

ANNUAL SCIENTIFIC MEETING ON INTENSIVE CARE

# ASMIC 2015

14<sup>th</sup> – 16<sup>th</sup>  
August 2015

**SHANGRI-LA HOTEL  
KUALA LUMPUR  
MALAYSIA**



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## MESSAGE FROM THE MINISTER OF HEALTH MALAYSIA



*It is indeed a pleasure to pen this message to commemorate the 6<sup>th</sup> Annual Scientific Meeting on Intensive Care, organised by the Malaysian Society of Intensive Care. I am pleased that this important gathering will bring together local and foreign experts in the field of intensive care to share their views and practices with the noble aim of improving care processes, as well as outcomes for our patients.*

*“Change is the only constant in this Universe!” We are living in a rapidly changing world and thus, keeping pace with the changes in Critical Care Medicine can present a formidable challenge to our clinicians. With a delectable smorgasbord of topics, this conference will certainly enable clinicians, scientists, researchers, nurses, as well as allied health professionals to update themselves on the latest advances in the management of the critically ill patient. It will also be an excellent forum for discussion with the various experts on research projects and perhaps, pave the way for the development and implementation of a number of research trials.*

*I am also pleased to know that the pre-conference workshops on ventilation, to be held a day before the start of this meeting, will allow hands-on practice for nurses and doctors, while the workshop on the end-of-life will enable the teaching of the necessary communication skills and knowledge to deliver compassionate care for terminally ill patients, as well as their families that are caring for them.*

*Wishing all of you an enjoyable, as well as memorable endeavour.*

A handwritten signature in black ink, consisting of stylized, flowing letters that appear to be 'S Subramaniam'.

**Datuk Seri Dr S Subramaniam**

## MESSAGE FROM THE PRESIDENT, MALAYSIAN SOCIETY OF INTENSIVE CARE



*Time flies and it is time for ASMIC 2015, the 6<sup>th</sup> in the series and the 7<sup>th</sup> Society's Annual General Meeting.*

*Although the Society is relatively young, it has progressed steadily. We have continued to hold the Annual Scientific Meeting on Intensive Care (ASMIC); we have continued to conduct courses, e.g. BASIC and Beyond BASIC courses; we have and will continue to support the Ministry of Health Malaysia intensive care fellowship programme and the Malaysian Registry of Intensive Care; we have and will continue to publish guidelines, manuals and protocols related to intensive care and we have also established ties with the international arena of intensive care, namely the Asia Pacific Association of Critical Care Medicine and the World Federation of Societies of Intensive and Critical Care Medicine.*

*Lord Acton, an English Catholic historian, politician, and writer, in the nineteenth century, wrote: History is not a burden on the memory but an illumination of the soul.*

*This year, the Society is proud to launch the book entitled "Supporting Life: The Journey of Intensive Care in Malaysia" at the opening ceremony of the ASMIC. The book is an effort by the Society to document and chronicle the development of intensive care services across the country, thereby, recognising the work of the pioneers while not forgetting those who have expanded its services. It is also hoped that the book will encourage more doctors to take up intensive care as a career.*

*I would take this opportunity to thank the author of the book, Dr Tan Beng Hui, who obtained her PhD in the Department of Southeast Asian Studies at the University of Malaya. Dr Tan Beng Hui had diligently, extensively and painstakingly researched into the subject via interviews, questionnaires, personal communications, government reports, annual reports and minutes of meetings of the Malaysian Society of Anaesthesiologists and the Malaysian Society of Intensive Care, newspapers, newsletters, books, journals and websites. The Executive Committee of the MSIC had initially planned for her to interview ten relevant people; in the end, she interviewed a total of 37 people from North to South, with some being interviewed two to three times. I was awed by her persistence in pursuing the truth. Thank you Beng Hui for a job really well-done.*

**MESSAGE FROM THE PRESIDENT,  
MALAYSIAN SOCIETY OF INTENSIVE CARE [cont'd]**

*I would also wish to record a word of thanks to all senior members of the medical profession who had willingly shared their memories and spent their time to be interviewed.*

*“Supporting Life: The Journey of Intensive Care” – The book was written in simple language without much medical jargon and I assure you that it would be a good read. The book will be available free for members of the MSIC, and can be purchased by non-members.*

*Lastly yet importantly, let me express my sincere thanks and appreciation to Dr Shanti Rudra Deva, the Organising Chair, Dr Louisa Chan, the Scientific Chair, and the team for their time and effort in organising this meeting and putting together, a scientific programme which is rich and current in content. This meeting has always attracted a multitude of delegates since, right from the beginning. The Society is indebted to the Organising Committee and the Secretariat: Dr Ng Siew Hian and then Dr Tai Li Ling, and now Dr Shanti Rudra Deva, together with Assoc Prof Dr Tang Swee Fong, for the success of this Annual Scientific Meeting.*

*I wish all of you a fruitful and memorable meeting.*



**Dr Tan Cheng Cheng**

## MESSAGE FROM THE ORGANISING CHAIRPERSON, ASMIC 2015



*On behalf of the Organising Committee, it gives me great pleasure to invite you to the 6<sup>th</sup> Annual Scientific Meeting on Intensive Care.*

*The Committee has, once again, strived very hard to ensure an interesting programme with a broad range of topics. The meeting will bring together key opinion leaders in the field of intensive care and our own local speakers to deliver their views and thoughts on the current practices in intensive care. It will be a great forum for doctors, nurses and allied health professionals to refresh their knowledge, as well as update themselves on the latest advances and research findings. Participants will also have the opportunity to discuss and exchange views with the speakers during this meeting.*

*In addition to the main meeting, there will be workshops held on the 13<sup>th</sup> of August. For the first time, there will be a workshop on mechanical ventilation, specially tailored for nurses. The workshop is designed to allow for hands-on practice and plenty of opportunities for interaction with the facilitators. Concurrently, there will be a one-day workshop on mechanical ventilator waveforms for doctors. Understanding and interpreting waveforms is integral in ensuring appropriate patient-ventilator interaction. The workshop is planned to cover the basics, as well as troubleshooting patient-ventilator problems.*

*Another pertinent issue in intensive care is the care of the dying and our need to improve the quality of dying for the patient. Communication with the family during these times can be difficult and uncomfortable for doctors. The end-of-life care workshop that has been conducted since 2009 by the Malaysian Society of Intensive Care, will be held as one of the pre-conference workshops this year.*

*Apart from improving our knowledge, the meeting will be a great place to meet fellow colleagues and old friends, as well as forge new partnerships. Besides this, there will be an extensive scientific exhibition by the biomedical industry with the latest medical equipment, pharmaceutical products and books related to the field of intensive care.*

*I welcome you to this state-of-the-art meeting.*

A handwritten signature in black ink, appearing to read 'SRD2015'.

**Dr Shanti Rudra Deva**

## **MALAYSIAN SOCIETY OF INTENSIVE CARE EXECUTIVE COMMITTEE**

PRESIDENT	Dr Tan Cheng Cheng
VICE-PRESIDENT	Dr Tai Li Ling
HON SECRETARY	Dr Shanthi Ratnam
HON ASST SECRETARY	Assoc Prof Dr Tang Swee Fong
HON TREASURER	Dato' Dr V Kathiresan
COMMITTEE MEMBERS	Dr Mohd Basri Dr Shanti Rudra Deva Dr Noor Airini (CO-OPTED) Dr Ismail Tan (CO-OPTED) Dr Louisa Chan Yuk Li (CO-OPTED)

## **ORGANISING COMMITTEE ASMIC 2015**

Dr Shanti Rudra Deva (CHAIRPERSON)  
Dr Louisa Chan Yuk Li (SCIENTIFIC CHAIR)  
Assoc Prof Dr Tang Swee Fong (PAEDIATRIC SCIENTIFIC CHAIR)  
Dr Shanthi Ratnam  
Dato' Dr V Kathiresan  
Dr Teoh Sim Chuah

## FACULTY

### AUSTRALIA

Ho Kwok Ming

### BELGIUM

Daniel De Backer

### CANADA

Niall Ferguson

### HONG KONG

Charles Gomersall

### INDIA

Ram Gopalakrishnan

Ramesh Venkataraman

### NEW ZEALAND

John Beca

Paul Young

### SINGAPORE

Kien Kong

Loh Tsee Foong

Loo Shi

Jonathan Tan Jit Ern

### UNITED KINGDOM

Mervyn Singer

### MALAYSIA

Louisa Chan Yuk Li

Claudia Cheng Ai Yu

Gan Chin Seng

Ismail Tan Mohd Ali Tan

Kamal Bashar Abu Bakar

Laila Kamaliah Kamalul Bahrin

Lucy Lum

Mageswary Lapchmanan

Maznisah Mahmood

Mohd Basri Mat Nor

Nahla Irtiza Ismail

Noryani Mohd Samat

Premela Naidu Sitaram

Rafidah Atan

Shahanisah Ahmad

Shymala Kumarasamy

Srijayanthi Gobalan

Tan Cheng Cheng

Tang Swee Fong

Toh Khay Wee

Vineya Rai

Wan Nasrudin Wan Ismail



# PRE-CONFERENCE WORKSHOPS

## 13<sup>TH</sup> AUGUST 2015, THURSDAY

### 1. MECHANICAL VENTILATION WAVEFORMS

*Venue: Johor Room*

Facilitators

**Assoc Prof Dr Kao Kuo-Chin**  
**Dr Foong Kit Weng**  
**Dr Teoh Sim Chuah**

**Ms Adeline Leong**  
**Ms Kien Kong**

Ventilator graphics are incorporated as a standard feature in all ventilators. It is a useful tool to assess patient-ventilator interactions, monitor patient's disease status and their response to therapy. Understanding and interpreting waveforms is integral in fine-tuning the ventilator to decrease work of breathing, optimise ventilation and maximise comfort for patients.

This one-day workshop is aimed at teaching clinicians working in the intensive care the basics of ventilator graphics, as well as recognising and troubleshooting the problems of patient-ventilator asynchrony. It consists of a series of lectures followed by skill stations where lifelike simulations of waveform abnormalities will be demonstrated. The simulations will be demonstrated in small teaching groups.

0830 - 0900	REGISTRATION
0900 - 0910	Opening <b>Shanti Rudra Deva</b>
0910 - 0930	Ventilator graphics: The basics <b>Teoh Sim Chuah</b>
0930 - 0950	Respiratory mechanics <b>Foong Kit Weng</b>
0950 - 1020	Patient-ventilator synchrony <b>Kao Kuo-Chin</b>
1020 - 1040	TEA
1040 - 1110	Optimal PEEP <b>Kao Kuo-Chin</b>
1110 - 1140	Evidence-based weaning <b>Adeline Leong</b>
1145 - 1215	<b>SKILL STATION 1</b> Optimizing patient-ventilator synchrony using waveforms <b>Kao Kuo-Chin</b>
1215 - 1245	<b>SKILL STATION 2</b> Case scenario: Managing patients with obstructive lung disease <b>Teoh Sim Chuah</b>
1245 - 1400	LUNCH
1400 - 1430	<b>SKILL STATION 3</b> Case scenario: Managing patients with restrictive lung disease <b>Foong Kit Weng</b>
1430 - 1500	<b>SKILL STATION 4</b> PEEP titration <b>Adeline Leong</b>
1500 - 1530	<b>SKILL STATION 5</b> Troubleshooting ventilator alarms <b>Kien Kong</b>
1530	Wrap up <b>Shanti Rudra Deva</b> TEA

# PRE-CONFERENCE WORKSHOPS 13<sup>TH</sup> AUGUST 2015, THURSDAY

## 2. MECHANICAL VENTILATION FOR NURSES

*Venue: Sarawak Room*

### Facilitators

**Dr Shanthi Ratnam**

**Dr Shymala Kumarasamy**

**Ms Amy Peng**

**Ms Lily Lai**

**Ms Ellen Liu**

**Mr Siddarth Hundoo**

**Ms Kien Kong**

This one-day workshop is designed to help ICU nurses improve their knowledge on how to safely and effectively manage critically ill patients on the mechanical ventilator. The objective of the workshop is to identify the various modes of ventilation and differentiate their mechanisms of action in order to monitor and troubleshoot alarms effectively.

The workshop will emphasise the core concepts of mechanical ventilation that are clinically relevant to the bedside nurse. With the aid of both lectures followed by the skill stations, participants will be allowed to practice what they learnt in a safe and supervised environment.

0830 - 0900	REGISTRATION
0900 - 0910	Opening <b>Shanthi Ratnam</b>
0910 - 0940	Understanding terminologies <b>Amy Peng</b>
0940 - 1040	Basic modes <b>Lily Lai</b>
1040 - 1100	TEA
1100 - 1130	NIV <b>Kien Kong</b>
1130 - 1210	Monitoring & troubleshooting alarms? <b>Siddarth Hundoo</b>
1210 - 1320	LUNCH
1320 - 1330	Participants to go to assigned starting group
1330 - 1400	<b>SKILL STATION 1</b> Maintenance & overview of ventilator set-up <b>Lily Lai</b>
1400 - 1430	<b>SKILL STATION 2</b> NIV: Set-up and monitoring <b>Shanthi Ratnam</b>
1430 - 1500	<b>SKILL STATION 3</b> Basic modes <b>Shymala Kumarasamy</b>
1500 - 1530	<b>SKILL STATION 4</b> Monitoring & troubleshooting ventilator alarms <b>Ellen Liu</b>
1530 - 1545	Wrap up <b>Shanthi Ratnam</b>
1545 - 1615	TEA

# PRE-CONFERENCE WORKSHOPS

## 13<sup>TH</sup> AUGUST 2015, THURSDAY

### 3. END-OF-LIFE CARE

*Venue: Kelantan Room*

Facilitators

**Dr Tai Li Ling**

**Dr Noor Airini Ibrahim**

**Dr Ahmad Shaltut Othman**

**Dr Louisa Chan Yuk Li**

This one-day workshop is intended for doctors who wish to develop skills and knowledge to deliver compassionate high quality end-of-life care for their patients. It is an opportunity to learn and share views on how care in the last days of life can be improved in the intensive care unit. It will be conducted by intensivists practising in the ICU. The workshop will include lectures, case discussions and role play.

#### **The Aims of this Workshop are to Improve:**

- Competency in providing quality end-of-life care
- Knowledge in various aspects related to end-of-life decisions
- Communication skills in end-of-life care
- The dying experience for families and healthcare providers

0800 - 0830	REGISTRATION
0830 - 0855	Death and dying in the critically ill <b>Louisa Chan Yuk Li</b>
0855 - 0920	Ethical and legal issues at end-of-life <b>Noor Airini Ibrahim</b>
0920 - 0950	Making end-of-life decisions <b>Tai Li Ling</b>
0950 - 1020	Withdrawal and withholding of therapy <b>Tai Li Ling</b>
1020 - 1050	TEA
1050 - 1105	Conflicts <b>Noor Airini Ibrahim</b>
1105 - 1135	Practical aspects of end-of-life care <b>Ahmad Shaltut Othman</b>
1135 - 1220	Communication skills <b>Louisa Chan Yuk Li</b>
1220 - 1230	Questions and answers <b>Tai Li Ling</b>
1230 - 1315	Case discussion / Role play
1315 - 1415	LUNCH
1415 - 1500	Case discussion / Role play
1500 - 1545	Case discussion / Role play
1545 - 1600	Feedback and closing remarks <b>Tai Li Ling</b>
1600 - 1630	TEA

## PROGRAMME SUMMARY

DATE TIME	14 <sup>TH</sup> AUGUST 2015 FRIDAY	15 <sup>TH</sup> AUGUST 2015 SATURDAY	16 <sup>TH</sup> AUGUST 2015 SUNDAY
0800 - 0900	Registration	<b>LET'S ASK THE EXPERT 1</b>	<b>LET'S ASK THE EXPERT 2</b>
0900 - 1000	<b>PLENARY 1</b>	<b>PLENARY 2</b>	<b>PLENARY 4</b>
	<b>Opening Ceremony</b>	<b>PLENARY 3</b>	<b>PLENARY 5</b>
1000 - 1100	Tea / Trade Exhibition	Tea / Trade Exhibition	Tea / Trade Exhibition
1100 - 1200	<b>SYMPOSIA</b>	<b>SYMPOSIA</b>	<b>SYMPOSIA</b>
1200 - 1300	<b>1</b>   <b>2</b>   <b>3</b>	<b>7</b>   <b>8</b>   <b>9</b>	<b>13</b>   <b>14</b>
1300 - 1400	Lunch / Friday Prayers	Lunch Satellite Symposium ( <i>Pfizer</i> )	Lunch
1400 - 1500	<b>SYMPOSIA</b>	<b>SYMPOSIA</b>	
1500 - 1600	<b>4</b>   <b>5</b>   <b>6</b>	<b>10</b>   <b>11</b>   <b>12</b>	
1600 - 1700	TEA	TEA	
1700 - 1830		<b>AGM of the Malaysian Society of Intensive Care</b>	

# DAILY PROGRAMME

## 14<sup>TH</sup> AUGUST 2015, FRIDAY

0800 – 0845	REGISTRATION		
0845 – 0930	<b>PLENARY 1</b> <span style="float: right;"><i>Sabah Room</i></span> Chairperson: Tan Cheng Cheng 15 years of clinical trials in ARDS: What progress have we made? <b>Niall Ferguson</b>		
0930 – 1015	<b>OPENING CEREMONY</b> <span style="float: right;"><i>Sabah Room</i></span>		
1015 – 1100	TEA / TRADE EXHIBITION		
	<i>Sabah Room</i>	<i>Kedah/Selangor Room</i>	<i>Sarawak Room</i>
1100 – 1240	<b>SYMPOSIUM 1</b> <b>SEPSIS</b> Chairperson: Tan Cheng Cheng	<b>SYMPOSIUM 2</b> <b>PAEDIATRICS I</b> Chairperson: Pon Kah Min	<b>SYMPOSIUM 3</b> <b>HAEMODYNAMICS</b> Chairperson: Ahmad Shaltut Othman
1100 – 1125	Fever in sepsis: Should we treat the heat <b>Paul Young</b>	Fungal infections in the PICU <b>Tang Swee Fong</b>	Resuscitation targets in a patient with severe burns <b>Kamal Bashar Abu Bakar</b>
1125 – 1150	Understanding lactates in sepsis – Milking it all <b>Mervyn Singer</b>	The persistently hypoxaemic child: Do newer ventilator modes change outcome? <b>Loh Tsee Foong</b>	Pitfalls of the common haemodynamic targets we use in ICU <b>Ho Kwok Ming</b>
1150 – 1215	The sepsis biomarker: Plenty of fish in the sea <b>Mohd Basri Mat Nor</b>	Pharmaco-nutrition in the PICU <b>Gan Chin Seng</b>	Damage control resuscitation: Beyond the massive transfusion protocol <b>Jonathan Tan Jit Ern</b>
1215 – 1240	Evidence-based medicine vs pathophysiology: Surviving sepsis campaign <b>Loo Shi</b>	Cooling the injured brain children in 2015 <b>John Beca</b>	Intra-aortic balloon pump: Expanding its use <b>Premela Naidu Sitaram</b>
1240 – 1430	LUNCH / FRIDAY PRAYERS		

**DAILY PROGRAMME**  
**14<sup>TH</sup> AUGUST 2015, FRIDAY [cont'd]**

	<i>Sabah Room</i>	<i>Kedah/Selangor Room</i>	<i>Sarawak Room</i>
1430 – 1610	<p><b>SYMPOSIUM 4</b>  <b>MAINTAINING HOMEOSTASIS</b>                      Chairperson:                      Jenny Tong May Geok</p>	<p><b>SYMPOSIUM 5</b>  <b>END-OF-LIFE CARE</b>                      Chairperson:                      Tai Li Ling</p>	<p><b>SYMPOSIUM 6</b>  <b>INTENSIVE CARE FOR NURSES I</b>                      Chairpersons:                      Mariani Bachok,                      Hindon Ismail</p>
1430 – 1455	<p>Transfusion targets in brain injury  <b>Jonathan Tan Jit Ern</b></p>	<p>Palliative care in ICU is not taboo  <b>Louisa Chan Yuk Li</b></p>	<p>Enteral nutrition in ICU: What, when and how  <b>Mageswary Lapchmanan</b></p>
1455 – 1520	<p>Transfusion targets in patients with liver failure  <b>Laila Kamaliah Kamalul Bahrin</b></p>	<p>Pitfalls in predicting outcomes of critically ill patients  <b>Ho Kwok Ming</b></p>	<p>Safe enteral nutrition: Nurses' role  <b>Mageswary Lapchmanan</b></p>
1520 – 1545	<p>Evidence-based medicine vs pathophysiology: Sugar control  <b>Loo Shi</b></p>	<p>Navigating the ethics of end-of-life care in ICU  <b>Mervyn Singer</b></p>	<p>The patient on NIV: Dos and don'ts  <b>Kien Kong</b></p>
1545 – 1610	<p>Understanding acid-base: Gaps, deficits and differences  <b>Ramesh Venkataraman</b></p>	<p>End-of-life care: Mastering the art of it  <b>Charles Gomersall</b></p>	<p>Weaning and extubating patients safely  <b>Noryani Mohd Samat</b></p>
1610 – 1630	TEA		

# DAILY PROGRAMME

## 15<sup>TH</sup> AUGUST 2015, SATURDAY

0800 – 0900	<p><b>LET’S ASK THE EXPERT 1</b>  Facilitator: Azmin Huda Abdul Rahim</p> <p>Doctor, please ventilate me better  <b>Niall Ferguson</b></p>	<i>Sarawak Room</i>	
0900 – 0945	<p><b>PLENARY 2</b>  Chairperson: Tang Swee Fong</p> <p>Why we need new sepsis definitions... Watch this space!  <b>Mervyn Singer</b></p>	<i>Sabah Room</i>	
0945 – 1030	<p><b>PLENARY 3</b>  Chairperson: Tang Swee Fong</p> <p>Creating a high functioning PICU  <b>John Beca</b></p>	<i>Sabah Room</i>	
1030 – 1100	TEA / TRADE EXHIBITION		
	<i>Sabah Room</i>	<i>Kedah/Selangor Room</i>	
1100 – 1240	<p><b>SYMPOSIUM 7 HAEMODYNAMICS</b>  Chairpersons:  Shanti Rudra Deva,  Noryani Mohd Samat</p>	<p><b>SYMPOSIUM 8 PAEDIATRICS II</b>  Chairperson:  Teh Keng Hwang</p>	<p><b>SYMPOSIUM 9 RESPIRATORY</b>  Chairpersons:  Ismail Tan Mohd Ali Tan,  Shymala Kumarasamy</p>
1100 – 1125	<p>Haemodynamic monitoring: What device and for which purpose  <b>Daniel De Backer</b></p>	<p>Protocols in sepsis: Do we need them?  <b>Loh Tsee Foong</b></p>	<p>Selecting the right PEEP based on physiological response  <b>Niall Ferguson</b></p>
1125 – 1150	<p>Is it time to SPLIT from normal saline?  <b>Paul Young</b></p>	<p>Ultrasound in the PICU: Beyond intravenous access  <b>Maznisah Mahmood</b></p>	<p>Closed loop ventilation  <b>Charles Gomersall</b></p>
1150– 1215	<p>A physiological approach to managing heart failure  <b>Mervyn Singer</b></p>	<p>Palliative care in the ICU  <b>Lucy Lum</b></p>	<p>Diaphragmatic dysfunction in the critically ill: What you need to know  <b>Toh Khay Wee</b></p>
1215 – 1240	<p>Echocardiography in septic shock: Indications and limitations  <b>Daniel De Backer</b></p>	<p>Hearts and minds – Brain injury and development in infants with congenital heart disease  <b>John Beca</b></p>	<p>Patient-ventilator asynchrony: How to recognise it and how to fix it  <b>Niall Ferguson</b></p>

**DAILY PROGRAMME**  
**15<sup>TH</sup> AUGUST 2015, SATURDAY** *[cont'd]*

1300- 1430	<b>LUNCH SATELLITE SYMPOSIUM (Pfizer)</b> <span style="float: right;"><i>Sabah Room</i></span> Chairperson: Tai Li Ling <b>Management of candidemia in critically ill</b> <b>Ram Gopalakrishnan</b>		
	<i>Sabah Room</i>	<i>Kedah/Selangor Room</i>	<i>Sarawak Room</i>
1430 - 1610	<b>SYMPOSIUM 10 PHARMACOTHERAPY</b> Chairperson: Mahazir Kassim	<b>SYMPOSIUM 11 ORGANISATION</b> Chairpersons: Lim Chew Har, Mohd Ridhwan Md Noor	<b>SYMPOSIUM 12 INTENSIVE CARE FOR NURSES II</b> Chairpersons: Mariani Bachok, Hindon Ismail
1430 – 1455	Lipids in TPN: Ready for prime time? <b>Jonathan Tan Jit Ern</b>	Long-term outcome of ICU survivors: How do we respond <b>Loo Shi</b>	Infection control – Nurses' role is vital <b>Srijayanthi Gobalan</b>
1455 – 1520	N-acetylcysteine: Jack of all trades, master of none <b>Vineya Rai</b>	Triaging into ICU: Guardians of the gates <b>Charles Gomersall</b>	Proning the patient: What you need to know <b>Ismail Tan Mohd Ali Tan</b>
1520 – 1545	O too much of a good thing <b>Paul Young</b>	The great Kelantan flood disaster <b>Wan Nasrudin Wan Ismail</b>	Healing established pressure ulcers <b>Shahanisah Ahmad</b>
1545 – 1610	Revisiting stress ulcer prophylaxis <b>Nahla Irtiza Ismail</b>	Perspective of a Malaysian private intensivist: Forging the way forward <b>Claudia Cheng Ai Yu</b>	Oral and eye care <b>Shymala Kumarasamy</b>
1610 - 1630	TEA		
1630 - 1830	<b>AGM of the Malaysian Society of Intensive Care</b>		<i>Kedah/Selangor Room</i>

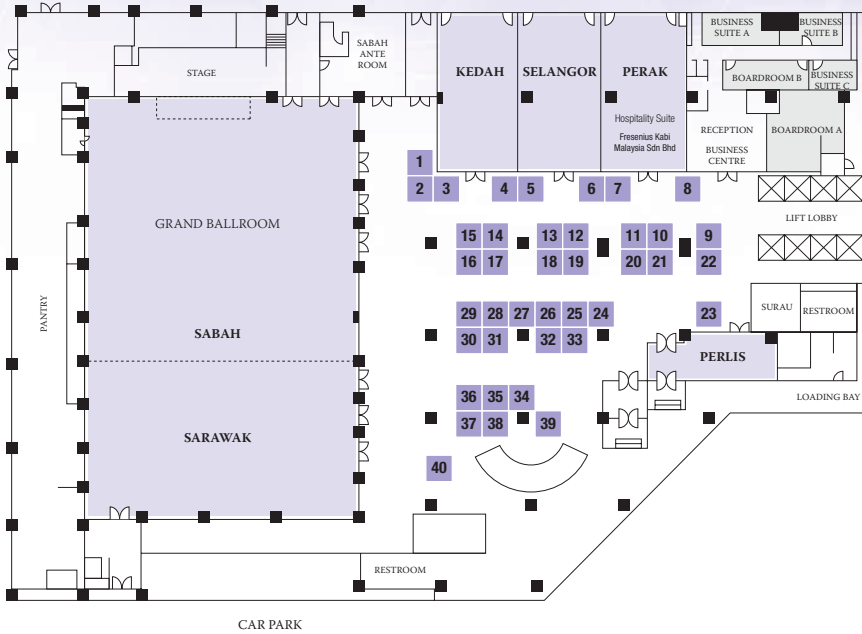


# DAILY PROGRAMME

## 16<sup>TH</sup> AUGUST 2015, SUNDAY

0800 – 0900	<b>LET'S ASK THE EXPERT 2</b> Facilitator: Mahazir Kassim How I manage a haemodynamically unstable patient <b>Daniel De Backer</b>	<i>Sarawak Room</i>
0900 – 0945	<b>PLENARY 4</b> Chairperson: V Kathiresan Why most research is wrong and how to make it right <b>Paul Young</b>	<i>Sabah Room</i>
0945 – 1030	<b>PLENARY 5</b> Chairperson: V Kathiresan Microcirculatory alterations in the critically ill <b>Daniel De Backer</b>	<i>Sabah Room</i>
1030 – 1100	TEA / TRADE EXHIBITION	
1100 – 1240	<b>SYMPOSIUM 13</b> <b>INFECTIOUS DISEASES</b> Chairperson: Noor Airini Ibrahim Asia: Capital of gram-negative resistance <b>Ram Gopalakrishnan</b> Treatment of multi-drug resistant gram-negative infections <b>Ram Gopalakrishnan</b> Dengue epidemic: What we know so far <b>Tan Cheng Cheng</b> Protecting yourself and your patients from respiratory infection <b>Charles Gomersall</b>	<b>SYMPOSIUM 14</b> <b>RENAL</b> Chairperson: Shanthi Ratnam Fluids and the kidney: Watch the type, measure the quantity <b>Ramesh Venkataraman</b> Diuretics and acute kidney injury <b>Ho Kwok Ming</b> Does one filter fit all? <b>Rafidah Atan</b> Renal replacement therapy in advance liver and cardiac disease: When to start and when to stop <b>Ramesh Venkataraman</b>
1100 – 1125		<i>Sabah Room</i>
1125 – 1150		<i>Kedah/Selangor Room</i>
1150 – 1215		
1215 – 1240		
1240 – 1400	LUNCH	<i>Sarawak Room</i>

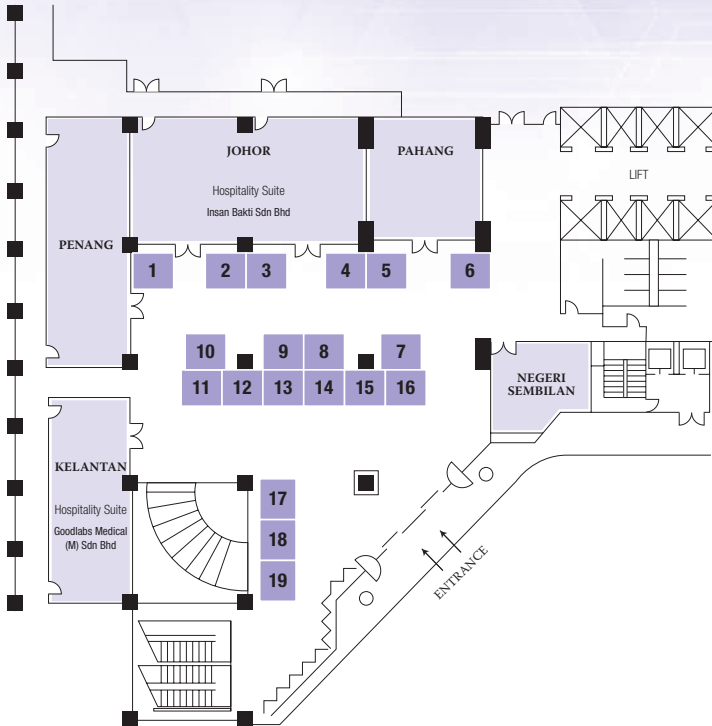
# FLOOR PLAN & TRADE EXHIBITION (BASEMENT II)



Booth Stands	Company
1	Fresenius Medical Care Malaysia Sdn Bhd
2 & 3	Schiller (Malaysia) Sdn Bhd
4 & 5	Draegar Medical SEA Pte Ltd
6	Medental (M) Sdn Bhd
7	Cook Asia (Malaysia) Sdn Bhd
8	Hexamine Sdn Bhd
9	Gambro Renal Care (M) Sdn Bhd
12	Nestle Health Science
13	Thermo Fisher Scientific
14 & 15	Suria-Medik Sdn Bhd
16 & 17	KL Med Supplies (M) Sdn Bhd
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10, 11, 20 & 21	Philips Healthcare

Booth Stands	Company
22	Star Medik Sdn Bhd
23	Syarikat Wellchem Sdn Bhd
24	Transmedic Healthcare Sdn Bhd
25	ResMed Ltd
26, 27, 28, 29, 30, 31 & 32	Malaysian Healthcare Sdn Bhd
33	A R Medicom (M) Sdn Bhd
34	3M Malaysia Sdn Bhd
35	Takeda Malaysia Sdn Bhd
36	ATN Medic Sdn Bhd
37	Pfizer (Malaysia) Sdn Bhd
38	Emerging Systems (M) Sdn Bhd
39	Schmidt BioMedTech Sdn Bhd
40	Norse Crown Co (M) Sdn Bhd

## FLOOR PLAN & TRADE EXHIBITION (LOWER LOBBY)



Booth Stands	Company
1	Radiometer Malaysia Sdn Bhd
2	Astellas Pharma
3	Zoll Medical Corporation
4	Hospira Malaysia Sdn Bhd
5	AstraZeneca Sdn Bhd
6	Primed Medical Sdn Bhd
7	Straits Scientific (M) Sdn Bhd
8	Anugerah Saintifik Sdn Bhd
9	RAS Quantum Sdn Bhd
10	Edward Lifesciences (Malaysia) Sdn Bhd
11	Nihon Kohden Malaysia Sdn Bhd
12	Hospimetrix Sdn Bhd
13	Malaysian Diagnostics Corporation Sdn Bhd
14	Shriro (Malaysia) Sdn Bhd / Meditop
15	I-Medic Imaging Sdn Bhd
16	Taraf Synergy Sdn Bhd
17	Jebsen & Jessen Technology (M) Sdn Bhd
18	Biosensors International Pte Ltd
19	Heal Integrated Solutions Sdn Bhd

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ATN Medic Sdn Bhd	Pfizer (Malaysia) Sdn Bhd
Biosensors International Pte Ltd	Philips Healthcare
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KL Med Supplies (M) Sdn Bhd	UG Medical Services Sdn Bhd
Malaysian Diagnostics Corporation Sdn Bhd	Zoll Medical Corporation

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## **CASPOFUNGIN AN OPTION FOR DISSEMINATED FUNGAL SEPSIS IN EXTREME LOW BIRTH WEIGHT**

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<sup>2</sup>Paediatric Department, Hospital Raja Permaisuri Bainun, Perak, Malaysia

Disseminated fungal sepsis continues to be a major cause of mortality in extremely low-birth-weight. Treatment options have traditionally been limited to amphotericin B or fluconazole; however, its use is limited due to drug-induced reactions, nephrotoxicity and amphotericin B-resistant candidemia. A 27 weeks premature male baby, weighing 760g, was admitted to NICU for ventilatory assistance. Repeat blood culture sensitivity at day 15 yield significant growth of *Candida albicans*, despite Fluconazole, candidemia persist with further clinical deterioration. Child was commenced on IV Amphotericin B, but developed nephrotoxicity with anaphylaxis. Subsequently he developed resistance to Fluconazole with persistent candidemia. His condition worsen with fungal ball in the brain parenchyma and the right atrium, child was then commenced on IV Caspofungin 2mg/kg/day daily. IV antibiotics were continued for 6 weeks as dissemination improved and resolved.

Therapeutic potential of Caspofungin for neonatal candidiasis may be efficacious for refractory candidemia and neonates with adverse reactions compared to conventional treatment. However, understanding of Caspofungin's pharmacokinetics, safety and appropriate dosing in this patient group is required before widespread use.



## **DISCRIMINATIVE ABILITY OF ICU PREDICTIVE SCORES IN CRITICALLY ILL**

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### **INTRODUCTION**

Predictive scoring in ICU was developed to measure and prognosticate severity of disease. Such measurements are helpful for clinical decision making, standardizing research, and comparing quality of patient care across ICUs.

### **OBJECTIVES**

To compare major ICU predictive scores discriminative ability in critically ill patients.

### **METHODS**

Prognosis scores of consecutive patients aged  $\geq 18$  years was collected on score specific proforma on Days 1, 3 & 7 during their ICU stay. All patients were followed till discharge or death which ever was earlier. Day wise trends of prognosis scores and delta scores (difference of scores between days) were then categorized based on 28 day outcome.

### **RESULTS**

Hundred patients (M: F=63:37), with mean age of  $45.8 \pm 16.1$  years were included in the study. Mortality was 34%. APACHE-II, SOFA, MODS, TISS and SAPS-II scores were significantly different between survivors and non-survivors on D1, D3, D7 and Delta [(D1-D3), (D3-D7), and D1-D7]. Multivariate analysis revealed significant scores (descending order) with odds ratio (95% confidence interval), p-values respectively: D1 [MPM-II: 2.45(1.31-4.61), p 0.005; SOFA: 1.280 (1.07-1.53), p 0.007], D3 [SOFA: 1.72(1.38-2.14), p <0.001], D7 [SOFA: 1.69(1.19-2.40), p 0.003; APACHE-II: 1.19 (1.00-1.41), p 0.050], Delta [(D1-D3)-SOFA: 1.51(1.15-1.99), p 0.003], Delta [(D3-D7)-APACHE-II: 1.31(1.06-1.61), p 0.011; SAPS: 1.09(1.10-1.17), p 0.027], and Delta [(D1-D7)-SOFA: 1.60(1.22-2.10), p 0.001]. Amongst all these the AUC ROC of SOFA score on D7 was highest 0.966 (0.930-1.000), p <0.001.

### **CONCLUSION**

Delta scores had higher discriminative ability than one time scores. Seventh day scores had highest discriminative ability than admission scores. SOFA score appeared to be the best amongst scores.

## **THROMBOEMBOLIC COMPLICATION IN HYPERTHYROID PATIENT**

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### **INTRODUCTION**

Thyroid storm is a rare but is a life threatening condition. Various studies have demonstrated that there is an association between hyperthyroidism and pulmonary embolism.

### **CASE DESCRIPTION**

A 36 year old gravida 6 para 5 at gestation period 17 weeks, presented with bleeding per vaginum and anaemia. Noted that she was tachycardic. She was admitted at labour ward for observation and blood transfusion.

Shortly later, patient developed seizures and became unresponsive. Cardiopulmonary resuscitation was commenced and she had spontaneous circulation after 30 minutes. Routine blood investigations, chest x ray were unremarkable however echocardiography showed dilated cardiac chambers with moderate pulmonary hypertension. The electrocardiography initially showed sinus tachycardia however subsequently patient developed atrial fibrillation resistant to antiarrhythmias and cardioversion. Few diagnosis including pulmonary embolism, thyrotoxicosis and dilated cardiomyopathy were postulated. Thyroid function test and computed tomography pulmonary angiogram later confirmed the diagnosis of thyrotoxicosis and pulmonary embolism. She was started on oral carbimazole, metoprolol and anticoagulant. She had complete miscarriage few days later though she showed significant recovery after initiating the treatment. She was discharged with oral medications with follow up at medical clinic four weeks later.

However, patient defaulted the follow up and was admitted again with symptoms of hyperthyroidism few months later. She was restarted with oral anticoagulants and antithyroid and was discharged after repeated counselling to attend her follow up.

### **CONCLUSION**

Hyperthyroidism is an acquired prothrombic state as thyroxine hormone increases coagulation and decreases fibrinolysis, all of which facilitates thrombosis. Therefore, anticoagulants should be considered in patients with atrial fibrillation due to thyrotoxicosis irrespective of CHADS2 risk.

## **FAMILY MEMBERS' SATISFACTION WITH CARE AND MANAGEMENT IN THE INTENSIVE CARE UNIT**

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<sup>2</sup>Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

### **OBJECTIVE**

To assess family satisfaction with care provided in the Intensive Care Unit

### **DESIGN**

A survey

### **SETTING**

Single centre, 30-bedded intensive care unit in Kuala Lumpur Hospital

### **SUBJECTS**

230 family members of patients in the ICU

### **TIME FRAME**

October 2013 to April 2014

### **METHOD**

A standard set of questionnaire was developed following a pilot study on 10 family members of patients in the ICU that explored five domains on some important aspects in the care of the patient, information and communication provided by health care professionals and visiting hours. One family member of the patient who remained in the intensive care unit for more than 72 hours was interviewed. Information on the family members age and relationship with the patient were taken into consideration during the survey

### **RESULTS**

Family members reported good satisfaction with care provided in terms of symptom control of pain, breathlessness and agitation (98.3%). There was also good satisfaction with regards to ease of obtaining and understanding updates on the patient progress provided by doctors and nurses (97.8%). The majority of the respondents (99.1%) felt doctors' communication skill was excellent. However, 32.6% of family members were not happy with the limited visiting hours in the ICU and 36.1% reported lack of emotional support, compassion and courtesy by the doctors and nurses.

### **CONCLUSIONS**

The study showed an overall satisfaction by the relatives with the care and management provided. However, the two areas of improvement need to be considered are extending the visiting hours in the ICU and the provision of emotional support and care of those relatives who need it.

**KING COBRA ENVENOMATION LEADING TO  
LIMB DERMATONECROSIS DESPITE PROMPT ANTIVENOM  
ADMINISTRATION: A CASE REPORT**

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**INTRODUCTION**

The mainstay of treatment for King Cobra (*Ophiophagus hannah*) envenomation is antivenom alongside supportive care. However, its role in limiting dermatonecrosis has not been well established.

**OBJECTIVE**

To report the clinical progression and outcome of dermatonecrosis in a King Cobra envenomed patient after receiving prompt and timely doses of antivenom.

**METHOD**

This is a case report with review of literature regarding efficacy of antivenom in preventing or limiting dermatonecrosis after King Cobra envenomation.

**RESULT**

The subject is a 27 year old male who suffered a King Cobra bite on his left forearm. Prompt and timely administration of antivenom did not limit the rate of dermatonecrosis despite resolving symptoms of systemic envenomation. The subject developed compartment syndrome of the forearm and required fasciotomy. He subsequently underwent above elbow amputation of the non-viable limb.

**CONCLUSION**

There is a lack of evidence to support nor reject the use of antivenom in limiting dermatonecrosis after King Cobra bites. Based on current case reports and experience, prompt surgical fasciotomy is indicated for compartment syndrome due to dermatonecrosis after snake envenomation. When indicated, surgical intervention should not be delayed in an effort to limit the rate or extent of dermatonecrosis using antivenom. In this case, the timing and dosages of antivenom administered did not result in a favourable outcome in terms of limiting the rate or extent of dermatonecrosis. While a large scale prospective, comparative study would be ideal, the sporadic incidence of snakebites and variety of snakes involved makes such studies difficult. Hence, we hope that this case report furthers the efforts to assimilate such data into better evidence.

## **PARASUICIDE AS A CAUSE OF ADMISSION TO THE INTENSIVE CARE UNIT IN HOSPITAL SERDANG**

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### **INTRODUCTION**

Parasuicide refers to suicide attempt or self-harm which does not result in immediate death. It has become a major health problem, which occurs at least 10 times more often than completed suicide.

### **OBJECTIVE**

To determine the general prevalence of parasuicide cases admitted to the Intensive Care Unit (ICU), the methods used for parasuicide, the patients' socio-demographic characteristics, as well as the outcome of the patients.

### **METHODS**

Using the electronic medical record, cases of parasuicides admitted to the ICU of Hospital Serdang from July 2008 to June 2013 were collected and reviewed. The associations between socio-demographic and methods of parasuicide were statistically analysed.

### **RESULTS**

Out of 4380 patients admitted to the ICU during the study period, 41 patients were admitted due to parasuicide (0.94%). Out of these 41 patients, 65.7% were discharged well, 22.9% needs psychiatric follow-up and 8.6% had relapsed. Median length of stay in the ICU was 2 days and only 19.5% spent more than one week stay. Mortality rate of parasuicides admitted to ICU was 14.6%.

Organophosphate poisoning was the most common method of parasuicide (56.1%). The incidence was highest among Indians, male gender and single marital status. Majority of cases were in the 40-60 year old age group. Most patients did not have any previous psychiatric history.

### **CONCLUSION**

Even though the rate of admission to ICU due to parasuicide was low, it was associated with high mortality. Organophosphate poisoning remained to be the method of choice for parasuicide. Appropriate psychiatric follow-up and treatment should be given to prevent relapse and recurrence.

## **INCIDENCE, RISK FACTORS AND CLINICAL EPIDEMIOLOGY OF MELIOIDOSIS IN MIRI HOSPITAL, SARAWAK, MALAYSIA**

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### **BACKGROUND**

Melioidosis is a fatal community acquired infection caused by gram negative bacteria *Burkholderia pseudomallei*. This study was undertaken to describe the incidence, risk factors, clinical epidemiology of the disease in Miri Hospital from Jan 2014 to June 2015.

### **METHODOLOGY**

This is a retrospective analysis of 15 culture confirmed cases of melioidosis treated in Miri Hospital.

### **RESULTS**

Patient age ranged from 19 to 78 years old (mean = 49.07). Males constituted 60% of cases. The overall mortality rate was 53.3% with 62.5% of them died after 14 days of admission. Lung infection was the commonest presentation (33.3%) with mortality rate of 80%. Co morbidities such as diabetes mellitus and hypertension result in higher mortality. Patients with underlying diabetes and hypertension had 75% and 100% mortality respectively. Patients presented with renal impairment on admission also had 100% mortality. Most patients received ceftazidime (60%), followed by meropenem (20%) and imipenem (20%). Based on in vitro sensitivity testing, antibiotic sensitivity of clinical isolates were 100%, 90% and 60% to imipenem, ceftazidime and meropenem respectively.

### **CONCLUSION**

It is important to realise that melioidosis is an emerging complex socio-ecological health problem in this part of the region. Patient's comorbidities and initial presentations are important determinants in overall outcome. Wide range of clinical presentations and fatal outcomes of melioidosis require a high index of suspicion for prompt early diagnosis and aggressive treatment to reduce the overall mortality.

**THE USE OF THE MOLECULAR ADSORBENT RECIRCULATING SYSTEM THERAPY IN SEVERE DENGUE WITH ACUTE LIVER FAILURE**

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**OBJECTIVE**

Molecular Adsorbent Recirculating System (MARS) has been used extensively as an artificial liver support therapy in the treatment of acute liver failure to enable native liver regeneration or as a bridge to liver transplantation, with the observed outcomes of effective albumin-bound toxin clearance and improvement of hepatic encephalopathy. We sought the use of MARS to break the vicious cycle of acute liver failure brought on by dengue fever.

**METHODS**

We ran three cycles of MARS treatment averaging about 10 hours/cycle in a patient with acute liver failure due to dengue fever based on the indications of hepatic encephalopathy Grade 2 or higher, international normalized ratio (INR)>1.5 and aspartate transaminase (AST) or alanine transaminase (ALT) >1500 U/L.

**RESULTS**

With each successive cycle, the patient made progressive improvement with respect to metabolic acidosis, liver function test, coagulopathy and mental status. The patient was eventually well for discharge after making good recovery in the intensive care unit.

**CONCLUSION**

Acute liver failure in dengue fever is a rare but life threatening complication. The use of MARS, based on early indications of acute liver failure caused by dengue fever, led to the rapid reversal of biochemical derangements and encephalopathy.

**OBSTETRIC PATIENTS REQUIRING ADMISSION TO  
INTENSIVE CARE UNIT SARAWAK GENERAL HOSPITAL:  
A 2-YEAR RETROSPECTIVE STUDY**

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**INTRODUCTION**

Obstetric patients are mostly young and otherwise healthy with requirement of admission and utilization of facilities in Intensive Care Unit (ICU) being relatively infrequent. The objective of this study is to review the demographics, clinical characteristics, length of stay, management and outcomes of obstetric patients admitted to ICU Sarawak General Hospital (SGH).

**METHOD**

A retrospective study of obstetric patients admitted to ICU SGH from 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2015.

**RESULTS**

A total of 101 obstetric patients were admitted, which represents 4.47% of total ICU admissions. The mean age of patients was 29 (+5.9) years. Admission during antepartum was 18.8% (n=19) and postpartum 81 % (n=82). Admission was predominantly from operating theatre, with 70.3% (n=71) admitted post caesarean section. 72.3% (n=73) of patients were admitted for obstetric causes while non-obstetric causes contributed 27.7% (n=28). Most common admission diagnosis is postpartum haemorrhage at 42.6 % (n=43) followed by hypertensive disorder at 27.4% (n=26). Non-obstetric admissions indication in general were sepsis at 8.9 % (n=9). 69.3% (n=70) of patients required mechanical ventilation, with mean ventilated days of 1.1 (+1.5) days. Median length of stay in ICU was one (1,2) day. There were a total of 2% (n=2) mortality within our study period which was contributed by Eisenmenger syndrome and intracranial bleeding.

**CONCLUSION**

Admission obstetric cases to ICU Sarawak General Hospital is still uncommon. Postpartum haemorrhage is the most common reason for ICU admission.



## **BLUE BABY BROWN BLOOD**

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### **CASE REPORT**

A 45 days old, 2.6kg term baby girl was brought to casualty with 2 days history of diarrhoea and vomiting. She was pale, tachypnoeic and tachycardic with sunken eyes and fontanelle, peripheral perfusion was poor consistent with ~10% dehydration. Chest was clear, heart was normal, no murmur elicited. Hb was 11g/dL. She remained lethargic and tachycardic despite 40ml/kg fluid boluses, tachypnoeic with deep chest recessions and acidotic breathing, saturating 95% under facemask oxygen. She was intubated for worsening respiratory distress. During transportation to PICU, she became cyanosed and desaturated to 80% despite 100% oxygen. Suspecting duct dependant lesion, echocardiogram was performed. There was no structural deformity but myocardial contractility was impaired hence dopamine was commenced. Serial ABG showed severe metabolic acidosis pH 6.9, paCO<sub>2</sub> 17mmHg, BE-26, HCO<sub>3</sub> 5mmHg, paO<sub>2</sub> 445mmHg, despite low SpO<sub>2</sub>. Anion gap was normal and lactate was 5.5mmol/L. The drawn venous and arterial blood was invariably brown in colour during cannulation. Serial methHb levels were extremely high 71%; pointing toward diagnosis of severe methaemoglobinaemia secondary to enterocolitis. She was non-G6PD deficiency, so iv methylene blue 1mg/kg was given. Transient dropped of pulse oximetry to 55% occurred during the infusion but paO<sub>2</sub> was high on ABG. The acidosis started to ameliorate 1 hour later, methHb level dramatically reduced and oximetry normalised. No repeated dose of methylene blue was required. She gradually improved, extubated 3 days later and discharged home.

### **SUMMARY**

We discussed a severe infantile methaemoglobinaemia survivor. Early diagnosis and prompt treatment is mandatory, as methHb level >70% could be fatal. Acute central cyanosis which resistant to oxygen supplement should raised high index of suspicion, especially in young infant with gastroenterocolitis and dehydration. Brown coloured blood is a helpful sign. Desaturation during methylene blue infusion was because the drug had interfered with the lightwave emission of pulse oximeter.

**CASE REPORT – LIFE THREATENING DYSKALAEMIA AFTER  
BARBITURATE COMA THERAPY: THE STRATEGY OF MANAGEMENT**

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Barbiturate coma therapy (BCT) is the ultimate option of treatments for refractory intracranial hypertension after all other managements have been taken accordingly. Although it is a brain protection management, it could also lead to several side effects such as hypotension, hepatic dysfunction, renal dysfunction, respiratory complications and electrolyte imbalances. One of less concerned complication but actually life threatening is dyskalaemia. It could present as a severe refractory hypokalaemia during the therapy with subsequent rebound hyperkalaemia after cessation of the therapy. We present our experience of successful management of this complication during BCT in post decompressive craniectomy for a severe traumatic brain injury patient. The key strategies of the management are cautious replacement of the potassium aiming just about 3.0 mmol/l of serum potassium during severe refractory hypokalaemia and gradual discontinuation of the thiopentone infusion every 1 ml/H in preventing rebound hyperkalaemia.

## **SPONTANEOUS VAGINAL DELIVERY DURING SEVERE DENGUE IN PREGNANCY– A MULTIDISCIPLINARY CHALLENGE**

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Outbreaks of dengue occur every five to six years. During the latest dengue outbreak in Malaysia, in 2014, 197 patients were admitted to our Intensive Care Unit (ICU) for dengue fever. Nine were pregnant.

Pregnancy is associated with dengue hemorrhagic fever (DHF) or dengue shock syndrome (DSS) and the susceptibility to severe disease increases with pregnancy age. Dengue fever during the third trimester is associated with a 23% risk of developing into DHF/DSS<sup>1</sup>. Two (22%) of our nine pregnant patients were in their third trimester and had severe dengue. We report here these two interesting cases that were managed successfully.

Both patients had positive NS1 antigen and were admitted to our ICU during the febrile phase. As they entered the critical phase, they progressed to severe dengue necessitating intubation and required high settings of mechanical ventilation. An esophageal pressure transducer was inserted for one of the patients to guide us on optimal positive end expiratory pressure level.

Both went into spontaneous labour – one during the recovery phase while the other was still in the critical phase, and delivered vaginally in the ICU. There is a potential hazard of antepartum and postpartum hemorrhage in pregnant patients with dengue fever above the risk to the general population<sup>2</sup> and this risk is at its highest during the critical phase<sup>3</sup>. This was evident with the second patient who had postpartum hemorrhage necessitating a hysterectomy. However, eventual outcomes for both the patients were good, and they were discharged home well.

Both babies were admitted to the neonatal ICU post delivery for observation. There was no evidence of vertical transmission in both cases and they were discharged home after a few days.

## **MAJOR LIVER INJURY FOLLOWING CARDIOPULMONARY RESUSCITATION IN A PREGNANT PATIENT**

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A 38 year old lady, Para 4+1 was referred to our hospital for further management of Grade 4 liver laceration post cardiopulmonary resuscitation during emergency caesarean section.

She was in her second stage of labour when she developed a seizure, was intubated and rushed to the operating theater. Upon arrival and during surgery, she had two episodes of CPR for a duration of 5 minutes and 3 minutes. An emergency caesarean section was performed, complicated with postpartum haemorrhage requiring a hysterectomy.

She was sent to the intensive care unit post operatively but noted to have persistent bleeding from the abdominal drain. A CT abdomen revealed grade 4 liver laceration. Laparotomy and liver packing was done twice in view of persistent bleeding and hypotension. She had a massive transfusion (46 unit pack cells plus blood products), novoseven was administered twice and required inotropic support.

On post operative emergency caesarean section day 3, she was referred to the Hepatobiliary department in our hospital and was transferred to intensive care for optimisation prior to surgery. Despite correction of acidosis and coagulopathy she developed fixed and dilated pupils. CT brain showed generalised cerebral and cerebellar oedema. She underwent laparotomy, cholecystectomy, liver inflow vessel ligation and repacking of liver the next day with 4 litres blood loss. After 5 days in ICU, brainstem tests showed absent reflexes and MRI findings were suggestive of global hypoxic ischemic brain injury with evidence of impending coning. Withdrawal of therapy was commenced after discussion with the family.

A retrospective analysis by European Resuscitation Council, a poster presentation by the American Thoracic Society and several case reports have documented liver injury as one of the rare complications post cardiopulmonary resuscitation.

**INCIDENCE OF COMPLICATIONS POST-PERCUTANEOUS TRACHEOSTOMY AT HOSPITAL RAJA PEREMPUAN ZAINAB II: A ONE-YEAR EXPERIENCE**

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**BACKGROUND**

Percutaneous tracheostomy is a feasible technique that is becoming a technique of choice for tracheostomy in ICU. The primary objective of this study is to evaluate the complications of percutaneous tracheostomy in HRPZ II and to identify the factors associated with it.

**METHODS**

Prospective Cohort Study including all patients who were selected for percutaneous tracheostomy procedure in ICU HRPZII from Mei 2014 until June 2015. Data were collected using patient medical record and Malaysia Registry of Intensive Care. Data were analyzed using SPSS version 19.

**RESULTS**

A total of 39 subjects underwent percutaneous tracheostomy in ICU HRPZ2. The indications include prolonged ventilation 43%, airway protection 41% and to facilitate weaning 15.4%. Procedural complications occurred in 20.5% of the subject including bleeding during procedure 7.7%, occlusion of the tracheostomy tube 7.7% and infected tracheostomy site 5.1%. No significant association between the occurrence of complication during percutaneous tracheostomy with patient age ( $c2 = 5.13$ ,  $p$  value = 0.14) and gender ( $c2 = 0.21$ ,  $p$  value 0.68). Duration of intubation does not show significant association with tracheostomy complication ( $c2 = 0.91$ ,  $p$  value = 0.42) and outcome ( $c2 = 0.27$ ,  $p$  value = 0.7). We found that SOFA score does not influence the complication rate ( $Z = -0.33$ ,  $p$  value = 0.74). Nosocomial infection was not influenced by early or late tracheostomy ( $c2 = 0.009$ ,  $p$  value = 1.0).

**CONCLUSION**

Percutaneous tracheostomy appears to be a safe technique of choice that justifies its practice in ICU. However, there was no proven statistical benefit in terms of patient outcome and the development of nosocomial infection. Future study with larger sample is required to reconfirm its safety.

**MEDIASTINITIS CONSEQUENCES OF UNDETECTED FISH BONE  
– A CASE REPORT**

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Mediastinitis that is complicated by fish bone ingestion is a rare complication. It is associated with life threatening condition and carries high mortality.

We report a case of a gentleman with diabetes mellitus presented with anterior neck swelling and acute upper airway obstruction after history of fish bone ingestion. Early plain radiograph and CT scan of the neck unable to detect presence of the fish bone. Emergency tracheostomy and incision and drainage of the neck abscess done. Repeated CTscan of the neck and thorax required as his condition worsen. It showed mediastinitis change with right lung abscess. Surgical intervention involving ENT and Cardiothoracic team managed to drain the abscess. He had 'stormy' stay in ICU up to 6 weeks where later he was able to be transferred out to general ward. This is one of successful mediastinitis case that had been managed well due to multidisciplinary approach and diligent control of infection status.

**IMPLEMENTATION OF CLOSED SYSTEM ENTERAL NUTRITION  
IN INTENSIVE CARE UNIT, SELAYANG HOSPITAL**

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Critically ill patients are characterized by the presence of hypercatabolism due to physiological and psychosocial stressors associated with critical illness. Consequently, if nutritional support is not adequately provided to meet increased bodily demands, malnutrition may result and these contribute to negative clinical outcomes. Enteral nutrition is a physiologic means as it provides trophic effects to maintain intestinal physiology, prevents gut villi atrophy, decreases intestinal permeability stimulates intestinal perfusion, preserves gut immunity, and is associated with reduced hospital length of stay and cost. However, the ability to provide adequate enteral nutrition in critically ill patients is often hampered by pulmonary, gastrointestinal, metabolic, and mechanical complications. All of these complications usually interfere with the achievement of adequate enteral nutrition. Because of this concern Dietetics Department and Intensive Care Unit of Selayang Hospital has moving forward to introduce continuous feeding with closed system ready to hang feeding technique. Continuous feeding method, compared with intermittent feeding, is expected to reduce the risk of gastrointestinal intolerance, and improve the nutritional support. Specific protocol for feeding initiation and product selection were designed to ease the implementation processes. Over 5 months of usage, data were collected and analyzed. Three ready to hang products were used, Nutrison Dison (n=15), Nutrison Energy (n=8) and Nutrison Protein Plus (n=7). There is no incidence of high GRV, diarrhea, vomiting, abdominal distended was reported and patient were able to achieved energy and protein intake after 2 days of feeding initiation.

**HAEMOPHILUS INFLUENZAE TYPE A PYOPERICARDIUM  
COMPLICATED WITH CONSTRICTIVE PERICARDITIS**

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Haemophilus Influenzae Type A invasive disease is rare. We present a case of Haemophilus Influenzae Type A disease which began with pneumonia and pericarditis, then complicated with pyopericardium and constrictive pericarditis. OP was a 5 month old who presented with intermittent fever associated with rapid breathing for 1 month. Upon presentation to the peripheral hospital, he was febrile with chest radiography showing features of pneumonia and cardiomegaly. An echocardiography showed large pericardial effusion. He was started on IV Ceftriaxone. A referral to IJN was made and repeat echocardiography confirmed presence of pyopericardium. As there were no features of cardiac tamponade, child was continued on antibiotics. Patient came for review the following week showed increasing pyopericardium with signs of tamponade.. He was noted to be in cardiogenic shock and was admitted to ICU for stabilisation. He was intubated and resuscitated with fluids boluses and was started on noradrenalin and dopamine. An urgent surgical referral was made for pericardiectomy drainage of the pus within the pericardium. Post procedure, the chest was left open and there was a transient improvement of hemodynamic. He continued to have raised central venous pressures, hypotension with raised lactate and poor urine output which indicate that he is still in persistent low cardiac output syndrome with suspicion of constrictive pericarditis .Detail assessment with echocardiography confirmed the diagnosis of constrictive pericarditis. Subsequently an urgent pericardiectomy was performed by the surgeon after which he improved dramatically. We were able to close the chest and he was weaned off inotropes and ventilation gradually. He was discharged home after 6 weeks of IV rocehine.Haemophilus Influenzae Type A was detected from the initial blood sample taken in the peripheral hospital. However serial blood cultures taken after initiation of antibiotics were negative. Haemophilus Influenzae Type A invasive disease is uncommon, however, it is a disease with increasing incidence due to the widespread Haemophilus Influenzae Type B immunisation. This case highlights the difficulty in making a diagnosis and management of pyopericardium complicated with constrictive pericarditis.



## **BANDED KRAIT ENVENOMATION WITH NEUROTOXICITY MIMICKING BRAIN STEM DEATH**

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### **INTRODUCTION**

The banded krait (*Bungarus fasciatus*) which can be found in the swampy areas along the coast of Sabah delivers pre- and post-synaptic neurotoxins in its venom that result in profound life threatening muscle weakness that may result in death by suffocation without medical intervention.

### **OBJECTIVE**

To report the clinical progression and outcome of a patient envenomed by a banded krait.

### **METHOD**

This is a case report with review of literature correlating the effects of bungarotoxins and observed clinical features. The role of antivenom as well as anticholinesterases in affecting clinical outcome of krait bites is also reviewed.

### **RESULT**

The subject of this report is a 19 year old boy who was bitten on the hand while playing with a banded krait while he was under alcohol influence. He presented with generalized muscle weakness including the loss of respiratory muscle power and required intubation for mechanical ventilation. On arrival to the ICU, he was in a deep coma with total flaccid paralysis and absence of brain stem and spinal reflexes. Consciousness and muscle power did not improve after 2 cycles of neuropolivalent antivenom. After a positive neostigmine test on day 3 of admission, he was started on pyridostigmine and his condition improved until he was successfully extubated after 2 weeks in the ICU without cognitive impairments. He was discharged after 3 weeks with residual lower limb weakness and followed up for physiotherapy and occupational therapy.

### **CONCLUSION**

Krait envenomation not only causes life threatening muscle weakness but as in this case, may also cause a deep but reversible coma and reversible inhibition of the brain stem reflexes possibly due to central effects of bungarotoxin. They may require a prolonged duration of mechanical ventilation despite the use of antivenom and anticholinesterases due to the denervating effects of  $\beta$ -bungarotoxin.

**THE CONTINUOUS RENAL REPLACEMENT THERAPY EXPERIENCE  
IN PEADIATRIC INTENSIVE CARE UNIT, SARAWAK GENERAL  
HOSPITAL, FROM APRIL 2014 – JUNE 2015**

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**OBJECTIVES**

Continuous renal replacement therapy (CRRT) is a treatment modality for unstable patients in intensive care unit. We are sharing our experience in the usage of continuous renal replacement therapy in Padiatric Intensive Care Unit (PICU), Sarawak General Hospital over duration of 15 months. The common indication for initiating CRRT includes severe sepsis with multiorgan failure, hyperleukocytosis and renal failure.

**METHOD**

This was a retrospective cohort study. Patients were unstable children admitted to the PICU, Sarawak General Hospital from April 2014 until June 2015, who fulfill initiation criteria.

**RESULTS**

16 patients were started on CRRT. 7 were 1 year and below (44%), 3 were between 1 to 5 years old (19%), 4 were within the age of 5-10 years old (25%), and 2 were between 10-20 years old (13%). Average length of CRRT usage was 6.81 days. 14 patients (88%) were given CRRT due to sepsis with multiorgan failure, 1 due to rhabdomyolysis with acute kidney injury secondary to hornet sting (6.3%) and 1 due to leptospirosis with hepatorenal syndrome (6.3%). Among these patients, 14 had anuria/oliguria (88%) while another 2 patients had hyperleukocytosis (13%). High flow rate (10-15ml/kg/min), high dose of treatment (40-120ml/kg/hr) and relatively larger filters were used and was tolerated well by these patients. Our survival rate was 31%.

**CONCLUSION**

Despite limited resources, we had 31% (5 children) survivors. Larger filter with higher flow rate and dose of treatment were tolerated well by children. A better representation of the effectiveness of CRRT usage could be attained with a larger sample size and further studies.

**CRITICAL CARE MANAGEMENT OF PATIENTS WITH  
HAEMOPHAGOCYTTIC LYMPHOHISTIOCYTOSIS**

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**OBJECTIVE**

To report our experience in children with primary or secondary haemophagocytic lymphohistiocytosis (HLH) presenting with multiorgan dysfunction syndrome in the paediatric intensive care unit

**DESIGN**

We reviewed the records of all children with HLH that were admitted to our institution from January 2014 to July 2015.

**SETTING**

Paediatric Intensive Care Unit of Sabah Women & Children's Hospital

**RESULT**

Four children presented with HLH over the duration reviewed. Two had primary HLH while the remaining two were secondary to infection. The mean age at presentation was 4.7 years (1 year 7 months to 11 years). Three of the patients were boys. All four were admitted to the PICU. Three patients had multiple organ dysfunction and required mechanical ventilation and inotropic support. One patient required renal replacement therapy. The mean length of stay in PICU was 23 days. All were treated according to the HLH 2004 protocol. Two out of four (50%) survived to PICU discharge and are currently on follow-up.

**CONCLUSION**

HLH is a lethal condition that carries high mortality. Early recognition and prompt institution of treatment is crucial to improve survival.