pinang, Penang, Malaysia
[2]Consultant Intensivist, Hospital Pulau Pinang, Penang, Malaysia

ID 16 **SEVERE DENGUE WITH RHABDOMYOLYSIS-INDUCED ACUTE KIDNEY INJURY: A CASE REPORT**

Yeoh Wei Yen, Gaithridevi A/P V Singam

Department of Anaesthesiology and Critical Care, Hospital Pulau Pinang, Penang, Malaysia

ID 17 **COMBINATION OF BLOOD PURIFICATION TECHNIQUES IN DENGUE SHOCK SYNDROME WITH CYTOKINE STORM**

Wong Phei Yi, Alexander Soo, Fong Kean Khang

Anaesthesiology and Intensive Care Unit, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia

ID 19 **RARE CASE OF HUMAN RHINOVIRUS MYOCARDITIS SUCCESSFULLY TREATED WITH HIGH DOSE STEROIDS AND IVIG - A PAEDIATRIC CASE REPORT**

Nina Nadia Nawi, Louise Ngu, Nisah Abdullah

Pediatric Department, Hospital Sultanah Aminah Johor Bahru, Johor, Malaysia

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Zayyid Mokhtar, Choo Hui Shuet, Ng Yew Ewe, Zuhrah Zakaria, Norly Ismail
Cardiothoracic Anaesthesiology and Perfusion Unit, Hospital Sultan Idris Shah Serdang, Selangor, Malaysia

ID 23 **BEHIND THE SCENES OF PICU DELIRIUM: CASE STUDY THAT HIGHLIGHTS THE NEED FOR AWARENESS!**

Wai Kuan Lim, Aznor Fadly Azim
Department of Paediatric, Hospital Tunku Azizah, Kuala Lumpur, Malaysia

ID 25 **WHEN INSONATION IS CRITICAL**

Ng Shin Ann, Ahmad Farhan
Anaesthesiology and Critical Care, Hospital Putrajaya, Putrajaya, Malaysia

ID 26 **MYOCARDITIS AS A FORGGOTEN COMPLICATION OF MUMPS**

Ronald Chandra, Frida Wulandari
Department of Pediatric, Siti Fatimah General Hospital, Palembang, South Sumatera, Indonesia

ID 27 **DILEMMA IN MANAGING SEVERE DENGUE COMPLICATED BY DIFFUSE ALVEOLAR HEMORRHAGE, ACUTE PULMONARY EDEMA, AND PERIMYOCARDITIS IN A RESOURCE-LIMITED CENTRE: A CASE REPORT**

Nurul Nadirah Norida[1], Nurafza Ahmad Hisham[2], Nazatul Shahnaz Mohd Nazri[1]
[1]Department of Anaesthesiology and Critical Care, Hospital Kemaman, Kemaman, Terengganu, Malaysia
[2]Department of Anaesthesiology, University Teknologi MARA, Sungai Buloh, Selangor, Malaysia

ID 28 **A RARE CASE OF DRUG-INDUCED METHAEMOGLOBINEMIA SECONDARY TO LEPROSY TREATMENT**

Zainuddi N H, Said @ Ahmad N A, Azham S N, Abd Malek M A F, Abdullah M Z

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Desti Handayani, Indra Saputra, Silvia Triratna
Division of Paediatric Emergency Medicine, Department of Child Health, Faculty of Medicine Universitas Sriwijaya/Mohammad Hoesin General Hospital, Palembang, Indonesia

POSTER PRESENTATIONS

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N F Mujiman, T A Samudra, N L Saad, S L Zawawi, P W Chia
Anaesthesiology and Critical Care, Hospital Tawau, Sabah, Malaysia

ID 34 SYSTEMIC DRUG AND VITILIGO: A RHABDOMYOLYSIS STORY

Yusr Anwar[1], Al-Muriesh Maher[2], Thabet Dunia[1], Al-Dhulaimi Elham[3], Alemad Moatasim[3]
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[2]Department of Dermatology, University of Medicine and Applied Sciences, Sana'a Republic of Yemen
[3]Department of Nephrology, University of Science and Technology Hospital, Sana'a Republic of Yemen

ID 35 CO-OCCURANCE OF INFECTIVE ENDOCARDITIS ON MITRAL VALVE VEGETATION AND CHRONIC SEVERE HYPERTENSIVE AORTIC REGURGITATION

Syahirah Atikah Shaidi, Nur Ainina Zulkeplee
Anaesthesiology and Critical Care, Hospital Kemaman, Kemaman, Terengganu, Malaysia

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Z Zulkifli, M A A Majid, A H A Rozali
Hospital Kajang, Selangor, Malaysia

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Z Zulkifli, Z Adril, N A Azhar
Hospital Kajang, Selangor, Malaysia

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Yasini Ramanya,Low Xiu Hui, Charmaine Anne Augustine, Premela Naidu Sitaram
Intensive Care Unit, Subang Jaya Medical Centre, Subang Jaya, Selangor, Malaysia

ID 39 A CASE OF PERSISTENT SEVERE HYPOKALAEMIA POSSIBLY INDUCED BY CEFTRIAXONE

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[2]Department of Anaesthesiology and Intensive Care, Sultanah Bahiyah Hospital, Alor Setar, Kedah, Malaysia

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ID 02

PROCALCITONIN AS A PROGNOSTIC MARKER FOR HOSPITAL MORTALITY IN CRITICALLY ILL ELDERLY PATIENTS: A CASE-CONTROL STUDY

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OBJECTIVES

Managing critically ill elderly patients poses unique challenges due to their physiological characteristics and multimorbidity. Amid conflicting evidence, this study aimed to evaluate procalcitonin as a prognostic marker for hospital mortality in critically ill elderly patients.

METHODS

This case-control study included patients aged 60 years and above admitted to critical care areas with procalcitonin results from year 2018 to 2022. Cases were critically ill elderly patients who did not survive the hospital admission, while controls were those who survived. Medical records were reviewed for data collection, with an estimated sample size of 114 in a 1:1 ratio. Binary logistic regression and ROC analysis were performed for analysis.

RESULTS

A total of 114 elderly patients were included, with a median age of 67.5 years (IQR:9.3) and 57.9% male. Most were admitted for pulmonary disease (25.4%). Median baseline SOFA and APACHE II scores were 7.0 (IQR:6.0) and 15.0 (IQR:12.0), respectively. The median procalcitonin level was 5.1 (IQR:22.9). Procalcitonin was significantly different between survivors [3.1 (IQR:15.1)] and non-survivors [7.4 (IQR:30.5)] (P=0.032). However, regression analysis showed that procalcitonin was not significantly associated with hospital mortality when controlling for sociodemographic and clinical variables (aOR: 0.99; 95% CI: 0.949-1.040; P=0.773). The AUC-ROC for procalcitonin predicting mortality was 0.62 (95% CI: 0.521-0.706; P=0.026) with 77.19% sensitivity and 42.11% specificity.

CONCLUSION

Single-point procalcitonin was not a strong predictor of hospital mortality among critically ill elderly patients. Further research is needed to explore prognostic value of periodic procalcitonin measurements.

ID 09

UNMASKING THE SILENT THREAT: A RETROSPECTIVE ANALYSIS OF UNPLANNED EXTUBATION INCIDENTS IN THE INTENSIVE CARE UNIT, SARAWAK GENERAL HOSPITAL

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INTRODUCTION/OBJECTIVES

Unplanned extubation (UE) in intensive care units (ICU) presents significant patient safety risks, including increased morbidity and healthcare costs. This study evaluates the incidence, contributing factors, and outcomes of UE at Sarawak General Hospital, focusing on the roles of physical restraints, staffing, and sedation practices.

METHODOLOGY

A retrospective cohort design was utilized in 1336 mechanically ventilated ICU patients who experienced UE throughout 2023. Data were collected on patient demographics and clinical interventions, including physical restraints, nursing availability, sedation protocols and the timing of spontaneous breathing trials (SBT).

RESULTS

There were 14 UE incidents predominantly in male (78.6%), yielding an incidence rate of approximately 10.48 per 1000 patients. Physical restraints were used in 57.1% of cases, and half occurred without ICU-trained nurses present. Four cases took place in isolated rooms, potentially affecting monitoring. Infusion Fentanyl was used as sedation in all cases, Propofol in nine cases, and multiple sedatives in four cases, typically under complex clinical conditions like high ventilator settings or polytrauma. SBTs were delayed in seven cases, complicating recovery efforts.

DISCUSSION AND CONCLUSION

This study shows the significant influence of sedation management and monitoring strategies within the ICU, particularly under conditions of nursing shortages and within isolated patient settings. The delays in SBT reveal critical shortcomings in the existing weaning process. Effective strategies to mitigate UE in ICUs include stringent monitoring of sedation levels, adequate staffing requirements and restraint use, tailored to individual patient needs to enhance safety and aim at improving care quality in critical care settings.

Keywords

Unplanned Extubation, Intensive Care Unit, Patient Safety, Sedation Practices, Spontaneous Breathing Trial

ID 14

PAEDIATRIC ACUTE LIVER FAILURE IN PICU, UNIVERSITI MALAYA MEDICAL CENTRE: A REVIEW

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INTRODUCTION

The management of PALF has significantly improved, resulting in markedly better outcomes over the years. The mortality rate has reduced from 72% to 44% with remarkable clinical improvement in the era following the introduction of liver transplantation. While spontaneous recovery can occur in pediatric ALF patients, timely medical intervention remains crucial to ensure the best possible prognosis and recovery.

OBJECTIVES

To review the demographic distribution, complications and outcome of PALF in PICU.

METHODS

This is a retrospective descriptive study of paediatric ALF patients admitted to PICU UMMC from 2020 to January 2024.

RESULTS

17 patients were admitted during the period, with the highest admission in 2023. 58.8% (n=10) of the patients were boys, and the etiology was indeterminate in 47% (n=8). The patients admitted ranged from 14 days to 17 years old, with a calculated median age of 2 years and 9 months. Of the 17 patients, multiorgan failure was observed in 88% (n=15), and hepatic encephalopathy was present in a similar proportion of 76.4% (n=13). Major bleeding was seen 53% (n=9). The mean admission days were 22.5 days.

CRRT and TPE were performed in 52.9% (n=9) of the patients. Liver transplantation was performed for about 10% (n=2) of these patients. The mortality rate among neonates was higher 67% as compared to paediatric age group 45% with an overall mortality rate of 59% (n=9).

CONCLUSION

The prompt identification of the causes of paediatric ALF is of the utmost importance in predicting and improving the outcome. Neonatal acute liver failure (NALF) represents a significant challenge and is associated with a high mortality rate.

ID 18

EPIDEMIOLOGY, MORBIDITIES AND SURVIVAL OUTCOMES OF CHILDREN WITH TRAUMATIC BRAIN INJURY ADMITTED TO PICU: A SINGLE-CENTRE EXPERIENCE

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OBJECTIVES
To describe the epidemiological characteristics, morbidities and survival outcomes of children with traumatic brain injury (TBI) managed in our paediatric intensive care unit (PICU) over a 4-year period.

METHODS
This is a single-centre, retrospective study which reviewed all TBI patients admitted to our PICU from January 2020 to December 2023. Patients were identified from PICU admission records. Epidemiologic and clinical data, including mechanism of injury, requirement for ventilatory and inotropic support, surgical intervention, brain imaging findings and mortality, were collected retrospectively from the electronic health records.

RESULTS
A total of 117 pediatric TBI patients were identified, with boys being the predominant gender. Road traffic accidents (RTA's) were the commonest mechanism of injury. Almost all RTA victims did not use helmets or safety restraints. The majority of patients underwent surgical intervention, which was associated with an increased PICU length of stay and need for ventilatory support. Only one patient underwent intracranial pressure monitoring. The overall mortality rate was low.

CONCLUSION
RTA's were a significant cause of paediatric TBI in this study. Public health measures aimed at increasing use of child safety restraints and helmets could potentially reduce severity of TBI. In resource-limited settings, PICU management of paediatric TBI can be associated with good survival outcomes, despite lack of intracranial pressure monitoring.

ID 07

MURSINAH SCORE AND LEON CANDIDA SCORE AS DIAGNOSTIC SCORES FOR CANDIDEMIA IN CRITICALLY ILL CHILDREN

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OBJECTIVES

Candidemia is an invasive fungal disease with high morbidity and mortality rate. The process of diagnosing candidemia is difficult due to the unspecific clinical presentation and diagnostic methods available have some limitations. Candida score has been widely used as a diagnostic score for candidemia, but its application is limited due to the need to find multifocal colonization. Mursinah score is an alternative, low cost, and simple diagnostic score consisting of length of stay, sepsis and surgical procedure. This study is aimed to establish the performance of Mursinah score and candida score from Leon as candidemia diagnostic scores in critically ill children.

METHODS

This study is a cross sectional study done on critically ill chidren age 1 month - 18 years hospitalized in Cipto Mangunkusumo Hospital (RSCM). Blood cultures for candida were used as gold standard, and cultures from oral and anal swab were used to find multifocal colonization. Risk factors and clinical profiles of the subjects were analyzed to establish the performance of Mursinah and candida score from Leon.

RESULTS

The prevalence of candidemia in this study was 6% with species found *C. krusei*, *C. albicans*, dan *C. dubliniensis*. Clinical and laboratory profile that were consistent in the three subjects with candidemia are instable thermoregulation, invasive devices, broad spectrum antibiotics, lymphopenia and positive candida culture in the oral cavity. Mursinah score had a sensitivity of 0 - 33.3% and specificity of 72.3 - 97.9% depending greatly on the sepsis definition used. Candida score had a sensitivity of 33.3% and specificity of 63.8 - 83%.

CONCLUSION

Mursinah score cannot be applied in critically ill children because of its great dependency on the definition of sepsis. Candida score from Leon with multifocal colonization has a high specificity rate with strong negative predictive value making it a viable option for screening critically ill children who may require antifungal therapy.

ID 32

THE EMPIRICAL USE OF ANTIFUNGAL IN NON-NEUTROPENIC CRITICAL CARE PATIENTS: ASSOCIATED FACTORS AND TREATMENT OUTCOME

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INTRODUCTION

Despite the lack of significant survival benefit, empirical antifungal treatment is often prolonged among patients in critical care units, leading to potential drug toxicity, emergence of resistant strains, and increased healthcare costs.

OBJECTIVE

This study aims to identify factors associated with prolonged empirical antifungal use and all-cause in-hospital mortality among critical care patients.

METHODS

A retrospective cross-sectional study was conducted among patients admitted to the critical care units from October 2021 and February 2023. Patients prescribed with intravenous empirical antifungal were included. Major abdominal surgery, total parenteral nutrition, candida colonization, broad-spectrum antibiotics use, and length of critical care stay are among the factors analysed. Multivariable logistic regression was used to identify factors associated with the duration of antifungal treatment, while Chi-square test was used to analyse all-cause in-hospital mortality.

RESULTS

A total of 102 patients were included in this study. The median length of critical care unit stay was 15 days (IQR 8, 21). The most commonly used antifungal was Fluconazole (79.4%). Of the patients, 64 (62.7%) received prolonged empirical antifungal treatment. Candida colonization was independently associated with prolonged empirical antifungal use (AOR = 3.125; 95% CI = 1.050 - 9.301; p = 0.041). All-cause in-hospital mortality was higher among patients who received prolonged antifungal treatment (p = 0.026).

CONCLUSION

Prolonged empirical antifungal use was prevalent among the studied patients with candida colonization emerging as a significant predictive factor. However, despite of prolonged antifungal use, higher mortality rate was observed among these patients, suggesting no survival benefit from its prolonged use.

Keywords

Prolonged empirical antifungal, critical care, Fluconazole, candida colonization, mortality

ID 47

A CASE REPORT: A SUCCESSFUL AND EFFECTIVE INTERVENTION FOR TANDEM CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT) AND THERAPEUTIC PLASMA EXCHANGE (TPE) ON AN INFANT WITH ACUTE LIVER FAILURE

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INTRODUCTION

It is evident that both CRRT and TPE procedures are vital in the management of acute liver failure, facilitating either the recovery process or the transition to a liver transplant. Nevertheless, it is difficult to perform two extracorporeal procedures on a paediatric patient, particularly in infants with a small body volume and restricted vascular access. This report details the successful application of tandem CRRT and TPE on a small infant with acute liver failure.

CASE

A 2-week-old female infant with a weight of 2.75 kg was diagnosed with acute liver failure with multiorgan dysfunction secondary to enterovirus infection. The patient has undergone tandem CRRT and TPE with completion of the process. Continuous renal replacement therapy (CRRT) was initially commenced for the indications of hyperammonemia, acute kidney injury, and fluid balance management. Subsequently, therapeutic plasma exchange (TPE) was performed in tandem (using the in-series method) with CRRT, with the same vascular catheter, for six cycles. The patient achieved the desired fluid balance management, reduction of ammonia levels, and reduction of inotropic support, as well as replacement of coagulation factors through TPE. Subsequently, however, the patient presented with an acute haemorrhage following liver biopsy and ultimately succumbed.

CONCLUSION

The performance of tandem CRRT and TPE in paediatric patients, particularly infants, can be effectively accomplished through the utilisation of a single vascular access point, facilitating the simultaneous execution of two extracorporeal procedures without compromising the efficacy of either.

ID 50

MULTILINGUAL EMPATHIC 30 SCORE AS A TOOL FOR PARENTAL SATISFACTION IN A FAMILY CENTERED CARE PICU: A PILOT STUDY

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OBJECTIVES

To determine the parental satisfaction of family centred care in PICU Sunway Medical Centre by using the validated multilingual EMPATHIC-30 questionnaire

METHODS

A prospective cross sectional cohort study involving all children admitted to PICU Sunway Medical Centre from December 2023 to June 2024. EMPATHIC-30 score questionnaire in multilingual format (English, Malay, Tamil, Mandarin) either via hardcopy or QR code online form were distributed at the end of PICU stay to the accompanying parent/caretaker.

RESULTS

A total of 257 admissions with 125 respondents (48.6%). Five domains tested were on information, care and treatment, organisation, parental participation and professional attitude. The internal consistency reliability was beyond satisfactory at Cronbach Alpha 0.97. There was no significant difference between sedated/non-sedated patients, planned/unplanned or medical/surgery admission, background chronic illness, patients' age or length of stay. Almost all (90%) will come back to this PICU if in a similar situation and almost 100% would recommend this PICU to anyone facing a similar situation.

CONCLUSION

EMPATHIC-30 questionnaire in multilingual format is a useful tool to measure parental satisfaction in our diverse multicultural/ethnicity Malaysian PICU.

ID 03

EXCHANGE TRANSFUSION IN CRITICAL PERTUSSIS: A SINGLE-CENTRE EXPERIENCE

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BACKGROUND

Pertussis is a highly contagious respiratory infection caused by the Bordetella pertussis bacterium. Pertussis can cause severe disease in infants, and is an important cause of critical illness and mortality in this age group, with an estimated 89,000 deaths worldwide in 2018 (WHO data). Unvaccinated children are at increased risk of infection. Critical pertussis is characterized by refractory hypoxemia, cardiogenic shock, pulmonary hypertension and multiorgan failure. Leucocytosis is an independent predictor of mortality. Exchange transfusion has been reported to improve survival in infants with critical pertussis.

CASE PRESENTATION

We present our single-centre experience of three children with critical pertussis who underwent exchange transfusion in our tertiary PICU. All three children tested positive for Bordetella Pertussis Nasopharyngeal aspirate PCR. The first two patients were infants aged one month, who presented with prolonged bouts of cough associated with cyanosis and apnoea. The third patient was a 1-year-old unvaccinated child with underlying nephrotic syndrome who had a similar presentation. All three children developed respiratory failure requiring high ventilator settings, associated with severe leucocytosis (range 51.8-131 $x10^3$/L). Following exchange transfusion, a marked reduction in leucocytosis was seen in all patients (range 21.5-40 $x10^3$/L). Two patients survived to hospital discharge, while one infant succumbed due to refractory pulmonary hypertension and hypoxaemia.

CONCLUSION

Exchange transfusion could be considered to improve survival and outcomes in infants with critical pertussis. National vaccination programs for pregnant women could help prevent disease in infants too young to be vaccinated.

ID 04

A CASE REPORT OF COMPLETE TRACHEAL RING IN ADULT, COMPLICATED WITH POST-INTUBATION TRACHEAL STENOSIS

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BACKGROUND

Complete tracheal ring is a rare, isolated tracheal or tracheobronchial anomaly resulting from abnormal cartilage growth, forming a complete ring and often causing airway stenosis. It is most commonly diagnosed during chilhood due to respiratory distress. Cases of complete tracheal ring in adult are rare, and are most commonly associated with difficult intubation.

CASE PRESENTATION

A 53-year-old male was admitted to our ICU after a motor-vehicle accident. He sustained a C5/C6 spinal cord injury with right pneumothorax. He was intubated due to respiratory distress. The intubation process was documented as difficult with multiple attempts, requiring smaller size of endotracheal tube. After his spine surgery, he required tracheostomy in view of prolonged ventilation. During tracheostomy, a telebronchoscopy was done which revealed a complete tracheal ring with stenosis.

Throughout the weaning process, he had multiple episodes of desaturations due to airway obstruction. Bedside bronchoscopy showed granulation tissue around the tip of tracheostomy tube. He also suffered from nosocomial lung infection requiring antibiotic therapy. Flexible bronchoscopy showed a complete tracheal ring with stenosis seen 7cm from vocal cord with the narrowest part of 2.4mm. Serial circumferential cryodilatation and CRE balloon dilatation was done. He was decannulated and successfully weaned off oxygen, and was discharged home after 3 months in ICU.

Later during his follow up at clinic, he was well and refused further bronchoscopy and dilatation.

CONCLUSION

Our case highlights the unusual presentation of complete tracheal stenosis in an adult with post-intubation tracheal stenosis in a polytrauma patient. Multi-disciplinary discussions between cardiothoracic, respiratory and otorhinolaryngology teams were paramount in the treatment and management of this case.

ID 05

NAVIGATING HYPERTENSIVE CRISIS IN PATIENT ON STEROID THERAPY IN CRITICAL CARE: A CASE REPORT

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BACKGROUND

Systemic Lupus Erythematous (SLE) is a systemic autoimmune disease and has systemic features that can affect all organs. Steroid therapy is an essential treatment option in SLE involving the kidneys, other vital organs and central nervous system. However, high dose of steroid treatment could lead to hypocorticolism that would activate the RAAS on overdrive resulting in resistant hypertension that could be difficult to manage.

CASE PRESENTATION

A 44 year old woman with a 2-year history of SLE, presented with an acute flare in June 2024 with manifestation of cerebral lupus with hypertensive hypertensive emergency complicated with acute pulmonary oedema (APO). She is diagnosed with SLE since November 2022, under rheumatology follow up and started with long term high dose steroid. Her random serum cortisol prior to current admission in early June 2024 was 303 nmol/L. During this admission, she was further investigated for meningoencephalitis. CT brain showed unremarkable findings. MRA/MRI brain was done and depicted features of known SLE with progression of cerebral lupus. However, while treating for acute SLE flare and infection, patient had resist ant hypertension despite being on 3 classes of antihypertensives that resorted in her developing APO and required intubation. During her ICU admission she was started on 5 different classes of antihypertensives which consist of felodipine, prazosin, metoprolol, valsartan, spironolactone and intravenous infusions of labetalol and glyceryl trinitrate (GTN). Despite on multiple antihypertensives, her systolic blood pressure range was 170-200mmhg and diastolic range was 90-100mmhg. Her repeated serum cortisol level was 509.5 nmol/L. After further evaluation, her resistant hypertension may be associated with steroid therapy, hence steroid dose was reduced and she was started on plasma exchange for her SLE treatment. After completed 3 cycles of plasma exchange, we were able to wean off antihypertensive infusion therapy and her blood pressure is well controlled.

CONCLUSION

Hypertension is a known consequence of excess glucocorticoids, both naturally occurring and synthetic. The prevalence of hypertension is more than 30% among long term users of glucocorticoids. Hypertension in critical care is not uncommon and it is frequently due to reversible factors such as pain, agitation after discontinuation of anaesthetic drugs, discontinuation of antihypertensive drugs, urinary bladder distension, ICU procedures and related diseases. Steroids as a cause for hypertension is often overlooked. Hence, our case report is to highlight steroid to be among the early differential diagnosis of hypertension, not just a diagnosis of exclusion.

ID 06

A MIRACULOUS TURNAROUND: LEVOSIMENDAN ROLE IN STABILIZING A HEMODYNAMICALLY UNSTABLE PREGNANT CARDIOMYOPATHIC PATIENT

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BACKGROUND

Levosimendan, a novel calcium sensitizer, is revolutionizing the management of acute heart failure, particularly in intricate and high-risk cases. Its unique mechanism of action presents new possibilities for patients previously deemed untreatable.

CASE PRESENTATION

We present a compelling case of a 29-year-old pregnant woman with a history of illicit drug use, admitted with hyperemesis gravidarum and hyperthyroidism at 11 weeks gestation. Despite initial stabilization, she experienced sudden cardiac arrest with pulseless ventricular tachycardia, necessitating resuscitation efforts and transfer to a tertiary center for cardiology support. Echocardiography revealed severely impaired left ventricular function (ejection fraction 33%). In the intensive care unit, she had persistent hemodynamic instability requiring escalating inotropic support, with echocardiogram confirming profound myocardial dysfunction. Given the refractory nature of her condition, intravenous levosimendan was initiated, marking a critical turning point. This intervention led to improvement in cardiac function with dramatic stabilization of hemodynamic parameters shown on cardiac output monitoring. Subsequent termination of pregnancy, for maternal indications, further contributed to her clinical recovery. She was successfully weaned from mechanical ventilation and inotropic support, enabling discharge to obstetric close monitoring ward. Cardiac MRI performed later demonstrated substantial improvement in left ventricular systolic function (ejection fraction 43%).

CONCLUSION

This case underscores levosimendan's dual mechanism of action in enhancing myocardial contractility and reducing cardiac workload, thereby offering a viable therapeutic option in critically ill patients, including those with unique challenges such as pregnancy-related heart failure. Further exploration and dissemination of its clinical benefits are crucial for optimizing patient outcomes across diverse clinical settings.

ID 07

REFRACTORY MALIGNANT HYPERPYREXIA: HOW FAST SHOULD WE ACT?

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BACKGROUND

Life-threatening hyperpyrexia usually results in multiorgan failure and fatal outcome. Thus, refractory malignant hyperpyrexia with non-resolving sepsis/septic shock require urgent multidisciplinary interaction, aggressive evaluation and appropriate management.

CASE PRESENTATION

This is a case of an unfortunate young lady 33 years old with underlying diabetes melitus, who presented to our ICU with high grade fever and septic shock secondary to melioidosis complicated with multiple multiseptated liver abscess with concomitant DKA. Despite on IV Meropenem more than 48H patient still having persistent high grade skin temperature of 40-41°C, not responding to regular antipyretics. Differential diagnosis of malignant hyperthermia and neuroleptic malignant syndrome were ruled out. Active cooling was started; physical methods of cooling by placing ice packs, rapid infusion of cooled iv fluids were done. Burch wartofsky score was >65 and urgent thyroid function test came back as hyperthyroid (free T4 24.5pmol/L, TSH 0.018 IU/mL), for which she was treated as thyroid storm and started on Lugols's iodine, carbimazole and hydrocortisone. After 2 days of treatment, persistent hyperthermic with core body temperature of >41°C for which CVVH was commenced. Temperature gradually came down and normalized after CVVH. However patient's condition further deteriorated and worsening lactic acidosis despite CVVH and patient succumbed.

CONCLUSION

Management of malignant hyperpyrexia is a true challenge in critical care settings and associated with high mortality and morbidity. The resultant worsening multiorgan failure when core body temperature exceeds 40.5°C warrants prompt and aggressive treatment.

ID 08

RHINO-ORBITAL-CEREBRAL MUCORMYCOSIS IN A DENGUE CHILD, A RARE AND FATAL OCCURRENCE

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BACKGROUND

Rhino-orbital cerebral mucormycosis is an uncommon yet severe fungal infection in children, associated with high morbidity and mortality rates. We present a case of a 9-year-old boy with severe dengue fever and subsequent hemophagocytic lymphohistiocytosis, complicated by rhino-orbital cerebral mucormycosis.

CASE PRESENTATION

A previously healthy 9-year-old male presented on day 5 of illness with severe dengue fever complicated by decompensated shock, acute renal failure and hemophagocytic lymphohistiocytosis (H score of 188, AST: 1878, ALT: 8840, Ferritin: >29000). He received intravenous immunoglobulin and dexamethasone (0.15 mg/kg TDS for 5 days) and required renal replacement therapy during his intensive care unit stay. By day 14 of admission, he developed a decreased Glasgow Coma Scale score, and brain CT revealed an ill-defined hypodensity in the left frontal lobe. Clinical findings included left eye chemosis, proptosis, and an eschar over the hard palate, along with upper motor signs in all limbs. MRI of the brain showed left frontobasal blooming with associated edema and ischemia affecting gray and white matter. ENT evaluation identified pansinusitis with nasal septum perforation and exposed cartilage, leading to a diagnosis of rhino-orbital cerebral mucormycosis. Treatment with intravenous amphotericin B was initiated, and tissue culture confirmed growth of Rhizopus sp. and Candida albicans. Despite therapy, the patient experienced worsening intraparenchymal hemorrhage and hydrocephalus, ultimately resulting in death after one month of hospitalization.

CONCLUSION

Rhino-orbital cerebral mucormycosis in children is particularly fatal with extranasal involvement. Early treatment with amphotericin B is crucial for better outcomes, emphasizing the importance of prompt diagnosis. Delayed recognition worsens prognosis, highlighting the need for early suspicion and intervention.

ID 10

OCULAR AND CEREBRAL INVOLVEMENT IN MELIOIDOSIS

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BACKGROUND

Melioidosis, caused by Burkholderia pseudomallei, is prevalent in Southeast Asia and Northern Australia, primarily transmitted via contaminated soil or water. Ocular and neurological manifestations are rare, occurring in less than 1% of cases, with high mortality associated particularly with cerebral involvement.

CASE PRESENTATION

A case of a 51-year-old male oil palm worker, previously healthy, who developed fever, right eye vision blurring with discharge, and altered mental status. Examination revealed neck stiffness, sclera abscess and corneal defects, alongside systemic infection and newly diagnosed diabetes mellitus. Subsequent seizures and neurological deterioration led to ICU admission. Melioidosis was confirmed through positive both blood and corneal scrap culture for Burkholderia pseudomallei. Serial plain and contrast brain CT showed left fronto-parietal subdural collection effusion suggestive of cerebral melioidosis and stable subdural bleed posterior interhemispheric fissure. He was treated with intravenous Meropenem and Ciprofloxacin concurrent with topical vancomycin applied over the right eye and antiepileptic. However, despite extensive courses of antibiotics, the right eye deteriorated into panophthalmitis, leading to the patient undergoing evisceration and tarsorrhaphy of the affected eye to prevent further spread of infection. Postoperative recovery was uncomplicated. He was weaned well and discharged to the general ward for continuation of intravenous Meropenem, Ciprofloxacin followed by eradication with oral Bactrim.

CONCLUSION

Melioidosis has a high propensity for disseminated infection. Diabetes mellitus is one of the common risk factors concomitant with occupational exposure for developing melioidosis. Early diagnosis and aggressive management, including surgical intervention when indicated, are crucial in mitigating morbidity and mortality associated with this condition.

ID 15

MIRACLE FROM BED NO. 9: A CASE OF SURVIVAL POST MULTIPLE ELECTRICAL STORMS AND CARDIAC ARREST

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BACKGROUND

Evidence is scarce with regards to the relationship between the duration of VT/VF arrests and survival/ neurological outcome. Whereas the guidelines for termination of resuscitation for in-hospital cardiac arrest (IHCA) is mostly arbitrary and is dependent on many factors. This begs the question how long do we resuscitate patients especially with regards to IHCA with VT/VF? Our case highlights this issue.

CASE DESCRIPTION

56 year old gentleman with underlying schizophrenia, diabetes and hypertension was admitted to the intensive care unit for community acquired pneumoniae (CAP) complicated with acute myocardial infarction (AMI). He developed cardiac arrest necessitating cardiopulmonary arrest (CPR) for 10 minutes with a single round of defibrillation for ventricular fibrillation (VF) before return of spontaneous circulation (ROSC). Within 24 hours he developed another 3 episodes of VF arrest. Cardiology went in for PCI and stented the proximal left anterior descending (LAD) with a drug eluting stent (DES). Post stenting he developed a further 14 episodes of VF arrests with CPR totaling 90 minute duration.

After a repeated PCI showed no evidence of in-stent thrombosis a temporary pacemaker was inserted and the patient remained event free subsequently. His Glasgow Coma Scale (GCS) fully recovered with no evidence of ischemic injury on a computed tomography (CT) of his brain. He was subsequently extubated and discharged well from the ward.

CONCLUSION

Prompt detection, resuscitation and the subsequent management of VF arrests are key in ensuring survival to discharge with good neurological recovery.

ID 16

SEVERE DENGUE WITH RHABDOMYOLYSIS-INDUCED ACUTE KIDNEY INJURY: A CASE REPORT

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BACKGROUND

Rhabdomyolysis in dengue fever is neither classically described in textbook nor commonly seen in real life. We present a case of severe dengue with warning signs in compensated shock with rhabdomyolysis induced acute kidney injury.

CASE PRESENTATION

We report a case of 16-year-old Malay male patient with HBE trait and morbid obesity of BMI 44 kg/m^2, who presented with 3 days history or fever, vomiting, poor oral intake, dark colour urine, myalgia and muscle weakness. Upon presentation, he was clinically in the state of hypovolaemia with compensated shock, otherwise had no evidence of bleeding or plasma leakage. Dengue PCR confirmed the infection of DENV2 serotype. Blood parameters showed evidence of acute renal injury, transaminitis and severe rhabdomyolysis with staggering serum creatine kinase (CK) level of 1,364,520 IU/L. To our best of knowledge, this it highest CK level ever recorded in Dengue fever. He was hydrated with alkaline diuresis and had early continuous veno-venous haemodiafiltration (CVVHHf) commenced. This brought down the CK levels, however he had persistent oliguric acute kidney injury that required a total of 12 sessions of haemodialysis in the post dengue period. After 52 days of admission, he made a full recovery with regards to his renal function and was discharged home.

CONCLUSION

This case highlighted the importance of early detection and intervention of rhabdomyolysis in patients with dengue fever. While forced alkaline diuresis is the first line treatment of rhabdomyolysis, CVVHDf should be considered early, as overzealous fluid resuscitation might pose more harm in the critical and recovery phase of dengue fever.

ID 17

COMBINATION OF BLOOD PURIFICATION TECHNIQUES IN DENGUE SHOCK SYNDROME WITH CYTOKINE STORM

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BACKGROUND

Dengue shock syndrome is a subset of dengue virus infection, characterized by plasma leakage and haemorrhage. It is caused by exaggerated immune response towards dengue virus which then lead to excessive release of pro-inflammatory cytokines. Few studies have shown that dysregulation of the cytokines is highly correlated with the severity of dengue infection. One of the strategy to attenuate the hyperinflammatory response is by extracorporeal elimination of the endotoxins and blood borne pro-inflammatory mediators. In this case report, we describe the effects of blood purification using CRRT with oXiris haemofilter and plasma exchange on interleukin-6 level and the clinical outcome.

CASE PRESENTATION

59 years old male, diagnosed with dengue shock syndrome, day 4 of illness, in critical phase with plasma leakage and multiorgans involvement. Investigation showed picture of cytokine storm (ferritin > 40,000ng/ml, IL-6 7223pg/ml), worsening trend of liver function (ALT 9057U/L, AST 31863U/L, ammonia 916µmol/L) and kidney injury. Steroid therapy and NAC regime had been started along with CVVHDF using oXiris filter. Low volume plasma exchange was carried out in tandem with CVVHDF on the 2nd and 3rd day. There were signs of improvement clinically and biochemically, notably the IL-6, ferritin, liver enzymes, ammonia as well as inotropic support. Besides, we noticed the level of IL-6 reduced remarkably after changing new oXiris filter, then raised gradually again until the next change of filter. However, patient had DIVC with bleeding episode on day 4. He deteriorated rapidly and deceased on Day 5.

CONCLUSION

Early initiation of combined techniques of blood purification may be beneficial in patient with dengue shock syndrome with elevated pro-inflammatory mediators.

ID 19

RARE CASE OF HUMAN RHINOVIRUS MYOCARDITIS SUCCESSFULLY TREATED WITH HIGH DOSE STEROIDS AND IVIG - A PAEDIATRIC CASE REPORT

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BACKGROUND

Rhinovirus is a rare cause of myocarditis in children. We report a case of a 7-year-old girl with presenting with complete heart block and multiple malignant arrhythmias due to rhinovirus infection that was successfully treated with intravenous immunoglobulin (IVIG) and high dose steroid without neurological complications.

CASE PRESENTATION

A previously healthy 7-year-old girl presented with status epilepticus following a 2-day history of fever and presyncope. Cardiac monitoring revealed bradyarrhythmia with complete heart block and haemodynamic compromise. She was started on inotropic support with Adrenaline (up to 0.6 mcg/kg/min) and Isoprenaline (up to 0.05 mcg/kg/min). Urgent brain imaging ruled out an acute neurological event as the cause of the seizure. Echocardiography demonstrated impaired left ventricular function with an ejection fraction of 29%.The patient was initiated on transcutaneous pacing and transferred to a cardiac referral centre. During transfer, she experienced multiple malignant arrhythmias requiring chest compressions. Upon arrival, she required up to four inotropic agents (Adrenaline, Noradrenaline, Milrinone, and Isoprenaline). An urgent transvenous pacing wires were inserted. Her tracheal aspirate viral study was positive for human rhinovirus. She was treated with IVIG (1 g/kg/day for 2 days) and IV Methylprednisolone (30 mg/kg/day for 3 days). Her arrhythmias resolved by day 2, and she was extubated after 10 days. Cardiac MRI findings were consistent with perimyocarditis. She developed hypoactive delirium upon extubation but was discharged home 2 weeks later with normal cardiac function and no neurological sequelae.

CONCLUSION

Rhinovirus as a cause of myocarditis is exceptionally rare, especially in children. This case highlights the importance of considering this aetiology in paediatric patients presenting with severe cardiac symptoms. Early administration of IVIG and high-dose treatments can significantly improve outcomes, underscoring the need for prompt recognition and intervention in such uncommon cases.

ID 21

UTILIZATION AND MANAGEMENT OF EXTRACORPOREAL MEMBRANE OXYGENATION IN A PREGNANT LADY WITH TRACHEAL COMPRESSION SECONDARY TO MEDIASTINAL MASS, A CASE REPORT

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BACKGROUND

Anterior mediastinal masses can cause significant compression on the airway potentially leading to airway obstruction and respiratory collapse. Extracorporeal membrane oxygenation (ECMO) support can be utilized as life saving measure.

CASE PRESENTATION

A 27-years-old lady primigravida, at 27 weeks of gestation, presented with severe breathlessness and orthopnoea. A computed tomography of the chest discovered a large mediastinal mass with mediastinal vessels compression and significant airway narrowing at thoracic T2 to T3/T4 level. Awake veno-venous ECMO (VV-ECMO) support in sitting position was planned.

During the procedure, patient was kept calm using dexmedetomidine and remifentanil. Peripheral cannulations for VV-ECMO were done via open technique, with transthoracic echocardiography used to confirm the position of the tip of cannulas to prevent recirculation. Once VV-ECMO was initiated, flow was adjusted to maintain saturation of more than 90%, allowing the respiratory physicians to obtain endobronchial biopsies and metallic Java Stent to be deployed. She was then intubated.

Post procedure, her CXR showed bilateral lung congestion likely due to irrigation fluids used during airway stenting and as a result she was kept intubated for two days prior to weaning of ECMO. She then underwent cycles of chemotherapy and a change of metallic to silicone stent prior to extubation much later.

CONCLUSION

VV-ECMO can be used effectively as a rescue therapy in patients with critical airway narrowing secondary to mediastinal mass. The exponential increase in the usage of VV-ECMO worldwide for this reason or for respiratory failure in critical care medicine warrants the need for training, education and experience.

ID 23

BEHIND THE SCENES OF PICU DELIRIUM: CASE STUDY THAT HIGHLIGHTS THE NEED FOR AWARENESS!

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BACKGROUND

Paediatric delirium is a severe yet often under-recognised condition in the Paediatric Intensive Care Unit (PICU) that significantly impacts critically ill children. Characterised by acute disturbances in consciousness and cognition, delirium presents as fluctuating symptoms including confusion, agitation, hallucinations, and altered sleep-wake cycles. Often delirium goes undiagnosed and untreated due to its subtle presentation and overlap with other ICU-related conditions.

CASE PRESENTATION

We present two cases of delirium in paediatric ICU patients that successfully intervened using combination of atypical antipsychotics and dexmedetomidine.

CASE 1

A previously healthy, 10-year-old boy, experienced upper airway obstruction and erosive esophagus with gastritis following accidental ingestion of corrosive detergent. He was heavily sedated and muscle-relaxed due to severe injuries and was extubated 11 days later. Post extubation, he exhibited erratic behaviour with abnormal posturing and hydrophobia. The CAP-D score was 20 and treatment for delirium was initiated. He showed significant improvement with the use of atypical antipsychotics and dexmedetomidine.

CASE 2

a 12-year-old boy with tuberous sclerosis complex developed status epilepticus secondary to pneumonia, requiring cerebral protection. Despite minimal sedative use, he developed withdrawal symptoms and started on T. Lorazepam. However, he deteriorated to altered behaviour along with inappropriate speech. The CAP-D score was 16, and treatment of combination of dexmedetomidine and atypical antipsychotics was administered. His parents reported that he is back to his baseline behaviour following therapy.

CONCLUSION

Paediatric delirium poses significant morbidity and prolongs ICU stay. Prevention is the best approach; requiring good screening tools and a high index of suspicion for prompt diagnosis and intervention. Previously, this issue has been underemphasized, but regular delirium screening in the PICU can potentially improve patient outcomes.

ID 25

WHEN INSONATION IS CRITICAL

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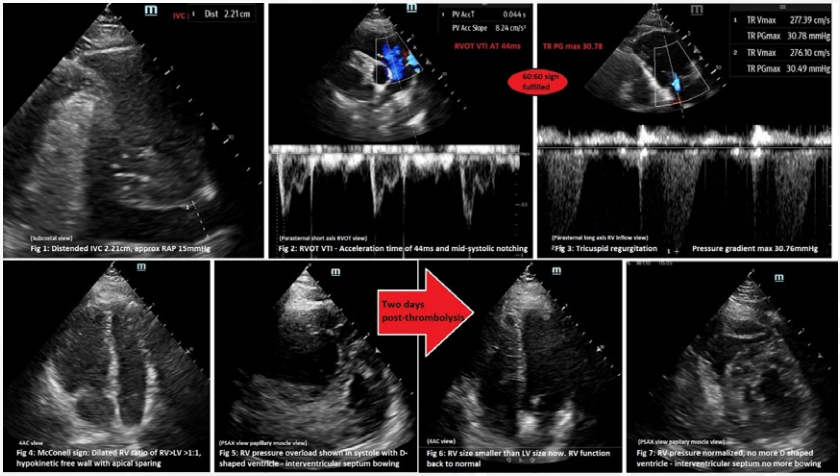
PROVING THE DIAGNOSIS

We present a 28-year old male who is physically active, and only has epilepsy on phenytoin due to post-traumatic brain injury four years prior. He developed status epilepticus at an eatery prior to admission and was placed under cerebral protection in ICU. Approximately 24 hours into admission, he rapidly deteriorated with **worsening gas exchange and hemodynamically instability, with increasing vasopressor support**.

He **did not have any significant risk factors to suggest VTE or PE** from Well's score, Geneva score or other scoring systems. Lower limb USS showed no signs of DVT, although reported that 70% of cases with PE had DVT. Other causes of shock had been ruled out[1].

His $PaCO_2$-$ETCO_2$ gradient was high; 90-47 = 43mmHg suggesting huge dead space ventilation. **With massive PE heavily suspected** despite the lack of risk factors, we stuck to the ESC 2019 algorithm, **using echocardiography when CTPA and other diagnostic tests are not feasible** as patient was not fit for transport. The recommendation was to find of RV overload/dysfunction. In view that **no individual parameter provided reliable insight to RV size and function, thus combination findings** were needed (Fig 1-5). We pushed for thrombolytic therapy after discussion with the cardiology team. Patient received IV Alteplase the same day. Two days later, a repeat echocardiography was done (see Fig 6&7). Subsequently, he was eventually discharge home with NOAC.



TAKE HOME MESSAGE

- One parameter is insufficient for the diagnosis of Massive PE. **Corroboration** with others add diagnostic value.

Acute RV dysfunction	Acute RV dysfunction
• Visualization of right heart thrombus (pathognomonic of acute PE) • Dilated RV>LV, McConnell's sign – hypokinetic RV free wall but apical sparing • RV free wall thickness <5mm • "60:60 sign" - TRPG ≤60mmHg and PAAT ≤60ms	• RV free wall thickness >5mm • TR PG gradient >46mmHg and PAAT 80-105ms • If RA >LA size suggest chronicity
• Notching of the RVOT VTI suggest pre-capillary obstruction - early systolic notching suggest proximal location, mid-systolic notching can occur with proximal and peripheral obstruction. • RA size = LA size	

- **Accurate and objective insonation is an imperative skill to acquire** when other modalities are unavailable

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ID 26

MYOCARDITIS AS A FORGGOTEN COMPLICATION OF MUMPS

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BACKGROUND

The global COVID-19 pandemic has disrupted vaccination efforts, leading to an increase in vaccine-preventable diseases, like mumps. Mumps, caused by the mumps virus, is typically a self-limiting disease but can lead to complications in up to 10% of cases, affecting various organs. Myocarditis, though rare, can manifest as a serious complication.

CASE PRESENTATION

An eight-year-old boy was admitted with scrotal and leg swelling, accompanied by a fever that had begun six days earlier. Previously, he had been hospitalized three weeks earlier with symptoms including a fever, dysphagia, and neck swelling, resembling diphtheria, and treated empirically. During this hospitalization, he developed chest pain and palpitations but only observed. He was discharged after revealing a negative C. diphtheria on a throat swab. His immunization status was incomplete. Physical examination revealed palpebral, scrotal, and leg edema, bilateral lung rales, and hepatomegaly. The Chest X-ray showed cardiomegaly and suggestive pulmonary edema. Subsequently, Point of Care Ultrasound (POCUS) revealed an enlarged left atrium and left ventricle, low ejection fraction (EF) (41.53%), an IVC/Ao ratio of 1.1, bilateral pleural effusion, and abdominal ascites. Further laboratory investigations showed increased CRP (12 mg/dL) and troponin I levels (1.27 mg/mL). A diagnosis of congestive heart failure with myocarditis due to mumps was established, and he was treated with inotropic agents, diuretics, and steroid. By the third day of treatment, POCUS monitoring showed improvement in EF, pleural effusion, and ascites. He was discharged after a 12-day hospitalization.

CONCLUSION

This case emphasizes the importance of recognizing myocarditis as a complication of mumps. Employing routine POCUS in the PICU as a diagnostic and monitoring tool is crucial for early detection and timely treatment, ultimately leading to favourable outcomes.

Keywords

Myocarditis, Mumps, POCUS

ID 27

DILEMMA IN MANAGING SEVERE DENGUE COMPLICATED BY DIFFUSE ALVEOLAR HEMORRHAGE, ACUTE PULMONARY EDEMA, AND PERIMYOCARDITIS IN A RESOURCE-LIMITED CENTRE: A CASE REPORT

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BACKGROUND

Severe dengue fever can lead to life-threatening complications, including diffuse alveolar hemorrhage, acute pulmonary edema, and perimyocarditis. While these complications are rare, their concurrent occurrence poses significant challenge in managing fluid resuscitation and avoiding iatrogenic fluid overload while addressing hemorrhagic issues.

CASE PRESENTATION

We present the case of a 20-year-old foreign male who presented to the Emergency Department with a five-day history of fever accompanied by vomiting, headache, and diarrhoea. Initial examination revealed blood pressure of 120/73 mmHg, bradycardia (heart rate 46 bpm), and a respiratory rate of 20 breaths per minute with 100% oxygen saturation on room air. Cardiac examination was unremarkable initially. Electrocardiogram showed sinus bradycardia. Dengue serology was positive for IgM and IgG.

During the critical phase, the patient developed cardiogenic shock on multiple vasopressors and inotropic support, alongside with diffuse alveolar hemorrhage. Serum troponin I was raised at 1.33 ng/ml and echocardiography revealed a left ventricular ejection fraction of 31% with global hypokinesia, confirming perimyocarditis. Subsequently, during recovery phase, patient developed acute pulmonary oedema requiring high ventilator settings. Despite the limitation of static monitoring and the challenges of managing fluid resuscitation and multiple blood products, the patient recovered fully within 13 days.

CONCLUSION

This case highlights the critical management challenges in severe dengue fever complicated by diffuse alveolar hemorrhage, acute pulmonary edema, and perimyocarditis, particularly in resource-limited setting. Judicious fluid resuscitation guided by both static and dynamic monitoring, along with meticulous management of blood products, were essential for the patient's recovery.

ID 28

A RARE CASE OF DRUG-INDUCED METHAEMOGLOBINEMIA SECONDARY TO LEPROSY TREATMENT

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INTRODUCTION

Methaemoglobinaemia is a rare and potentially life threatening condition characterized by decreased oxygen carrying capacity of hemoglobin due to conversion of iron from reduced ferrous state to oxidized ferric state which make it incapable of binding oxygen molecules. Cyanosis is rare but may occur when 10 to 25% of total hemoglobin turns into methaemoglobinaemia. It can be congenital but most common causes are acquired due to drug such as dapsone which happened in our case.

CASE PRESENTATION

A 22 years old Orang Asli Male was diagnosed with leprosy after presented with macula-papular lesion of size 1 cm x 2 cm at earlobes and with positive leprosy biopsy. He was started with leprosy multidrug therapy (MDT) consist of rifampicin, clofazamine and dapsone. He had been taking the pills for a month and was compliance with the therapy.

A month later, he was presented to Hospital Pekan with fever, vomiting and poor oral intake for the past 4 day and subsequently admitted to general ward for presumed leptospirosis (as his sister was admitted for leptospirosis) and IV Ceftriazone was initiated. Clinical assessment in emergency department showed lethargy with mild tachypnea but good pulse volume. Initial blood gas in ED showed good oxygenation with PaO2 151 on VM40% and able to saturate to 100%. Upon admission to general ward, he had episodes of desaturation down to 90% with mild tachypnea (respiratory rate of 22) so he was upgraded to High Flow Mask (HFM). Despite increment of oxygen support, patient still appear tachypneoic with RR of 22-24 and saturation ranging around 92-95% so he was referred to anesthesia team for High Flow Nasal Cannula (HFNC).

HFNC of 50L/min and FiO2 0.5 was started and clinically his RR reduce to 20 but his saturation remains around 92-95% and no cyanosis was noted. Bedside echo showed normal heart with no evidence of pulmonary embolism. 1st ABG post 1-hour of HFNC was done in ICU and showed good gas exchanged but there was an incidental finding of MethHb of 25%. Discussion with medical physician, dermatology and intensivist were done. As patient is still taking MDT treatment of leprosy plus low saturation despite on high oxygen support, patient was diagnosed with Dapsone-induce-Methaemoglobinaemia. He was given with IV Methylene blue 100 mg stat (1.2 mg/kg) on the same day and subsequently SPO2 improved and able to wean down to NPO2 the next day.

CONCLUSION

This case illustrates the potential for drug-induced-methaemoglobinaemia secondary to dapsone which is a rare case that occur in Malaysian population. The value of a complete drug history and knowledge of drug side effect is so important and early recognition of this disorder may prevent further deterioration of patient which may lead to fatal outcome.

ID 31

NUTRITIONAL IMPACT ON LENGTH OF STAY AND MORTALITY IN PEDIATRIC INTENSIVE CARE UNIT: A PICU STUDY

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OBJECTIVES
Assess the impact of nutritional status on length of stay and mortality among pediatric patients in the PICU at Mohammad Hoesin General Hospital.

Nutritional status is a critical factor influencing the clinical outcomes of pediatric patients admitted to the Pediatric Intensive Care Unit (PICU). Malnutrition at PICU admission is frequent (50-55% prevalence rates). This study investigates the association between nutritional status and key clinical outcomes, specifically length of stay and mortality, in children on mechanical ventilation.

METHODS
A retrospective cohort study was conducted from January to December 2022, involving 116 pediatric patients admitted to the PICU requiring mechanical ventilation. Patients were categorized based on nutritional status into two groups: normal and malnutrition. Clinical outcomes were compared, including length of stay (<14 days vs. ≥14 days) and survival (survive vs. non-survive). Odds ratios (OR) were calculated to assess the associations.

RESULTS
Out of 116 patients, the OR for length of stay ≥14 days was 0.76 (95% CI: 0,33 to 1,78), indicating no significant difference in prolonged length of stay between normal and malnutrition status groups. The OR for survival was 0.63 (95% CI 0,27 to 1,48), suggesting no significant impact of nutritional status on survival rates.

CONCLUSION
Nutritional status, whether normal or malnutrition, did not significantly affect the length of stay or mortality in PICU. Future research should focus on larger sample sizes to validate these findings and explore potential underlying mechanisms

Keywords
Nutritional status, Pediatric Intensive Care Unit, Length of stay, Mortality

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ID 33

HYPEREMESIS GRAVIDARUM UNMASKING WERNICKE'S ENCEPHALOPATHY: A DIAGNOSTIC CHALLENGE IN DISTRICT HOSPITAL

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BACKGROUND

Wernicke's encephalopathy (WE) is a neurological emergency resulting from vitamin B1 deficiency. We report rare case of WE following severe hyperemesis gravidarum.

CASE PRESENTATION

A 22-year-old primigravida at 13 weeks of gestation was admitted to our Intensive Care Unit (ICU) with a 3-month history of persistent vomiting, resulting in significant weight loss (from 63 kg to 45 kg). She also experienced worsening generalized body weakness and altered mental status over the past day. Neurological examination revealed drowsiness and muscle weakness (muscle power of 3 for all four limbs). Laboratory investigations showed electrolyte imbalances (K+: 2.7, Mg2+: 0.80, PO4-: 0.58). The CECT brain scan was normal. Due to a declining Glasgow Coma Scale (GCS) (E1V2M1), she was intubated during her ICU stay. Initially, we considered meningoencephalitis with a differential diagnosis of autoimmune disorder. However, her CSF examination yielded negative microbiology results and autoimmune investigations returned normal results. After a week in the ICU, her clinical condition was plateau. Consultation with the Neuromedical team raised suspicion of Wernicke's Encephalopathy, leading to the administration of IV Thiamine 500 mg TDS. MRI brain confirmed the diagnosis. She was discharged with lifelong Thiamine supplementation, and her motor function gradually improved over 6 months. Unfortunately, her pregnancy was terminated at 24 weeks of gestation due to maternal condition.

CONCLUSION

Wernicke's encephalopathy resulting from hyperemesis gravidarum is an infrequent and frequently misdiagnosed condition. It is a potentially reversible disease if diagnosed and treated in time. Thiamine-based medical management is straightforward and effective.

ID 34

SYSTEMIC DRUG AND VITILIGO: A RHABDOMYOLYSIS STORY

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INTRODUCTION

Rhabdomyolysis, a recognized adverse outcome of statin therapy, poses an increased risk when combined with drugs that inhibit cytochrome p450-3A4 (CYP3A4).

CASE

We present a case study of a 45-year-old patient with acrofacial vitiligo who experienced generalized weakness, muscle pain, decreased urine output, and these symptoms persisted for three days. The patient had previously undergone intensive treatment involving multiple immunosuppressive drugs and simvastatin in Egypt. Then he returns home from Egypt. Following that, the patient drove from Aden airport to Sana'a for 12 hours without stopping, resulting in acute rhabdomyolysis and admittance to the critical care unit. General examination: the patient exhibited consciousness, orientation, normal body temperature, and no signs of pallor, cyanosis, or jaundice. Vital signs were as follows: blood pressure of 139/72 mm Hg, pulse rate of 80 beats per minute, respiratory rate of 30-36 breaths per minute, and central venous pressure of 5 cmH2O. Upon admission, initial investigations revealed the following results: hemoglobin level 15.3 g/dL, white blood cell count 16.1 × 109/L, neutrophils 81.3%, lymphocytes 3.4%, platelet count 393 × 109/L, creatinine level 4.16 mg/dL, urea level 202 mg/dL, potassium level 7.62 mmol/L, ALT level 837 IU/L, AST level 147 IU/L, serum albumin level 3.4 g/L, CPK level 4033 IU/L, arterial blood gas measurements showing pH 7.35, PCO2 22.6 mmHg, HCO3 12.6 mmHg, SaO2 98%, and lactate level 1.9 mmol/L.

The treatment plan included aggressive intravenous fluid therapy with normal saline and sodium bicarbonate, along with Lasix administration to promote urine output. A hemodialysis catheter was inserted for urgent hemodialysis session, with monitoring of fluid intake and ultrafiltration. An anti-hyperkalemia protocol was implemented, a proton pump inhibitor was prescribed, and heparin prophylaxis was initiated. On 2nd day patient arrested and connected to mechanical ventilator and improved on hemodialysis. A sepsis management plan involving cultures and sensitivities was established, and empirical antibiotic therapy was administered. These interventions aimed to address the patient's condition and manage potential complications associated with rhabdomyolysis.

CONCLUSIONS

This case emphasizes the need to be aware of drug interactions related to statins and immunosuppressive drugs, as well as the importance of early detection and therapy of rhabdomyolysis.

Keywords
Rhabdomyolysis; Vitiligo; Statins; Immunosuppressive drugs

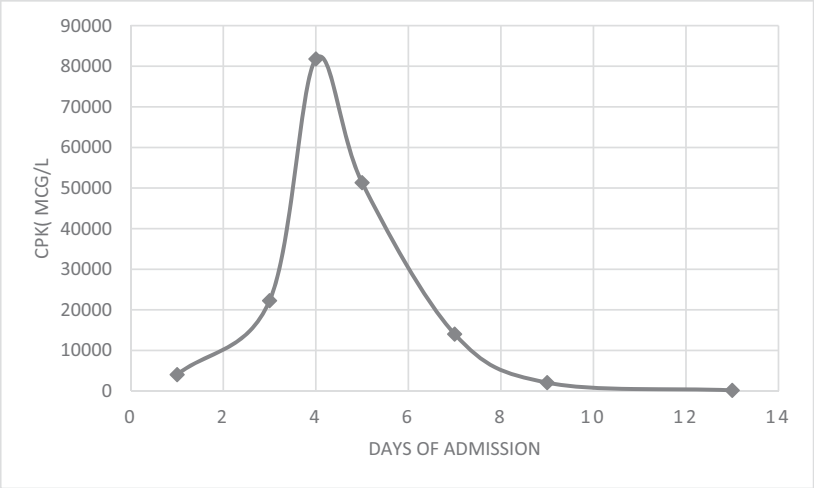

Figure 1: Creatine phosphokinase

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ID 35

CO-OCCURANCE OF INFECTIVE ENDOCARDITIS ON MITRAL VALVE VEGETATION AND CHRONIC SEVERE HYPERTENSIVE AORTIC REGURGITATION

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BACKGROUND

Infective endocarditis (IE) is not uncommon and potentially lethal. Most common causes of native valve infective endocarditis are *Staphylococci* and *Streptococci* which can be cultured within 48 hours using usual laboratory methods. Some organisms that cause IE are fastidious therefore requiring different diagnostic procedures to be performed, making diagnosis and treatment difficult.

CASE PRESENTATION

We report a case of a severe chronic aortic valve regurgitation in a 27-year old male with acute infective vegetations on mitral valve.The echocardiogram showed findings of severe aortic regurgitation and mitral valve regurgitation, along with vegetation that suggested infective endocarditis. However, blood culture remained negative. His admission to the district hospital is complicated by several factors including:

- blood culture negative infective endocarditis
- shock
- intractable pulmonary edema from severe aortic regurgitation and mitral vegetation causing mild regurgitation
- isolated high systolic hypertension with diastolic blood pressure below the safety margin.

Although urgent surgery was indicated, he required medical stabilisation for transportation to a cardiac centre and to reduce surgical risks. After spending a total of 47 days in the district hospital, he underwent aortic and mitral valve replacement on day 12 at the cardiac centre. On day 15 of hospitalisation at the cardiac centre (total 62 days hospitalised), we received notification that serology testing for Coxiella (Q fever), which was conducted on day 32 at the district hospital, returned positive.

CONCLUSION

In this case, we discussed the delayed recognition of bacterial-negative infective endocarditis. The patient developed acute pulmonary edema primarily due to severe underlying aortic regurgitation rather than infective endocarditis itself. This highlights the management challenges encountered in a district hospital setting.

ID 36

GLYPHOSATE POISONING IN CRITICAL CARE: A SEPARATE ENTITY FROM ORGANOPHOSPHATE POISONING

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BACKGROUND

Glyphosate is a widely used non-selective herbicide. It is crucial to distinguish glyphosate poisoning from organophosphate poisoning, commonly associated with insecticides. This case report details glyphosate poisoning and highlights its distinct management.

CASE PRESENTATION

A 50-year-old diabetic male ingested several sips of herbicide branded "Ken-Up," containing 41% glyphosate-isopropyl ammonium. He arrived at the emergency department 3 hours post-ingestion with vomiting and heartburn. Initially managed conservatively, he underwent CT abdomen to rule out gastrointestinal corrosive effects. After 4 hours, he developed respiratory failure and required intubation. Pre-intubation blood gas analysis on a high-flow mask (15 L/min) showed: pH 7.36, pCO2 39 mmHg, pO2 59 mmHg, HCO3 22 mmol/L, and lactate 0.7 mmol/L. Admitted to the ICU, he was placed on mechanical ventilation with ACPC settings of IP15, PEEP 10, FiO2 0.8, and a rate of 20. Arterial blood gas results were: pH 7.43, pO2 354 mmHg, pCO2 38 mmHg, HCO3 25 mmol/L, and lactate 1.0 mmol/L. Consultation with a toxicologist from the National Poison Center confirmed that supportive care was vital, as no specific antidote is available. It is absorbed following ingestion, with peak plasma concentrations occurring approximately 6 hours later, and undergoes minimal metabolism with primary excretion in feces and urine. The patient experienced gastrointestinal disturbances and difficulty swallowing, leading to pneumonitis. His ventilator settings were gradually weaned, and on Day 2, he was extubated to nasal cannula oxygen at 3 L/min after 36 hours from the initial presentation.

CONCLUSION

This case highlights the need for prompt supportive care in glyphosate poisoning due to the absence of a specific antidote. Despite structural similarities to organophosphates, glyphosate does not inhibit acetylcholinesterase.

ID 37

RUPTURED ECTOPIC PREGNANCY FOLLOWED BY MASSIVE BLOOD TRANSFUSION MASKING THE DIAGNOSIS OF PERIPARTUM CARDIOMYOPATHY

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BACKGROUND

Peripartum cardiomyopathy (PPCM) is a potentially life-threatening pregnancy-associated condition characterized by left ventricular dysfunction and heart failure (HF). We present a case of PPCM at our center.

CASE PRESENTATION

A 35-year-old woman, unsure of her pregnancy status, was admitted with generalized abdominal pain, presyncopal symptoms, hypotension, and tachycardia. A positive urine pregnancy test was confirmed. Transabdominal ultrasound revealed a floating uterus with a thin endometrium, organized blood clots, and a left adnexal mass measuring 4.4 x 4.9 cm. Her lactate level was 6.2. Hypovolemic shock secondary to a ruptured ectopic pregnancy was diagnosed. The patient underwent laparotomy, and the massive transfusion protocol was activated. In the operating theatre, a left ruptured tubal pregnancy with 2 liters of hemoperitoneum was found, and a left salpingectomy was performed. A total of 2 units of type O negative blood, 2 units of packed cells, 4 units of FFP, and 4 units of cryoprecipitate were transfused. Intraoperatively, lactate decreased to 3.3, and the patient was transferred to the ICU for close monitoring. On ICU admission, she had narrowed pulse pressure, sinus tachycardia (rate 140), desaturation, and required increased oxygen support and ventilator settings. CXR showed increased pulmonary congestion and cardiomegaly. Transabdominal ultrasound revealed no free fluids. Initially suspected as transfusion-associated circulatory overload, furosemide was administered. Echocardiography showed left ventricular dysfunction with an ejection fraction of 15%. Consultation with the intensivist from National Heart Institute led to her transfer for ECMO due to cardiogenic shock and respiratory failure secondary to suspected PPCM. After two weeks, she was transferred back to the ward and underwent rehabilitation.

CONCLUSION

Ruptured ectopic pregnancy with massive blood transfusion may mask the diagnosis of PPCM.

ID 38

USE OF CYTOSORB HAEMADSORPTION PURIFICATION IN TREATMENT OF CYTOKINE RELEASE SYNDROME SECONDARY TO LEPTOSPIROSIS ICTERO-HEMORRHAGICA AND SEPTICAEMIA WITH RHABDOMYOLYSIS

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This is a case report of two critically ill patients receiving blood purification treatment. The first patient is a 30 years old gentleman with pulmonary hemorrhage secondary to leptospirosis and the second patient is a 32 years old gentleman with septic shock and rhabdomyolysis. Both patients were admitted to ICU with hypoxia requiring mechanical ventilation and hemodynamic instability. In ICU, patients showed similar progression into multiorgan failure despite all attempts to stabilise with inotropes and antibiotics. Based on the parameters, cytokine release syndrome was suspected. Cytosorb haemadsorption purification was initiated and continued for 24 hours and 48 hours respectively. Subsequently, both patients showed improvement in hemodynamics, organ functions and reduction in inflammatory markers.

ID 39

A CASE OF PERSISTENT SEVERE HYPOKALAEMIA POSSIBLY INDUCED BY CEFTRIAXONE

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BACKGROUND

Ceftriaxone, a third-generation cephalosporin, is commonly used in intensive care units (ICUs) as the empirical treatment of gram-positive and gram-negative bacterial infections. Owing to its good blood-brain barrier penetration, Ceftriaxone is one of the antibiotics of choice for the empirical therapy of meningoencephalitis. Although Ceftriaxone has a wide therapeutic index, it is associated with some adverse reactions.

CASE PRESENTATION

A 21-year-old male was admitted to the ICU for a severe traumatic brain injury with basal skull fracture following a motor vehicle accident. He has no known medical illnesses, drug or food allergies. His baseline serum potassium levels were within the normal range. He was started on IV Ceftriaxone 2 g every 12 hours to cover for meningoencephalitis. His serum potassium level began to decrease on day 3 of IV Ceftriaxone to a nadir of 1.1mmol/L, despite vigorous correction with multiple doses of potassium chloride. The Ceftriaxone was changed to IV Cefotaxime on day 5. The potassium level rebounded to 6.4 mmol/L the next day following the discontinuation of IV Ceftriaxone. As the brain injury was severe with worsening acute kidney injury and metabolic acidosis, his family opted for comfort care. The patient passed away on day 6 of the ICU stay after the withdrawal of care.

CONCLUSION

A review of the literature suggests that Ceftriaxone may induce hypokalaemia. Healthcare professionals should be aware of this rare, but possible, adverse effect when using Ceftriaxone.

ID 40

AMOEBIC SPLENIC ABSCESS IN PREGNANCY

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BACKGROUND

Amoebic splenic abscess is uncommon. Amoebiasis is associated with poor sanitation in socio-economically disadvantaged populations. During pregnancy, reduced immunity increases vulnerability to bacterial and parasitic infections. We report a rare case of extraintestinal amoebiasis in pregnant women.

CASE PRESENTATION

A 29-year-old woman, Gravida 7 Para 6, a non-clinic case, living in a rural area, presented at 29 weeks of gestation with two-month history of abdominal pain and distension. Initial obstetrics assessment raised suspicion of ovarian malignancy in pregnancy. Laboratory work up revealed a normal total white count of 7.8 with no sign of sepsis. Ultrasound revealed large well-defined cystic mass from left pelvic region, although its origin remained unclear. Due to her pregnancy, CT imaging was not pursued, and MRI was unavailable due to resource limitations. On the 3rd day of admission, she developed acute severe abdominal pain, leading to urgent laparotomy surgery with suspicion of ruptured tumour. Intraoperatively, normal bilateral ovaries were found, but a huge splenic haemorrhagic cyst adhering to bowels and anterior abdominal wall was discovered. Emergency splenectomy and caesarean section were performed simultaneously. Her baby was delivered prematurely at 29 weeks. She required intensive care unit postoperatively for stabilization and cefuroxime and metronidazole were started. The histopathological examination of the spleen showed amoebic organism which defining the diagnosis of splenic abscess by amoeba. Patient was treated with metronidazole for one-week prior discharge.

CONCLUSION

Pregnancy increases the risk of Amoebiasis infection. However, diagnosing extraintestinal Amoebiasis during pregnancy is challenging due to limited imaging options. Symptoms are nonspecific, and delayed diagnosis is common. Often, the diagnosis is only confirmed during laparotomy. A multi-disciplinary team approach is essential for perioperative assessment and postoperative management to ensure positive obstetric outcomes.

ID 41

HYPERAMYLASAEMIA MASKING ACUTE LEPTOSPIROSIS

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BACKGROUND

Pancreatitis is a known but rare complication of leptospirosis however the initial elevation in amylase levels may obscure the diagnosis of leptospirosis itself. In case of leptospirosis-related pancreatitis, vasculitis and endothelial damage to the pancreas play a role. We report two cases of severe leptospirosis with hyperamylasaemia.

CASE PRESENTATION

We present two similar cases of young adults at the age 13 and 18 years old with history of recent river recreational activity present with fever and gastrointestinal losses on day 4 of illness. One of them had haematuria episode while the other had bilateral calf pain during presentation. Initial laboratory workup revealed high amylase (1570 and 1288 respectively) in the background of multiple organ involvement ie; acute kidney injury, acute respiratory distress syndrome (ARDS) and thrombocytopenia. Leptospirosis IgM antibody was negative on admission for both cases. Both patients were admitted into ICU being treated for severe pancreatitis with ARDS. In ICU, both patients were worked up along the diagnosis of pancreatitis and imaging was done revealing a normal pancreas. One of the patients developed pulmonary haemorrhage and another requiring haemodialysis support. Due to high index of suspicion of leptospirosis, patients were treated empirically with ceftriaxone. On day 7 of illness, leptospirosis IgM was repeated and revealed positive result which confirmed with MAT test. Both patients weaned in ICU and shows gradual improvement of organs. They were extubated well and discharge home.

CONCLUSION

Due to spectrum of the disease, early testing for leptospirosis IgM antibodies testing may provide a false negative result leading to misdiagnosis of pancreatitis in the evidence of hyperamylasaemia. While PCR is a rapid and accurate diagnostic tool, its unfortunately not easily available in most centres.

ID 42

ACUTE ADULT SUPRAGLOTTITIS WITH URAEMIA IN A DISTRICT HOSPITAL IN SABAH: A CASE REPORT AND LITERATURE REVIEW

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BACKGROUND

Acute Adult Supraglottitis (AAS) carries a risk of respiratory arrest. The presentation and management defers from childhood epiglottitis, often being subtle and unpredictable.

CASE PRESENTATION

A 54-year-old female with hypertension, diabetes and end stage renal failure (ESRF) presented with fever, dysphonia odynophagia and orthopnoea. She was clinically lethargic with no stridor. The otorhinolaryngology team performed a flexible scope that revealed significant erythematous and oedematous supraglottic region, pooling of secretions, with no medialization of vocal cords. Her lateral neck imaging revealed a pathognomonic thumb sign of AAS. She was referred to the intensive care unit (ICU) for close monitoring and started on Nebulized adrenaline, dexamethasone and Ceftriaxone with high flow nasal cannula. Her septic parameters were not significantly elevated and cultures were negative. She was dialysed early for uraemia in the event surgical tracheostomy was required. Her improvement was dramatic with conservative measures and she had resolution of symptoms within 36 hours.

A meta-analysis in 2024 showed that awake fibreoptic had the best success rate rendering it a first-line option. Awake laryngoscopy (52%) had the worse success rate, being used in more severe cases. Unlike children, the role of inhalational agents in AAS induction is unclear with a 25% failure rate. Videolaryngoscopy was not superior to direct laryngoscopy in the presence of airway edema. AAS also has a risk of complete airway obstruction due to airway manipulation and disease progression, which can occur within minutes to hours. In study in Finland revealed that only 14.6% of AAS patients required airway intervention.

CONCLUSION

Due to the subacute presentation of AAS, careful clinical judgement remains paramount. A ‘wait and watch’ approach may be more suitable in most cases.

ID 43

CASE SERIES OF SHOSHIN BERI-BERI: A REVERSIBLE CAUSE OF SEVERE PULMONARY HYPERTENSION IN EARLY INFANCY DUE TO THIAMINE DEFICIENCY

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OBJECTIVES

Severe Pulmonary Hypertension is a rare but fatal disease despite many advances in its management. This case series is to call attention for early recognition and prompt treatment of thiamine deficiency pulmonary hypertension in early infancy.

METHODS

Descriptive case series of 5 Rohingya infants presenting with Acute Pulmonary Hypertension in decompensated crisis which were likely due to thiamine deficiency admitted to PICU Hospital Pulau Pinang between October 2023 to July 2024.

RESULTS

All 5 infants are exclusively breast feeding infants of mothers who are on a restricted diet. They presented at the age of 2-3.5 months in the state of haemodynamically unstable with severe metabolic acidosis and high lactate. There were preceded by non-specific inter-current illness. Most of them required fluid resuscitation, pulmonary vasodilator, inotropic and mechanical ventilation support. Point of care echocardiogram highly suggest the diagnosis of pulmonary hypertension with unknown origin. 2 infants were given early IV Thiamine who subsequently showed complete resolution of Acute Pulmonary Hypertension. IV Thiamine was not administered for 2 out of 3 fatal cases. 1 infant was brought in with no signs of life, succumbed to death despite extensive resuscitation and IV Thiamine was served.

CONCLUSION

Point of care echocardiogram is crucial in early diagnosis of Pulmonary Hypertension in critically ill infants. High index suspicion of thiamine deficiency as a cause of Acute Pulmonary Hypertension. Early IV thiamine administration should be considered in all Acute Pulmonary Hypertension in early infancy to reduce the mortality.

ID 45

A NATIONAL SURVEY ON THE PERCUTANEOUS TRACHEOSTOMY PRACTICE IN MALAYSIAN INTENSIVE CARE UNITS

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OBJECTIVE

The objective of the study was to assess the current practice of percutaneous tracheostomy (PT) in Malaysian ICUs. The study aimed to identify the operators, frequency of techniques, procedural adjuncts, follow-up practices, and current opinions on PT.

METHODS

This observational cross-sectional study used a validated questionnaire with 13 items. The questionnaire was distributed to the heads of 61 identified ICUs, and responses were collected from them.

RESULTS

54 ICUs participated in the study. 90.7% were from MOH hospitals and 9.3% from university hospitals. ICU heads included 37% intensivists and 63% anaesthetists. At the time of the survey, 44.4% of ICUs practiced PT, while 55.6% did not. PT rates were 80% in intensivist-led ICUs versus 21.5% in anaesthetist-led ICUs. Intensivists were the primary personnel for PT in 61.3% of ICUs, with most assistants being medical officers (96.8%). The Ciaglia Blue Rhino (CBR) technique was used by 75.9%, with airway management via endotracheal tube. Fibreoptic bronchoscopy and ultrasonography were used during 38.7% and 6.5% PT, respectively. Reusable inner cannulae were used by 74.2%, and 83.9% followed up with patients post-discharge. PT was preferred for elective tracheostomy by 79.2% of respondents, though only 48.1% found it safer than surgical tracheostomy.

CONCLUSION

PT is commonly practised in ICUs, especially those led by intensivists. The CBR technique is most frequently used, with minimal use of fibreoptic bronchoscopy and ultrasonography. Most ICUs prioritize follow-up care, using reusable cannulae and ensuring follow-ups. While PT is preferred, safety perceptions vary. Intensivists primarily perform PT.

ID 46

MANAGEMENT OF SNAKEBITE IN A PARTURIENT: A CASE REPORT FROM A MALAYSIAN CRITICAL CARE UNIT

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BACKGROUND

The 2016 WHO guidelines on management of snakebite for South-East Asia had highlighted the burden to the region. The Malaysian guideline a year after, had helped to improve management of snake envenomation in the country. We shared a case of snakebite in a parturient in our intensive care unit.

CASE PRESENTATION

37 years old 32 weeks parturient presented to casualty with alleged snakebite in her bathroom over her right ankle. The snake then escaped from the bathroom. Immediately, she felt pain over the area of snakebite which was associated with swelling and numbness. There was no bleeding. She applied tourniquet over the area and brought herself to hospital. Initially, in the casualty, she was hemodynamically stable with no respiratory distress. Six hours after the snakebite, she complained of generalised paralysis, difficulty in breathing. She had bilateral ptosis and poor respiratory effort on examination. She was subsequently intubated. Her ABG post intubation showed respiratory acidosis in keeping with hypoventilation. She was admitted to ICU with impression of unidentified snakebite with systemic envenomation. Case was discussed with the Remote Envenomation Consultation Service (RECS) which provide 24-hr consultation service nationwide. 10 vials of Neuro Polyvalent AntiVenom (NPAV) which was available in the hospital was given. In ICU, patient was haemodynamically stable with no inotropic support, no coagulopathy, no acute kidney injury and no raised creatine kinase. Her neurological symptoms and signs improved after treatment with NPAV. She was able to be weaned off ventilator and extubated day 1 post ICU admission. She was transferred to general ward a day after.

CONCLUSION

This case highlighted management of snakebite which was guided by the local guideline.

ID 48

ARDS FROM PNEUMONIA AND FLUID OVERLOAD: PRONE OR DIALYSIS FIRST? A CASE REPORT

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[2]Internal Medicine, Hospital Tanah Merah, Tanah Merah, Kelantan, Malaysia

BACKGROUND

Acute Respiratory Distress Syndrome (ARDS) is a severe complication in critically ill patients, associated with high mortality. Prone positioning has emerged as an effective strategy to improve oxygenation in moderate to severe ARDS, defined by the Berlin criteria as a PaO2/FiO2 ratio < 150 mmHg with FiO2 ≥ 0.6 and PEEP > 10 cmH2O.

CASE PRESENTATION

A 59-year-old male with diabetes, hypertension, and stage 5 chronic kidney disease was admitted to the ICU with acute pulmonary oedema secondary to fluid overload and pneumonia. Despite non-invasive ventilation, his condition worsened, requiring mechanical ventilation. The patient developed severe ARDS with a PaO2/FiO2 ratio of 50, severe metabolic acidosis (pH 7.0), and required vasopressor support. Prone positioning was initiated for 24 hours, resulting in improved oxygenation and reduced oxygen requirements. Following resupination, the patient underwent dialysis and received standard ICU care. He was successfully extubated on day five and later discharged.

CONCLUSION

This case highlights the challenges in managing ARDS patients with multiple comorbidities. The decision to prioritize prone positioning over immediate dialysis was driven by the critical need to address severe hypoxemia. Prone positioning enhances ventilation-perfusion matching, improves lung compliance, reduces ventilator-induced lung injury, and facilitates secretion clearance. Individualized treatment plans are essential, considering the unique clinical context and comorbidities of each patient. Early application of prone positioning significantly reduces mortality in severe ARDS.

ID 49

IS RHINOVIRUS TRULY A BYSTANDER IN PICU?

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BACKGROUND

Rhinovirus is the most frequent cause of common cold in the worldwide paediatric population. It usually causes mild respiratory symptoms and is self limiting. It is commonly thought that rhinovirus is only a bystander organism. However, there are some case reports that suggest Rhinovirus can cause significant infections with multiorgan involvement in paediatric patients.

OBJECTIVES

Our aim of the study is to describe the clinical features, organs involvement, treatment required and outcomes of paediatric patients infected with rhinovirus in Paediatric Intensive Care Unit (PICU) of Hospital Pulau Pinang, a tertiary hospital.

METHOD

We collected data retrospectively from all the respiratory panels that were sent from our PICU from January to June 2024. All respiratory panels positive for rhinovirus/enterovirus were further sent to differentiate between rhinovirus and enterovirus. Only patients with positive rhinovirus results were included in this descriptive case series.

RESULTS

From January to June 2024, there are 8 patients in our PICU who are tested positive for Rhinovirus and required PICU admission. From the 8 patients, 5 of them have underlying comorbidities mostly with lung diseases including bronchial asthma and viral induced wheeze. Out of the 8 patients, 6 required intubation for ventilatory support and the other 2 required non invasive ventilation. 3 out of the 8 patients have multiorgan involvement including acute respiratory failure, cardiovascular failure, acute kidney injury, transaminitis and neurological involvement. Inotropic support is required in 3 patients. 2 patients required renal replacement therapy. 2 patients have tomographic imaging evidence of encephalitis. 2 patients required immunoglobulin treatment and steroids for rhinovirus induced cytokine storm. There is 1 mortality among these patients.

CONCLUSIONS

Rhinovirus can cause severe diseases not only involving the respiratory system, but also multiorgan involvement especially in children with underlying comorbidities. The mainstay of treatment for rhinovirus infection is supportive and symptomatic. However, in severe cases, immunotherapy and antiviral therapies should be considered.

ID 51

FEASIBILITY OF USING ELECTRONIC PEDIATRIC EARLY WARNING SYSTEM (EPEWS) IN A SINGLE PRIVATE MEDICAL CENTRE PEDIATRIC INTENSIVE CARE UNIT (PICU) IN MALAYSIA: A CASE SERIES

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BACKGROUND

The Paediatric Early Warning System (PEWS) is a scoring system that evaluates vital signs and clinical status to identify hospitalized pediatric patients at higher risk of deterioration. While PEWS has been widely implemented in paediatric wards and emergency department, its use in Pediatric Intensive Care Unit (PICU) setting remains underexplored. In PICU, timely identification of clinical deterioration in critically ill children is crucial for improving patient outcomes. An electronic version has been developed to provide a standardized, objective tool for early detection of clinical deterioration in PICU.

CASE SERIES

A total of 7 patients of lower respiratory tract diagnoses were selected based on severity of clinical status. The median age was 4 year 6 months old with male gender 42.9%. The mean ePEWS pre intervention was 7 while post intervention score was 3. The median time from ePEWS alert score by PICU nurses to intervention by consultant was within minutes.

CONCLUSION

ePEWS scoring system is useful in a nurse-led alert, single consultant PICU setting.

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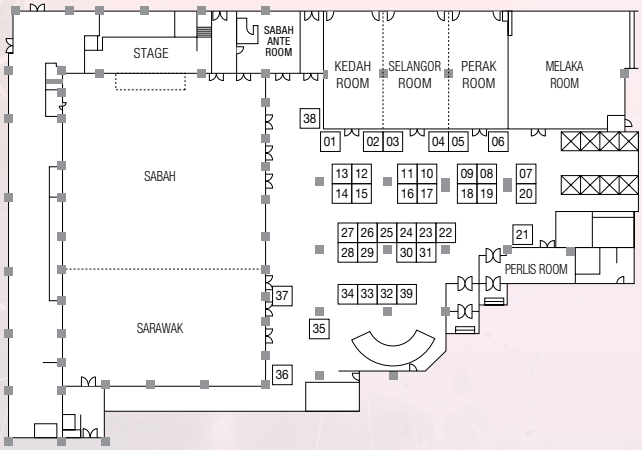

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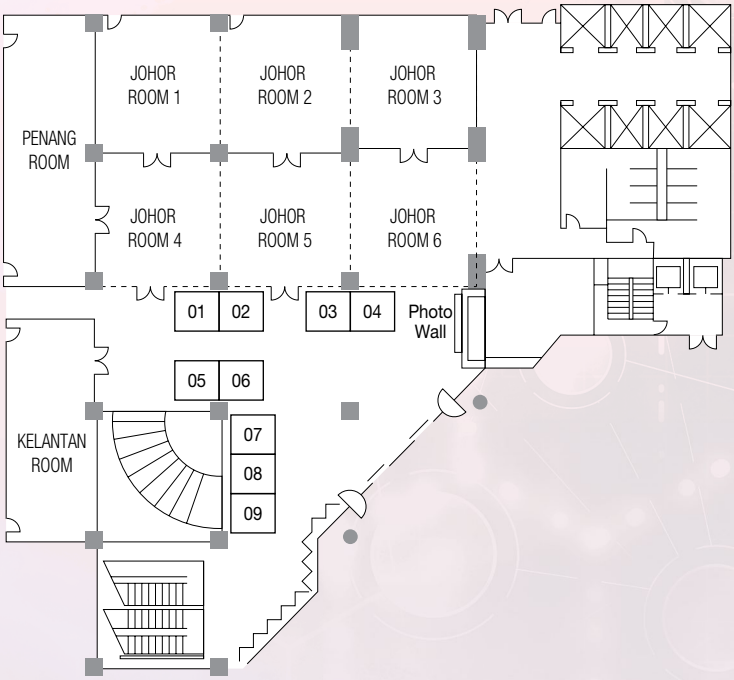

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