



Malaysian Society
of Anaesthesiologists



College of
Anaesthesiologists

Malaysian Society of Anaesthesiologists &
College of Anaesthesiologists, AMM
Annual Scientific Congress

2017

**27th to 30th
APRIL 2017**

THEME "RE-EMERGENCE"

**Berjaya Waterfront Hotel
Johor Bahru
Johor**

**SOUVENIR PROGRAMME &
ABSTRACT BOOK**

PERMAISURI JOHOR



**DULI YANG MAHA MULIA RAJA ZARITH SOFIAH
BINTI ALMARHUM SULTAN IDRIS SHAH
AL MUTAWAKKIL ALALLAHI SHAH**

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MESSAGE FROM THE PRESIDENT, MALAYSIAN SOCIETY OF ANAESTHESIOLOGISTS



On behalf of the Malaysian Society of Anaesthesiologists, it gives me great pleasure to welcome all of you to the Annual Scientific Congress 2017 of the Malaysian Society of Anaesthesiologists and the College of Anaesthesiologists Academy of Medicine of Malaysia to be held at the Berjaya Waterfront Hotel, Johor Bahru, Johor, on 27th to 30th April 2017.

First of all, a heartfelt thank you to the Organising Committee who under the able leadership of both Dato' Dr Subrahmanyam Balan and Dr Raha Mohd Daud, has lined up some exciting programmes with renowned speakers for the event. The theme of this year's Congress is "Re-Emergence". The phrase 'Old is Gold' comes to mind when talking about re-emergence. Today, where robotic surgeries no longer remain as one man's dream, we would need to revisit our history books and look at the contributions and relevance that old techniques and practices have in the current scenario.

This is the second time the Annual Scientific Congress has been held in Johor Bahru.

To those who are in Johor Bahru for the first time, I would encourage you to take this opportunity to try the local cuisine and cool off at the pristine beaches that Johor has to offer.

I hope we can all walk away with our minds enriched with new ideas, hearts filled with the joy of meeting old and new colleagues and memories to last us a lifetime.

Warm regards,

A handwritten signature in black ink, appearing to read 'Raveenthiran Rasiah', written in a cursive style.

Dr Raveenthiran Rasiah

MESSAGE FROM THE PRESIDENT, COLLEGE OF ANAESTHESIOLOGISTS, ACADEMY OF MEDICINE OF MALAYSIA



Greetings! On behalf of the College of Anaesthesiologists, Academy of Medicine of Malaysia, I would like to extend a warm and cheerful welcome to all of you to the Annual Scientific Congress 2017, Malaysian Society of Anaesthesiologists and College of Anaesthesiologists to be held in Johor Bahru from 27th to 30th April 2017.

Both the Organising and Scientific Committees have worked tirelessly towards ensuring a comprehensive and varied scientific programme with an exciting social programme not to be missed! The Scientific Committee has planned workshops with a difference, as well as interesting plenaries and symposium sessions.

The theme “Re- Emergence” addresses the resurgence of some of the old practices in anaesthesia that have long been forgotten.

The conference will see distinguished and renowned invited speakers both foreign and local, who are experts in their respective fields share their knowledge and experience.

Enjoy the conference and enjoy renewing old ties and making new ones!

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

Dr Sushila Sivasubramaniam

MESSAGE FROM THE ORGANISING CHAIRPERSON



Welcome to Johor Bahru, Johor Darul Takzim

It is our pleasure to welcome you to the Annual Scientific Congress 2017 of the Malaysian Society of Anaesthesiologists and the College of Anaesthesiologists. It is an honour for us to once again, host this much awaited annual congress within our anaesthesiology fraternity.

The Scientific Committee has chosen “Re-emergence” as the theme to reflect on old or previous practices that have been less adopted but now have come back into trend. The scientific programme will consist of pre-congress workshops, plenaries and concurrent symposium sessions.

Distinguished and renowned speakers, both local and overseas, will share their knowledge and expertise on a wide variety of topics.

As for the venue, Berjaya Waterfront Hotel (formerly known as The Zon Regency Hotel by the Sea) will give you a nice view of the Selat Tebrau and Johor Bahru city.

Please do not miss the Gala Dinner. We have chosen the theme “Simply Traditional” and are looking forward to see you in your lovely and colourful traditional costumes. We promise you an entertaining programme and a memorable night.

May we have a pleasant and fruitful Congress.

Dr Raha Mohd Daud

MSA HONORARY MEMBER – DATO' DR SYLVIAN DAS



Citation by Dato' Dr A Damodaran

It is indeed my privilege and pleasure to give this citation for my good friend and a distinguished doctor of our specialty, Dato' Dr Sylvian Das.

Dr Das as he is affectionately called, was born in Simpang Valley Estate to the late Mr & Mrs Vincent Das.

Early education was in three different places: St Paul's Institution, Seremban; St John's Institution, Kuala Lumpur and Maktab Sultan Abu Bakar, Johor Bahru.

For Medicine, he went to India. He graduated from the Christian Medical College, Vellore in 1971. After completing his housemanship in General Hospital, Johor Bahru, he took up the position of medical officer in anaesthesia in Kluang Hospital, Johor. After five years of training, he chose to pursue his career in anaesthesia. He joined University Hospital in 1977 for training in anaesthesia and intensive care.

Going back a few years in history, the Academic Department of Anaesthesia, University of Malaya was established in 1965. In 1972, the department was recognised by the Faculty of Anaesthesia of the Australian Royal College of Surgeons for training of eight medical officers from 1972 onwards. Dr Das successfully completed his post-graduate studies and obtained his Australian Fellowship in 1981.

Following this, he became a Fellow of the Academy of Medicine of Malaysia and a Fellow of the Indian Academy of Medical Sciences.

As a lecturer in the Department of Anaesthesiology, he taught the postgraduate students. During his four years in the department, he was mainly responsible for revising and fine tuning the undergraduate programme for medical students to the department.

After gaining experience in anaesthesia for various surgical disciplines, he joined the Tun Hussein Onn Eye Hospital in 1985. He left the Eye Hospital and joined Pantai Medical Centre, Bangsar, Kuala Lumpur in 1991 at a time when I was bringing about rapid changes in the hospital by establishing intensive care units, both adult and neonatal, open heart surgery and management of acute pain and labour epidural services. Dr Das' arrival at that time to join me with his wide academic experience and organisational capabilities was indeed a boon to the hospital.

As Organising Chairman of the ASEAN Congress of Anaesthesiologists 1998, Organising Chairman of the 11th Asian Australasian Congress of Anaesthesiologies

MSA HONORARY MEMBER – DATO' DR SYLVIAN DAS (CONTINUED)

in 2002, Honorary Secretary (2001 – 2003) of Asian-Oceanic Society of Regional Anaesthesia, and as Vice Chairman (2002 – 2006) of Asian-Australasian Regional Section of the World Federation of Societies of Anaesthesiologists, he actively promoted collaborative ventures for training and improving the delivery of anaesthesia in the region. He also presented numerous academic papers and chaired scientific sessions in various conferences.

At home, he was the Honorary Secretary of MSA (1981 – 1987), President of MSA (1988 – 1990), Dean of Faculty of Anaesthesiologists, College of Surgeon of Malaysia, Chairman of MSA, Council Member of Academy of Medicine of Malaysia – all these are a testament to the numerous contributions he had made to the profession and the country.

His generosity in the care of the indigent is also noteworthy. He is a Rotarian and was the Past President of the Rotary Club of Ampang. Currently, he is the Chairman of Rumah Bethany, a home for special children.

For the services he had rendered to this profession and country, he was awarded DIMP by His Royal Highness, Sultan of Pahang, in 2012 which carries the title 'Dato'.

His gentle demeanour, empathetic approach and delightful humour during challenging times are endearing experiences we continue to admire and relish.

He is married to Doreen Kamalini Das and has two beautiful daughters. He is a grandfather.

This award is a tribute to a life of activities and creative endeavours bringing honours and reverences for this man and his crucial roles in the history of anaesthesia in the country.

MALAYSIAN SOCIETY OF ANAESTHESIOLOGISTS OFFICE BEARERS 2016 – 2017

President	Dr Raveenthiran Rasiah
Immediate Past President	Dr Sushila Sivasubramaniam
President-Elect	Dato' Dr Jahizah Hassan
Chairman	Dr Mohamed Namazie Ibrahim
Hon Secretary	Professor Dr Marzida Mansor
Hon Treasurer	Datuk Dr V Kathiresan
Committee Members	Dr Gunalan a/l Palari Dr Mafeitzeral Mamat Dr Norliza Mohd Nor Dato' Dr Subrahmanyam Balan Dr Suresh Kumar
Hon Auditors	Professor Dr Chan Yoo Kuen Professor Dr Jaafar Md Zain



COLLEGE OF ANAESTHESIOLOGISTS, ACADEMY OF MEDICINE OF MALAYSIA OFFICE BEARERS 2016 – 2017

President	Dr Sushila Sivasubramaniam
Vice President	Associate Professor Dr Raha Ab Rahman
Hon Secretary	Professor Dato' Dr Wang Chew Yin
Hon Treasurer	Dr Tan Cheng Cheng
Council Members	Associate Professor Dr Ina Ismiarti Shariffudin Dato' Dr Jahizah Hassan Datin Dr V Sivasakthi Dr Muhammad Maaya
Coopted Council Members	Dr Lim Wee Leong Dr Raveenthiran Rasiah



LOCAL ORGANISING COMMITTEE

Advisor

Dato' Dr Subrahmanyam Balan

Chairperson

Dr Raha Mohd Daud

Sub-Committee Members

Dr Azmiza Maharani

PPP Anuar Ismail

PPP Zakuan Mohd Nor

Dr Nur Fadhlina Arifin

Dr Ng Chong Hin

PPP Mohd Ali bin Kassim

Dr Hanizah Mohamed

Secretary 1

Dr Ismawaty Sukawi

Secretary 2

PPP Zoolfadhli Hashim

PPP Mohd Haidzir b Mohamed

Dr Nadzirah Mohd Shah

PPP Naswadi Zakaria

PPP Razi bin Sahil

PPP Ainie Leong

PJ Ushadevi Kumaran

KJ Eswazilah Bt Md Esa

Treasurer

Dr Murniati Mustafa

Dr Lakshmi Thiyagarajan

KJ Asmah Bt Rahmat

KJ Rahimah Hashim

KJ Siti Suryani Bohari

KJ Salinder Kaur

PJ Norsiah Mustapha

KJ Siti Hajar Lai



KJ Salinder Kaur



KJ Rahimah Hashim



KJ Siti Suryani Bohari



PPP Ainie Leong



PPP Razi bin Sahil



KJ Siti Hajar Lai



PJ Norsiah Mustapha



KJ Asmah Bt Rahmat



Dr Nadzirah Mohd Shah



PPP Mohd Haidzir b Mohamed



Dr Hanizah Mohamed



PPP Mohd Ali bin Kassim



Dr Ng Chong Hin



PPP Naswadi Zakaria



PJ Ushadevi Kumaran



KJ Eswazilah Bt Md Esa



PPP Zakuan Mohd Nor



PPP Anuar Ismail



Dr Azmiza Maharani



Dr Nur Fadhlina Arifin



PPP Zoolfadhli Hashim



Dr Ismawaty Sukawi



Dato' Dr Subrahmanyam Balan



Dr Raha Mohd Daud



Dr Murniati Mustafa



Dr Lakshmi Thiyagarajan

SCIENTIFIC COMMITTEE

Chairpersons

Dr Mafeitzeral bin Mamat

Dr Maria Lee Hooi Sean

Committee Members

Dr Rafidah Atan

Dr Shahridan Fathil

Dr Muhammad Maaya

Local Sub-Committee Members

Dr Faizal Zuhri Abd Aziz

Dr Mahazir Kassim

Dr Soh Wei Ney

Dr Lim Wei Tat

Dr Seethal Padmanathan



Dr Soh Wei Ney



Dr Mahazir Kassim



Dr Faizal Zuhri Abd Aziz



Dr Lim Wei Tat



Dr Seethal Padmanathan



Dr Rafidah Atan



Dr Muhammad Maaya



Dr Mafeitzeral bin Mamat



Dr Maria Lee Hooi Sean



Dr Shahridan Fathil

OPENING CEREMONY 28TH APRIL 2017, FRIDAY

VENUE

Grand Ballroom, Berjaya Waterfront Hotel

0930 – 0935	Arrival of Guest of Honour Duli Yang Maha Mulia Raja Zarith Sofiah binti Almarhum Sultan Idris Shah, Permaisuri Johor
0935 – 0940	Recital of Doa by Mufti of Johor
0940 – 0945	Speech by Dr Raveenthiran Rasiah, President, Malaysian Society of Anaesthesiologists
0945 – 0950	Speech by Dr Sushila Sivasubramaniam, President, College of Anaesthesiologists, Academy of Medicine of Malaysia
0950 – 0955	Speech by Guest of Honour Duli Yang Maha Mulia Raja Zarith Sofiah binti Almarhum Sultan Idris Shah, Permaisuri Johor followed by declaration and official opening
0955 – 1005	Launching of Guidelines on Sugammadex
1005 – 1010	Presentation of Montage
1010 – 1020	Citation on Dato' Dr Sylvian Das, Honorary Member by Dato' Dr A Damodaran
1020 – 1025	Conferment of Honorary Membership on Dato' Dr Sylvian Das by Dr Raveenthiran Rasiah, President, Malaysian Society of Anaesthesiologists
1025 – 1030	Opening of Trade Exhibition at Exhibition Centre by Duli Yang Maha Mulia Raja Zarith Sofiah binti Almarhum Sultan Idris Shah, Permaisuri Johor
1030 – 1100	Coffee/Tea for Delegates at Exhibition Centre

GALA DINNER 29TH APRIL 2017, SATURDAY

VENUE

Grand Ballroom, Berjaya Waterfront Hotel

THEME

Simply Traditional

1930 – 2000	Arrival of Guests and Delegates
2000 – 2010	Traditional Dance Performance
2010 – 2015	Welcome Speech by Dr Raha Mohd Daud, Organising Chairperson
2015 – 2020	Signing of MOU with Korean Society of Anaesthesiologists
2020 – 2120	Dinner is served and performance by singer <ul style="list-style-type: none">• Presentation of MSA Award and MSA-AZ YIA Award By Dr Raveenthiran Rasiah, President, Malaysian Society of Anaesthesiologists• Games by MC• Presentation of Best Poster Awards By Dr Sushila Sivasubramaniam, President, College of Anaesthesiologists, AMM
2120 – 2140	Performance by Singer
2140 – 2150	Games by MC
2150 – 2210	Best Dress Awards
2210 – 2220	Performance by Singer
2220 – 2230	Traditional Dance Performance
2230	Ends

INVITED SPEAKERS

INTERNATIONAL FACULTY

Belgium

Lynette Dominguez

Jan Mulier

Hong Kong

Gordon Wong

Italy

Sabino Scolletta

Singapore

Joseph Abueg

Soon Yuen

Thailand

Supranee Niruthisard

The Netherlands

Reynaldo Joey Soria

United Kingdom

Andrew Klein

Western Australia

Richard Riley

MALAYSIA

Adi Osman

Alan @ Abdul Hanan

Ariffin Marzuki Mokhtar

Azlina Masdar

Mary Cardosa

Chan See Yun

Fahmi Lukman

Eleanor Fe Fey Chew

Haslan Ghazali

Andrew Gunn Kean Beng

Jahizah Hassan

Kiung Sze Ting

Kwok Fan Yin

Lakshmi Thiyagarajan

Lim Wee Leong

Mahazir Kassim

Marzida Mansor

Mohamed Hassan Ariff

Murniati Mustafa

Nor'Azim Mohd Yunos

Noorjahan Haneem Md Hashim

Nora Azura Dintan

Nur Fadhlina Arifin

Nurhayati Mohd Idris

Omar Sulaiman

Rafidah Atan

Raha Abdul Rahman

Sheila Menon

Sivasakthi Velayuthapillai

Teo Shu Ching

Ungku Kamariah Ungku Ahmad

Vanitha Sivanaser

Yoga Bhavani

PRE-CONGRESS WORKSHOP 1

Field Surgical Care

In collaboration with Medicins Sans Frontiere (MSF) and Mercy Malaysia (MM)

DATE & TIME

27th April 2017, Thursday

VENUE

Gleneagles Medini Hospital

FACULTY

Shahridan Fathil (Organising Chairman)

Reynaldo Joey Soria

Lynette Dominguez

Mafeitzeral Mamat

Shalimar Abdullah

Nasuha Yaacob

The workshop is designed to prepare anaesthetists, surgeons and obstetricians to provide quality surgical care in the immediate post-disaster response and/or resource limited environment.

The faculty will be led by referents from MSF Operation Center Brussels, and assisted by veterans from Mercy Malaysia.

PROGRAMME

0745 – 0815	Registration
0815 – 0830	Introduction <i>Shahridan Fathil</i>
0830 – 0900	Surgical activities in the field <i>Reynaldo Joey Soria</i>
0900 – 0930	Prerequisite to surgery <i>Lynette Dominguez</i>
0930 – 1000	MSF protocols <i>Reynaldo Joey Soria</i>
1000 – 1030	Tea
1030 – 1100	MSF surgical tools <i>Lynette Dominguez</i>
1100 – 1130	MM emergency response unit <i>Shalimar Abdullah</i>
1130 – 1200	Mass casualty management <i>Reynaldo Joey Soria</i>
1200 – 1230	War surgery <i>Lynette Dominguez</i>
1230 – 1300	Field orthopaedics <i>Shalimar Abdullah</i>
1300 – 1400	Lunch
1400 – 1430	Field obstetrics <i>Nasuha Yaacob</i>
1430 – 1500	Field anaesthesia <i>Reynaldo Joey Soria</i>
1500 – 1530	Field regional anaesthesia <i>Mafeitzeral Mamat</i>
1530 – 1600	Ultrasound in the field <i>Shahridan Fathil</i>
1600 – 1630	Q & A End of Session

PRE-CONGRESS WORKSHOP 2

Crisis For The Anaesthetist: Short. Sharp. Intense.

DATE & TIME

27th April 2017, Thursday

VENUE

Monash Medical School

FACILITATORS

Rafidah binti Atan

Monash University Malaysia, Johor Bahru

Nor'azim bin Mohd Yunos

Monash University Malaysia, Johor Bahru

Mafeitzeral Mamat

Gleneagles Medini Hospital, Johor Bahru

Noorjahan Haneem binti Md Hashim

University of Malaya, Kuala Lumpur

Richard Riley

Royal Perth Hospital and University of Western Australia

CO-FACILITATORS

Hanizah binti Mohamed

Hospital Sultanah Aminah, Johor Bahru

Nurhanani Zaini binti Mohd Sapiee

Hospital Sultanah Aminah, Johor Bahru

Nur Ilyani Bujang

Hospital Sultan Ismail, Johor Bahru

Won Kang Lin

Hospital Sultan Ismail, Johor Bahru

We invite medical officers, nurses and anaesthetists to participate in this short and intense course on crisis management. This half-day course will start off with a short briefing on principles of crisis management and orientation to the simulation environment plus its rules of engagement. Participants are then divided into four groups and will rotate through four stations on various crisis scenarios relevant to the practice of anaesthesia and intensive care. Time allocated for each scenario is approximately 45 minutes including debriefing time.

This short course may act as an introductory course on crisis management for newbies, or a refresher course for those already familiar with its concept. Facilitators of this course have undergone formal training to run simulation sessions and are experienced in providing a safe learning environment for all levels of participants.

The course will be held at the Clinical School Johor Bahru, Monash University Malaysia, which houses simulation rooms that are fully equipped to run immersive simulations.

Come and join us for this short and sharp course! It will be a half-day well spent!

0730 – 0800	Registration
0800 – 0805	Introduction and welcoming address
0805 – 0835	Principles of crisis management <i>Richard Riley</i>
0835 – 0850	Rules of engagement and ice breaking
0850 – 0950	Scenario 1 and debriefing
0950 – 1010	Tea
1010 – 1110	Scenario 2 and debriefing
1110 – 1210	Scenario 3 and debriefing
1210 – 1310	Scenario 4 and debriefing
1310 – 1330	Take home messages and closing remarks
1330 – 1400	Lunch

PRE-CONGRESS WORKSHOP 3

Basic Renal Replacement Therapy (CRRT)

DATE & TIME

27th April 2017

VENUE

Angsana & Hibiscus, Level 6,
Berjaya Waterfront Hotel

COORDINATOR

Faizal Zuhri

FACILITATORS

Mahazir Kassim
Ismawaty Sukawi

We invite specialists, medical officers, pharmacists and nurses involved in the delivery of CRRT to critically ill patients.

Participants will be able to:

1. Describe the basics of CRRT provision to patients across the entire spectrum of critical illness.
2. Discuss the latest information regarding the entire CRRT prescription from modality choice, anticoagulation, access choice and timing of CRRT initiation, and the application of CRRT in various disease states.
3. Experience hands-on-training using CRRT machines and learn the practicalities of initiation and common problems during provision of CRRT including plasmapheresis to critically ill.

Come and join us in this enlightening half-day course!

1200 – 1300	Registration
1300 – 1350	Lunch
1350 – 1400	Welcome note
1400 – 1445	Introduction to continuous RRT in anaesthesia and critical care – Understanding different types of RRT – Introduction to CRRT – Therapies of CRRT
1445 – 1500	Q & A
1500 – 1545	Managing continuous renal replacement therapy in anaesthesia and critical care – Renal recovery – RRT modalities – CRRT initiation – CRRT dose
1545 – 1600	Q & A
1600 – 1630	Tea
1630 – 1730	Hands-on

PRE-CONGRESS WORKSHOP 4

How To Ventilate Like Intensivists!

DATE & TIME

27th April 2017

VENUE

Arcadia & Daffodil, Level 6, Berjaya Waterfront Hotel

COORDINATOR

Ng Chong Hin

FACILITATORS

Azmin Huda

Lam Hui Lin

We invite specialists and medical officers involved in the delivery of ventilation to critically ill patients. Whenever you dial the knobs on the ventilator, have you ever wonder, how much is too much or too little?

The workshop will cover the physiological basis of ventilation, the new features in advance ventilator and the protective ventilation strategies to minimise ventilator associated lung injury.

Come and discover how you can individualise your therapy!

PROGRAMME

1200 – 1300	Registration <i>Committee</i>
1300 – 1350	Lunch
1350 – 1400	Welcome note <i>Ng Chong Hin</i>
1400 – 1430	Stress, strain villi <i>Lam Hui Lin</i>
1430 – 1500	PV loops: Spirodynamic <i>Lam Hui Lin</i>
1500 – 1530	Lung protective strategy <i>Azmin Huda</i>
1530 – 1600	Update in ARDS <i>Azmin Huda</i>
1600 – 1630	Break
1630 – 1700	Indirect calorimetry <i>Lam Hui Lin</i>
1700 – 1800	Hands-on <i>Lam Hui Lin, Azmin Huda</i>

PRE-CONGRESS WORKSHOP 5

Extracorporeal Membrane Oxygenation (ECMO)

DATE & TIME

27th April 2017

VENUE

Daisy, Level 5, Berjaya Waterfront Hotel

FACILITATORS

Yong Chow Yen (Organising Chairperson)

Norly binti Ismail

Abdul Halim bin Abdul Hamid

Faradh Anas bin Masdokhi

Hermi bin Sapian

0730 – 0830	Registration
0830 – 0835	Welcome note <i>Yong Chow Yen</i>
0835 – 0900	Evidence, patient selection and outcome <i>Lim Chew Har</i>
0900 – 0925	Physiology of VV and VA ECMO <i>Lim Chew Har</i>
0925 – 0950	Cannula, tubing, pump, oxygenator, monitors <i>Mohamad Hanafi Mohd</i>
0950 – 1015	Cannulation and surgical considerations <i>Faisal Ismail</i>
1015 – 1040	Initiation and stabilization (VA and VV) <i>Zuraini Md Nor</i>
1040 – 1110	Tea
1110 – 1135	Anticoagulation <i>Mohamad Hanafi Mohd</i>
1135 – 1200	Monitoring and ECMO circuit management <i>Hamidah Ismail</i>
1200 – 1225	Nursing care of patient on ECMO <i>Nur Asmayanti Leman</i>
1225 – 1250	Complications and management <i>Hamidah Ismail</i>
1250 – 1315	Weaning and decannulation (VA and VV) <i>Zuraini Md Nor</i>
1315 – 1430	Lunch
1430 – 1630	Practical sessions in 4 groups rotation
	A. Cannula selection <i>Faisal Ismail, Mohamad Hanafi, Hj Halim</i>
	B. Circuit jigsaw puzzle <i>Yong Chow Yen, Faradh Anas Masdokhi</i>
	C. Circuit assembly, priming, initiation, trouble shooting <i>Hamidah Ismail, Hermi Safian</i>
	D. Monitoring and documentation <i>Zuraini Md Nor, Nur Asmayanti Leman</i>
1630 – 1700	Tea & End

PROGRAMME SUMMARY

Date	28 th April 2017 Friday	29 th April 2017 Saturday	30 th April 2017 Sunday
0700 – 0730		MEET-THE-EXPERT 1	AEROBIC
0730 – 0800	REGISTRATION	PLENARY 2	PLENARY 5
0800 – 0830			
0830 – 0900	PLENARY 1	PLENARY 3	SYMPOSIA
0900 – 0930			
0930 – 1000	OPENING CEREMONY	Tea Break	18 19 WORKSHOP ON HYPNOSIS
1000 – 1030	Tea Break	SYMPOSIA	
1030 – 1100	SYMPOSIA	9 10 11	Tea Break
1100 – 1130	1 2 3	PLENARY 4	SYMPOSIA
1130 – 1200			
1200 – 1230			20 21
1230 – 1300	Lunch Symposium 1	Lunch Symposium 2	
1300 – 1330	Friday Prayers		
1330 – 1400	SYMPOSIA	SYMPOSIA	
1400 – 1430	4 5 6	12 13 14	
1430 – 1500			
1500 – 1530	Tea Break	Tea Break	
1530 – 1600	SYMPOSIA	SYMPOSIA	
1600 – 1630	7 8 MSA / MSA-AZ YIA AWARDS OFFICIAL POSTER ROUND	15 16 17	
1630 – 1700			
1700 – 1730			
1730 – 1900	COLLEGE OF ANAESTHESIOLOGISTS AGM	MALAYSIAN SOCIETY OF ANAESTHESIOLOGISTS AGM	
2000 onwards	FACULTY DINNER <i>(by invitation only)</i>	2000 – 2300 GALA DINNER	

SCIENTIFIC PROGRAMME

DAY 1 | 28TH APRIL 2017 (FRIDAY)

0730 – 0830 REGISTRATION

0830 – 0930 **PLENARY 1** *Grand Ballroom*
Chairperson: Vanitha Sivanaser
Anaesthesia response in conflict areas : The MSF experience [PAGE 28]
Reynaldo Joey Soria

0930 – 1030 **OPENING CEREMONY*** (*refer programme in page 11*) *Grand Ballroom*
 Graciously officiated by Duli Yang Maha Mulia Raja Zarith Sofiah binti Almarhum Sultan Idris Shah, Permaisuri Johor

1030 – 1100 Tea Break *Exhibition Centre*

	<i>Ballroom 3</i>	<i>Ballroom 1 & 2</i>	<i>Auditorium 2</i>
1100 – 1230	SYMPOSIUM 1 EMERGING TRENDS <i>Chairperson: Vanitha Sivanaser</i> 1100 – 1130 Anaesthesia for the elderly : How much to give? [PAGE 29] <i>Omar Sulaiman</i> 1130 – 1200 Real-time clinical debriefing <i>Rafidah Atan</i> 1200 – 1230 The return of nitrous oxide! [PAGE 29] <i>Nur Fadhlina Arifin</i>	SYMPOSIUM 2 PAIN MANAGEMENT <i>Chairperson: Nita Salina Abdullah</i> 1100 – 1130 Pain free hospital and its implementation <i>Mary Cardoso</i> 1130 – 1200 Procedural pain management in adults [PAGE 30] <i>Ungku Kamariah Ungku Ahmad</i> 1200 – 1230 Consent and ethics in pain management <i>Marzida Mansor</i>	SYMPOSIUM 3 PERIOPERATIVE MEDICINE <i>Chairperson: Yoga Bhavani</i> 1100 – 1130 Optimization of perioperative haemoglobin <i>Andrew Klein</i> 1130 – 1200 Perioperative care of the high risk surgical patients <i>Soon Yuen</i> 1200 – 1230 Preoperative blood investigations in elective surgery : A national audit on Ministry of Health anaesthetic practices [PAGE 31] <i>Jahizah Hassan, Kiung Sze Ting</i>

1230 – 1315 Lunch Symposium 1 [Merck, Sharp & Dohme] *Ballroom 1 & 2*
Chairperson: Mafeitz bin Mamat
Role of the anaesthesiologist in enhanced recovery [PAGE 32]
Jan Mulier

1315 – 1415 Friday Prayers

SCIENTIFIC PROGRAMME (CONTINUED)

DAY 1 | 28TH APRIL 2017 (FRIDAY)

1415 – 1545	<p><i>Ballroom 1 & 2</i></p> <p>SYMPOSIUM 4 NEUROANAESTHESIA <i>Chairperson: Ng Chong Hin</i></p> <p>1415 – 1445 The future and direction of neuro-anaesthesia in Malaysia [PAGE 33] <i>Lim Wee Leong</i></p> <p>1445 – 1515 Traumatic brain injury – Malaysia Experience [PAGE 33] <i>Fahmi Lukman</i></p> <p>1515 – 1545 The brain bulge: Management strategies <i>Vanita Sivanaser</i></p>	<p><i>Ballroom 3</i></p> <p>SYMPOSIUM 5 RESEARCH & TRAINING <i>Chairperson: Muhammad Maaya</i></p> <p>1415 – 1445 Postoperative complications of unrecognized sleep apnea (POSA) trial [PAGE 34] <i>Eleanor Fe Fey Chew</i></p> <p>1445 – 1515 Patient centric healthcare [PAGE 34] <i>Ariffin Marzuki</i></p> <p>1515 – 1545 Simulation as an essential tool in anaesthesia training [PAGE 35] <i>Richard Riley</i></p>	<p><i>Auditorium 2</i></p> <p>SYMPOSIUM 6 SPECIAL INTEREST <i>Chairperson: Shahridan Fathil</i></p> <p>1415 – 1445 Field anaesthesia [PAGE 36] <i>Reynaldo Joey Soria</i></p> <p>1445 – 1515 Donation after cardiac death (DCD) : Are we ready? [PAGE 37] <i>Omar Sulaiman</i></p> <p>1515 – 1545 Medical cannabis <i>Mary Cardoso</i></p>
1545 – 1600	Tea Break		<i>Exhibition Centre</i>
1600 – 1730	<p><i>Ballroom 1 & 2</i></p> <p>SYMPOSIUM 7 ALLIED HEALTH 1 : COMMUNICATION DURING PATIENT CARE <i>Chairperson: Subrahmanyam Balan</i></p> <p>1600 – 1630 KISS – Effective communication <i>Sivasakhti Velayuthapillai</i></p> <p>1630 – 1700 ISBAR and graded assertiveness <i>Rafidah Atan</i></p> <p>1700 – 1730 Communicating treatment goals in acute pain management : Communication during patient care [PAGE 37] <i>Ungku Kamariah Ungku Ahmad</i></p>	<p><i>Auditorium 2</i></p> <p>SYMPOSIUM 8 AMBULATORY ANAESTHESIA <i>Chairperson: Lakshmi Thiyagarajan</i></p> <p>1600 – 1630 TIVA in day surgery [PAGE 38] <i>Gordon Wong</i></p> <p>1630 – 1700 MIS practice in daycare <i>Soon Yuen</i></p> <p>1700 – 1730 Extended criteria for daycare patients [PAGE 38] <i>Eleanor Fe Fey Chew</i></p>	<p><i>Ballroom 3</i></p> <p>MSA / MSA-AZ YOUNG INVESTIGATOR AWARDS [PAGE 63-71] <i>Chairperson: Maria Lee Hooi Sean</i></p> <p>OFFICIAL POSTER ROUND</p>
1730 – 1900	COLLEGE OF ANAESTHESIOLOGISTS AGM		<i>Auditorium 2</i>
2000 onwards	FACULTY DINNER (by invitation only) <i>Venue: Makan Kitchen, DoubleTree by Hilton, Johor Bahru</i>		

SCIENTIFIC PROGRAMME (CONTINUED)

DAY 2 | 29TH APRIL 2017 (SATURDAY)

0700 – 0800	MEET THE EXPERT 1 <i>Chairperson: Shahridan Fathil</i> What editors look for <i>Andrew Klein</i>			<i>Angsana & Hibiscus</i>
0800 – 0900	PLENARY 2 <i>Chairperson: Jahizah Hassan</i> Anaesthesiology and the law [PAGE 39] <i>Mohamed Hassan Ariff</i>			<i>Ballroom 1 & 2</i>
0900 – 1000	PLENARY 3 <i>Chairperson: Raveenthiran Rasiah</i> Haemodynamic monitoring for perioperative optimization [PAGE 40] <i>Sabino Scolletta</i>			<i>Ballroom 1 & 2</i>
1000 – 1030	Tea Break			<i>Exhibition Centre</i>
1030 – 1200	SYMPOSIUM 9 POST ANAESTHESIA CARE <i>Chairperson: Maria Lee Hooi Sean</i>	SYMPOSIUM 10 AIRWAY MANAGEMENT <i>Chairperson: Muhammad Maaya</i>	SYMPOSIUM 11 UPDATES IN MONITORING & TECHNOLOGY <i>Chairperson: Gunalan a/l Palari</i>	
	1030 – 1100 Essential set up of post anaesthetic care unit (PACU) [PAGE 41] <i>Raha Abdul Rahman</i>	1030 – 1100 Muscle relaxant for the difficult airway [PAGE 43] <i>Jan Mulier</i>	1030 – 1100 Arterial pressure monitoring in anaesthesia [PAGE 45] <i>Sabino Scoletta</i>	
	1100 – 1130 Myths and facts of postoperative nausea vomiting [PAGE 41] <i>Nora Azura Dintan</i>	1100 – 1130 Airway ultrasound [PAGE 44] <i>Adi Osman</i>	1100 – 1130 Adequacy of anaesthesia – NMT/ENTROPY/BIS [PAGE 46] <i>Joseph Abueg</i>	
	1130 – 1200 Best practices with health informatics [PAGE 42] <i>Ariffin Marzuki</i>	1130 – 1200 Future of supraglottic airway devices [PAGE 44] <i>Fahmi Lukman</i>	1130 – 1200 CVP waveforms – The forgotten monitor [PAGE 47] <i>Mohamed Hassan Ariff</i>	
1200 – 1300	PLENARY 4 <i>Chairperson: Sushila Sivasubramaniam</i> Save blood, save lives [PAGE 48] <i>Andrew Klein</i>			<i>Ballroom 1 & 2</i>
1300 – 1400	Lunch Symposium 2 [Pfizer (M) Sdn Bhd] <i>Chairperson: Sivasakthi Velayuthapillai</i> Making multimodal analgesia work for you and your patient <i>Supraanee Niruthisard</i>			<i>Ballroom 1 & 2</i>

SCIENTIFIC PROGRAMME (CONTINUED)

DAY 2 | 29TH APRIL 2017 (SATURDAY)

1400 – 1530	<p style="text-align: right;"><i>Ballroom 3</i></p> <p>SYMPOSIUM 12 VENTILATION STRATEGIES <i>Chairperson: Nur Fadhlina Arifin</i></p> <p>1400 – 1430 Management of atelectasis [PAGE 48] <i>Joseph Abueg</i></p> <p>1430 – 1500 Helmet CPAP [PAGE 49] <i>Adi Osman</i></p> <p>1500 – 1530 Nasal high flow oxygen therapy [PAGE 49] <i>Raha Abdul Rahman</i></p>	<p style="text-align: right;"><i>Auditorium 2</i></p> <p>SYMPOSIUM 13 CARDIOTHORACIC ANAESTHESIA <i>Chairperson: Salamah Azerai</i></p> <p>1400 – 1430 Optimizing oxygen delivery during extracorporeal circulation [PAGE 50] <i>Nurhayati Mohd Idris</i></p> <p>1430 – 1500 Viscoelastic test of coagulation in cardiac surgery [PAGE 51] <i>Haslan Ghazali</i></p> <p>1500 – 1530 Liberal vs restrictive transfusion threshold in cardiac surgery [PAGE 51] <i>Andrew Klein</i></p>	<p style="text-align: right;"><i>Ballroom 1 & 2</i></p> <p>SYMPOSIUM 14 PERIOPERATIVE COMPLICATIONS <i>Chairperson: Ina Ismiarti Shariffudin</i></p> <p>1400 – 1430 Nightmare of anaphylaxis [PAGE 52] <i>Kwok Fan Yin</i></p> <p>1430 – 1500 Safety standards in management of drugs listed under Dangerous Drugs Act [PAGE 52] <i>Lim Wee Leong</i></p> <p>1500 – 1530 Timeout & SSSL: Doing it right! <i>Andrew Gunn Kean Beng</i></p>
1530 – 1600	Tea Break		
1600 – 1730	<p style="text-align: right;"><i>Ballroom 3</i></p> <p>SYMPOSIUM 15 MEDICOLEGAL & ETHICS ISSUE IN ANAESTHESIA <i>Chairperson: Mohamed Namazie Ibrahim</i></p> <p>1600 – 1630 Bullying and harassment in the operating theatre [PAGE 53] <i>Richard Riley</i></p> <p>1630 – 1700 Inappropriate surgery? The anaesthetist as patient's advocate <i>Noorjahan Haneem Md Hashim</i></p> <p>1700 – 1730 Consent of the minor [PAGE 54] <i>Teo Shu Ching</i></p>	<p style="text-align: right;"><i>Auditorium 2</i></p> <p>SYMPOSIUM 16 TRAUMA ANAESTHESIA <i>Chairperson: Shahridan Fathil</i></p> <p>1600 – 1630 Preoperative trauma stabilization [PAGE 54] <i>Adi Osman</i></p> <p>1630 – 1700 War surgery in humanitarian settings [PAGE 55] <i>Lynette Dominguez</i></p> <p>1700 – 1730 ATLS updates & changes <i>Andrew Gunn Kean Beng</i></p>	<p style="text-align: right;"><i>Ballroom 1 & 2</i></p> <p>SYMPOSIUM 17 ALLIED HEALTH 2 : CARING FOR THE ANAESTHETISED <i>Chairperson: Azlina Masdar</i></p> <p>1600 – 1630 Pregnant mothers and anaesthesia [PAGE 56] <i>Chan See Yun</i></p> <p>1630 – 1700 I'm confused: Post op delirium / emergence delirium/POCD [PAGE 56] <i>Haslan Ghazali</i></p> <p>1700 – 1730 Patient positioning <i>Vanitha Sivanaser</i></p>
1730 – 1900	MALAYSIAN SOCIETY OF ANAESTHESIOLOGISTS AGM		
2000 – 2300	GALA DINNER (refer programme in page 12) Theme: Simply Traditional		

SCIENTIFIC PROGRAMME (CONTINUED)

DAY 3 | 30TH APRIL 2017 (SUNDAY)

0700 – 0800	AEROBIC	<i>Open space parking area, beside the straits</i>	
0830 – 0930	PLENARY 5 <i>Chairperson: A Damodaran</i> Hypnosedation in the 21 st Century : Is It time for anaesthetists to embrace hypnosis? [PAGE 57] <i>Alan @ Abdul Hanan</i>	<i>Ballroom 1 & 2</i>	
0930 – 1100	<i>Auditorium 2</i> SYMPOSIUM 18 OBSTETRIC ANAESTHESIA <i>Chairperson: Ismawaty Sukawi</i>	<i>Ballroom 1 & 2</i> SYMPOSIUM 19 ALLIED HEALTH 3 : CRISIS MANAGEMENT <i>Chairperson: Ina Ismiarti Shariffudin</i>	<i>Ballroom 3</i> WORKSHOP ON HYPNOSIS Practicals in clinical hypnosis [PAGE 60] <i>Facilitators: Alan @ Abdul Hanan, Sheila Menon</i>
	0930 – 1000 Abnormal invasive placenta : Avoiding bloodbath [PAGE 57] <i>Azlina Masdar</i>	0930 – 1000 ALS Update 2015 [PAGE 59] <i>Murniati Mustafa</i>	0930 – 1000 Demonstration of hypnoanagesia – Live volunteer explanation and discussion
	1000 – 1030 Point of care coagulation testing in the management of post partum haemorrhage [PAGE 58] <i>Chan See Yun</i>	1000 – 1030 Crisis resource management roles <i>Noorjahan Haneem Md Hashim</i>	1000 – 1030 Practical skills training in clinical hypnosis induction, deepening technique, awakening practice and discussion
1030 – 1100 Enhanced recovery pathway after caesarean [PAGE 58] <i>Nora Azura Dintan</i>	1030 – 1100 Prevention of hypothermia in the neonate [PAGE 59] <i>Lakshmi Thiyagarajan</i>	1030 – 1100 Perioperative care – Multi- dimensional approach to pain management with clinical hypnosis. What can you do? how it makes a difference?	
1100 – 1130	Tea Break		
1130 – 1300	<i>Ballroom 3</i> SYMPOSIUM 20 PAEDIATRIC ANAESTHESIA <i>Chairperson: Murniati Mustafa</i>	<i>Ballroom 1 & 2</i> SYMPOSIUM 21 UPDATES IN CRITICAL CARE <i>Chairperson: Nurhayati Mohd Idris</i>	
	1130 – 1200 Challenge of the neonates [PAGE 60] <i>Lakshmi Thiyagarajan</i>	1130 – 1200 Fluids 2017: Balance or unbalanced? <i>Nor'Azim Mohd Yunus</i>	
	1200 – 1230 TIVA in children [PAGE 61] <i>Teo Shu Ching</i>	1200 – 1230 Steroids in pneumonia <i>Mahazir Kassim</i>	
1230 – 1300 URTI anaesthesia risk? Evidence versus traditional practice? [PAGE 61] <i>Yoga Bhavani</i>	1230 – 1300 Advances in ICU: What can microcirculation tell us? [PAGE 62] <i>Sabino Scoletta</i>		

CONFERENCE INFORMATION

CONGRESS VENUE

Berjaya Waterfront Hotel, Johor Bahru – Malaysia

88 Jalan Ibrahim Sultan, Stulang Laut, 80300 Johor Bahru, Johor Darul Takzim **Tel:** (607) 221 9999

REGISTRATION

The registration hours are:

27 th April 2017 (Thursday)	1500 to 1900 hrs
28 th April 2017 (Friday)	0700 to 1700 hrs
29 th April 2017 (Saturday)	0730 to 1700 hrs
30 th April 2017 (Sunday)	0730 to 1100 hrs

IDENTITY BADGES

Delegates are kindly requested to wear identity badges during all sessions and functions.

ENTITLEMENTS

Registered delegates will be entitled to the following:

- Admission to the scientific sessions, satellite symposia and trade exhibition
- Conference bag and materials
- Gala Dinner
- Lunches & Coffee/Tea

GALA DINNER

Registered delegates can bring their guests for the Gala Dinner on 29th April 2017 (Saturday). The cost is RM 100 per person. Please enquire at the registration counter.

SPEAKERS AND PRESENTERS

All speakers and presenters are requested to check into the Speaker Ready Room at least two hours prior to their presentation. There will be helpers on duty to assist with your requirements regarding your presentation.

The operating hours are:

27 th April 2017 (Thursday)	1700 to 1900 hrs
28 th April 2017 (Friday)	0800 to 1700 hrs
29 th April 2017 (Saturday)	0800 to 1700 hrs
30 th April 2017 (Sunday)	0800 to 1100 hrs

All presentations will be deleted from the conference computers after the presentations are over.

PHOTOGRAPHY & VIDEOTAPING POLICIES

No photography or videotaping of the presentations is permitted during the scientific sessions.

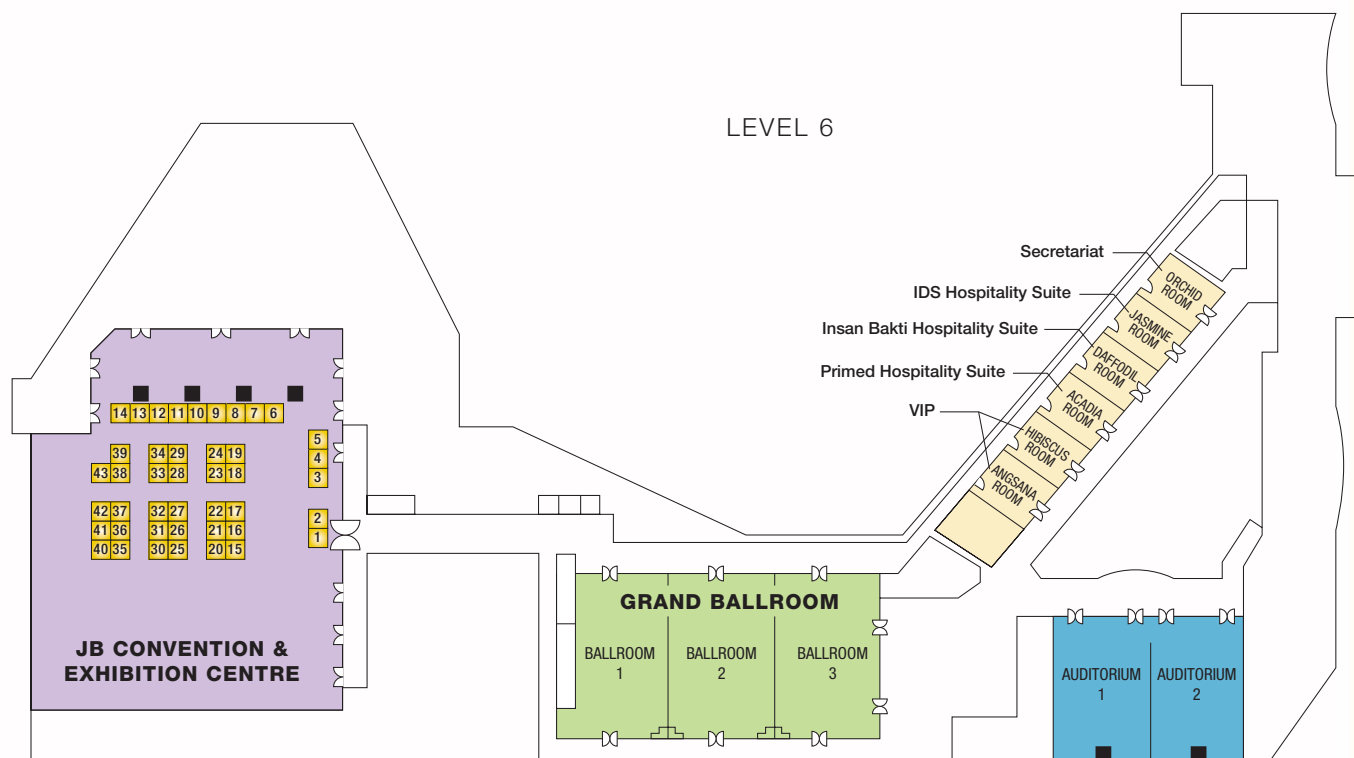
MOBILE PHONE

For the convenience of all delegates, please ensure that your mobile phone is silenced during the conference sessions.

DISCLAIMER

Whilst every attempt would be made to ensure that all aspects of the Convention as mentioned in this publication will take place as scheduled, the Organising Committee reserves the right to make the changes should the need arises.

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13 & 14	Unimed Sdn Bhd
15	Medental (M) Sdn Bhd
16 & 17	KL Med Supplies (M) Sdn Bhd
18 & 19	Pfizer (M) Sdn Bhd
20	Merck, Sharp & Dohme (Malaysia)
21	UMMI Surgical Sdn Bhd
22	Daya Cergas (M) Sdn Bhd

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ANAESTHESIA RESPONSE IN CONFLICT AREAS: THE MSF EXPERIENCE

Reynaldo Joey Soria¹, Rafael Van Den Bergh^{2,3}

¹Medecins Sans Frontieres – OCA; Amsterdam, the Netherlands

²Médecins Sans Frontières (Doctors without Borders)

³Operational Research Unit, Medical Department, Operational Centre Brussels

OBJECTIVES

Doctors without Borders (MSF) has proven that in conflict contexts, safe anaesthesia is possible, and the “do no harm” principle can and must be upheld; regardless local means and capabilities.

METHODS

This is a retrospective description of MSF experience that mainly relies in the delivery of standardized care with flexibility to tailor it to a given setting.

SUMMARY

Conflicts are linked with high numbers of trauma and are mainly occur in developing countries where healthcare systems are weak, compromising care for other health issues present in the affected population. Presently, healthcare suffers the destruction of facilities and killing of staff. While required anaesthesia may be similar in non-conflict contexts, it is important to account in local resources availability, supply possibilities, and the extent of surgical care needs. To perform quality anaesthesia, it should be recognized the constraints linked to the context: health system characteristics where hospitals are no longer functional, human resources are scarce, diagnostic tools and therapeutic means are lacking, and referrals are not possible; and patient characteristics where co-morbidities are present and late arrival aggravates the patient’s health status. The MSF experience in conflict contexts is valuable to understand the type of anaesthesia that should be used, and where some techniques are not appropriate. Widely accepted are local and spinal anaesthesia; and general intravenous technique with Ketamine remains one of the preferred options.

CONCLUSIONS

Anaesthesia in conflicts is challenging due to several constraints, but it is possible to perform safe anaesthesia by carefully considering the need for basic infrastructure and means, competent human resources, standard operative procedures and adapted and tailored techniques to the context: local, spinal and general intravenous. Surgical care should not be provided at any cost compromising safety and quality. Clear policies regarding informed consent should be in place.

ANAESTHESIA FOR THE ELDERLY: HOW MUCH TO GIVE?

Omar Sulaiman

Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia

The elderly patient poses a specific challenge to the anaesthesia whose role might extend from peri operative physician to palliative care provider. The adage “start low, go slow” still holds true, but more research and education in geriatric age group will improve outcome and help us to develop expertise in this relatively “young” subspeciality of geriatric anaesthesia.

No ideal anaesthetic technique has been describe, but if a through understanding of changes that occur in physiology and pharmacology is there, an optimal anaesthetic technique can be individually designed. The degree of preparedness and acumen of the anaesthesiologist is more important than the anaesthetic technique and agents.

Finally, most of the surgery is done to improve quality of life rather than to increase survival.

THE RETURN OF NITROUS OXIDE!

Nur Fadhlina Arifin

Hospital Sultanah Aminah, Johor Bharu, Johor, Malaysia

Nitrous oxide is one of the oldest drugs in anaesthesia practice which is still in use since discovered in 18th century. The use of nitrous oxide has become popular among anaesthesiologist in ensuring faster and smoother induction process, acute analgesia in balanced anaesthesia and risk reduction in intraoperative awareness. However, on the negative side, nitrous oxide interferes with vitamin B12 metabolism causing hematological and neurological adverse effect, increases incidence of postoperative nausea and vomiting (PONV) and expansion of gas filled cavity. There are also theoretical concern that administration of nitrous oxide increase health risk in patients or provider exposed to this drugs and environmental pollution. The controversies lingering around nitrous oxide cause decline in its usage, but we are looking at the potential beneficial effect of nitrous oxide on central nervous system, cardiovascular system and acute and chronic pain management.

PROCEDURAL PAIN MANAGEMENT IN ADULT

Ungku Kamariah Ungku Ahmad

Anaesthesiologist and Pain Specialist, Hospital Sultan Ismail Johor Bahru, Johor Bahru, Johor, Malaysia

Pain Management during procedure are very challenging especially if procedure are to be done with out anesthesia. In a hospital working towards Pain Free Hospital certification, Pain Free Procedure is one of the five objectives to be achieved. We as anaesthesiology team are very well known to have more knowledge in providing analgesia for intra operative procedure and during post- operative period using various techniques. With this knowledge we Pain Management Team in HSIJB managed to help our surgical discipline team to provide adequate relief for some common procedure done in open ward or emergency department eg. Wound dressing and fracture reduction.

A specific protocol was design to ensure proper selection of patients; safety, patients comfort during procedures using multimodal analgesia and specific techniques . Follow-up was made post procedure and continuation of care was given till patient's discharged. At discharged all patients who received strong opioids was be given an appointment to pain clinic for continuation of care to ensure good rehabilitation process.

Our data indicates that during dressing mean pain score is 2, more then 90% of patient was able to be converted to oral analgesia, less then 10% requires sedation or anaesthesia, 21% requires additional medication or special techniques for pain relief during dressing. Sixty seven percent was discharged with strong opioids . More then 50% attend pain clinic for continuation of care and averaged strong opioids use was 3-5 weeks. In fracture reduction procedures it was noted that more then 70% of patients who had fracture reduction done under adequate pain relief without sedation had successful reduction. Mean pain score during reduction was 3 and 95% had sedation score of 0, 5% had sedation score of 1 but non had sedation score of 2 and above.

PREOPERATIVE BLOOD INVESTIGATIONS IN ELECTIVE SURGERY: A NATIONAL AUDIT ON MINISTRY OF HEALTH ANAESTHETIC PRACTICES

*S T Kiung¹, N H Hadzrami¹, R J Ryan², HA Hashim³, H Jawahir³, CA Ang⁴, R L Alias⁴,
L S Tay⁵, L F Phang⁶, L K Tan⁷, K W S Ng⁸, A Y Zainal Abidin⁹, W L Lim², J Hassan¹,
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⁶Hospital Umum Sarawak, Kuching, Sarawak, Malaysia

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⁸Hospital Sultan Hj Ahmad Shah, Temerloh, Pahang, Malaysia

⁹Hospital Pulau Pinang, Georgetown, Penang, Malaysia

Preoperative blood testing is elementary in the anaesthetic assessment for patients going for elective surgeries to improve patients' overall outcome. Previous studies have demonstrated that up to 90% of preoperative blood investigations were deemed unnecessary. This has major impact in terms of workload and costs the ministry with no added clinical advantage to the patients.

A national cross sectional study was recently completed to capture the proportion of inappropriate preoperative blood investigations done in ASA I and ASA II patients, the costs incurred from inappropriate blood ordering practices within the anaesthesia fraternity. A total data from 2955 patients were collected. Mean age was 32.93 (± 19.93), majority of patients were females (60.3%) with equal proportions of ASA I and II patients going for mostly minor surgery (64.7%). The blood tests analyzed were full blood count, coagulation profile, renal profile and liver function test. The appropriateness of the test ordered by anesthetists was examined in accordance to the Anaesthetic Clinic Protocol 2012, published by the Ministry of Health Malaysia.

Anaesthesia department did mass of the blood test ordering (72.1%) on first encounter and on second review (27.6%). This has resulted in a total of 1795 indiscriminate blood tests. Commonest reason for reordering of blood investigations was stated as routine (18.8%). This amounts to a total of unnecessary expenditure of RM13515.48 over 3 months. However, we did not study the surgical context of their investigation ordering practices.

This survey provides a glimpse of non adherence to guidelines and gross wastage. Protocol implementations and fortifications are still mandatory to minimize expenditures and to improve blood ordering practices.

ROLE OF THE ANAESTHESIOLOGIST IN ENHANCED RECOVERY (based on article of Abdelazeem Eldawlatly⁸)

Jan P Mulier

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There have been many published articles on implementing the enhanced recovery after surgery (ERAS) (www.erassociety.org) protocols with first special reference to gastrointestinal surgery.^{1,2} ERAS is a clinical pathway proposed to improve the outcome and to speed the recovery process after surgery.³ In implementing enhanced recovery after bariatric surgery (ERABS) protocol, it was found that the use of ERABS ensured the highest safety standards.^{3,4} ERAS guidelines for the postoperative management were successfully implemented in gynaecologic/oncology surgery.⁵ Looking in depth to the ERAS protocols, you will find that anaesthesia plays an important role in many aspects of ERAS, including patient education, preoperative evaluation and optimization, anaesthesia choice and medication, fluid therapy, temperature monitoring, and postoperative analgesia. Therefore, the term enhanced recovery after anaesthesia (ERAA) accurately describes the anaesthesia section in the ERAS protocols.

In the preoperative section, patient information and risk stratification are the most important. Smoking cessation for at least 4 weeks is highly recommended as is avoiding sedative pre medication and requesting weight reduction for obese patients. Oral hydration and energy might be less important.

In the intraoperative section, a standard aesthetic protocol should be adhered. Monitoring aesthetic depth to prevent awareness and to minimize aesthetic side effects is recommended. Neuromuscular transmission monitoring and reversal of neuromuscular blockade are strongly recommended. We believe that sugammadex which is specific reversal agent for rocuronium has ensured the adequate return of muscle function and nearly eliminates the problem of residual paralysis during the recovery period. Anaesthetic drugs should be short acting with a focus on maximal opioid reduction by using additives that block sympathetic activity.

In the postoperative section, opioid sparing techniques including regional techniques are strongly recommended as multimodal analgesia strategy. This is easier to achieve when using total opioid free anaesthesia intra operative by preventing the rapid developing tolerance and hyperalgesia after a normal opioid anaesthesia. Thoracic epidural analgesia is strongly recommended only in open laparoscopic and thoracic surgery.

Opioid free anaesthesia can be achieved by using alpha2 agonists, lidocaine, magnesium and ketamine, all four in a reduced dose when combined. Paracetamol and NSAIDs might be sufficient as analgesics post operative and can be combined with very low doses of alpha2agonists, lidocaine, ketamine and magnesium again.⁶ Single dose or continuous wound infiltration of local anaesthetic is also helpful as analgesics.⁷ In addition it is important to prevent and avoid postoperative delirium which includes avoidance of long fasting hours, deep anaesthesia, and use of benzodiazepines.

ERAA includes all aspects of the ERAS protocol and gives the practicing anaesthesiologist the most important facts; belong to our specialty, to be implemented in an easy way to achieve at the end better outcome for our patients.

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THE FUTURE AND DIRECTION OF NEURO-ANAESTHESIA IN MALAYSIA

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Sub-specialisation training enables anaesthesiologists to provide superior expertise in perioperative patient care, use of expensive technology, and close collaboration with surgeons in special interest fields. This is especially true in neurosurgery and their allied disciplines where the increasing complexity of surgical procedures, expanding knowledge and increasingly challenging neurosurgical patient requires that the anaesthetist undergo training to acquire extra knowledge and skills to ensure good perioperative care to our patients.

This lecture will highlight the needs and challenges in neuro-anaesthesiology services in our country. By creating awareness, it is hoped that many young anaesthetists will pursue this exciting career in neuro-anaesthesia and hence contribute to the betterment of patient care in Malaysia.

TRAUMATIC BRAIN INJURY – MALAYSIA EXPERIENCE

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Traumatic brain injury (TBI) is a major cause of morbidity and mortality in all age groups. It is a major cause of disability and the survivors often suffer cognitive, mood and behavioural disorders. Currently, the treatment is aimed at minimizing the secondary brain injury, no effective treatment to reverse the effects of primary brain injury yet. Worldwide, around 10 million traumatic brain injuries detrimental enough to result in hospitalization, life-long disability, or death occur annually. For our country, in 2007, out of 584 major trauma patients, 55.6% had initial GCS of 3 to 8 and 90% had injuries to the head and neck. 45% of all TBIs were intracranial injuries with traumatic subdural haemorrhage as the commonest findings (28.3%). In 2008, 0.8% from 147 607 trauma patients who were admitted to the 8 participating hospitals were classified as major trauma. 65.2% of major trauma patients had injuries to the head and neck and 51.7% had GCS 3 to 8. 43.7% of the intracranial injuries were due to traumatic subdural haemorrhage. 46.9% of major trauma patients underwent surgery with 54.5% of these were intracranial injuries. In 2009, with the same participating hospitals as in 2008, out of 166 768 patients, 1.2% were diagnosed as major trauma with 85.4% of them had injuries to the head and neck; 63.6% underwent intracranial surgeries; an increment of morbidity from the previous years. In conclusion, as other parts of the world, TBI is an important public health problems of our country.

POSTOPERATIVE COMPLICATIONS OF UNRECOGNIZED SLEEP APNEA (POSA) TRIAL

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Over the last few decades, there has been increasing concern that a majority of patients with OSA are undiagnosed and untreated. Despite the growing awareness of OSA's effect on postoperative outcomes, up to 80% of patients presenting for surgery may have undiagnosed OSA.

Majority of studies reported that OSA patients have worse outcomes for a number of events, especially pulmonary complications. Association between OSA and in-hospital mortality varied among studies.

POSA trial is an international, prospective, observational study in patients, with known, or at risk of, atherosclerotic disease, undergoing major non-cardiac surgery to determine the association between OSA and postoperative vascular events at 30 days after surgery.

Results of the study showed that of the 1,212 high- risk patients who had undergone surgery, 78% had a diagnosis or suspicion of OSA, of which 40% were moderate- to- severe. Moderate- to- severe OSA is associated with increased risk of postoperative vascular events (myocardial infarction), higher risk for ICU readmission/re-ventilation as well as risk for respiratory infection.

This suggest that improving the recognition of OSA, ensuring adequate therapy and close observation of these patients may be a strategy to reduce the incidence of adverse postoperative outcomes.

PATIENT CENTRIC HEALTHCARE

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“That the ultimate test of the quality of a healthcare system is whether it helps the people it intends to help...”(National Academies, 2001). This quote served as the pivot point for the presentation. This session will define what a “patient centric healthcare” concept is. After which the presenter will explain the dimensions of patient centeredness according to Gerteiss (1993) and how it relate to the International Patient Safety Goals as advocated by the Joint Commission International (2017). The concept then is linked to the complex adaptive nature of the healthcare system and the need to redesign the current system to achieve the patient centeredness required to ensure safety of the patient. The session later will conclude with elaboration of the key challenges of redesigning and implementation of a patient centric healthcare organization using examples from the literature and the presenter will share his experience in designing and implementing the healthcare enterprise architecture for a similar initiative in Malaysia, for the participants to learn from.

SIMULATION AS AN ESSENTIAL TOOL IN ANAESTHESIA TRAINING

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BACKGROUND

Training with realistic devices is not a new phenomenon in military, aviation and other high-stakes industries. Healthcare education has increasingly incorporated training aids to supplement traditional techniques of lectures, discussions and apprenticeships. Thus, part-task trainers, animal and cadaver models and increasingly sophisticated mannequins became commonplace for skills training of medical proceduralists. But this was not enough to prepare anaesthetists and other acute-care physicians for medical crises.

EVIDENCE

Published studies from anaesthesia incident monitoring surveys and audits of adverse outcomes have determined that medical staff do not manage perioperative emergencies optimally. Well-trained and knowledgeable doctors were often impeded by inadequate or incorrect behaviours. Healthcare looked to aviation to understand the importance of non-technical skills (human factors) in supplementing mastery of the component skills to enhance passenger and patient safety. Immersive simulation with sophisticated, realistic mannequins represents the most recent step in evolution of education in medical crisis management.

APPROACH

As academic educationalists, and other related professionals, such as psychologists, turned their attention to simulation centres, 'simulationists' were challenged and some of their early ideas were questioned. Course structures were refined and extra levels of academic rigour were imposed. With these new interprofessional relationships came new opportunities. Simulation-rich courses became more acceptable for established curricula and allowed them to achieve 'mainstream' status. Simulation is now embedded in training programs for Anaesthesia [MOCA (USA); EMAC (Australasia, Hong Kong)], and Emergency Medicine [ACME, (Australia)].

CONCLUSION

With the relative rarity of anaesthetic crises and the acceptance that clinicians often perform poorly during real emergencies, it is imperative that trainees and practitioners be exposed to simulated emergencies at regular intervals.

FIELD ANAESTHESIA

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OBJECTIVES

Surgical care needs are different from context to context and anaesthesia providers need to recognize the difficulties linked to these contexts. MSF (Doctors without Borders) has proven that even in low-resourced settings, safe administration of anaesthesia is possible.

METHODS

This is a retrospective description of MSF experience that mainly relies in the delivery of standardized care with flexibility to tailor it to a given setting.

SUMMARY

The aim of field anaesthesia is to save lives and to facilitate surgery, and although conditions are unfavourable, it is still possible to administer simple anaesthesia of good quality. There is no essential difference between normal anaesthetic practice and those of anaesthesia in low-resourced settings. What make the differences are the practical aspects, constraints and conditions. The fundamental principle must be ‘Do No Harm’ and sometimes not operating may be more appropriate than surgery under unacceptably dangerous conditions. Usually, the standard is very basic with very little available electronic monitoring equipment but at least, a pulse oximeter must be available. Also oxygen cylinders are often not available and oxygen concentrators are a useful alternative. As anaesthesia machines with ventilators are not common, self-inflating bags might be the solution. Anaesthesia techniques should consider the risks and the benefits for the patient and the following should be taken into account: cardiorespiratory depression and muscular paralysis and low dependency on oxygen and biomedical devices. Recommended techniques: local infiltration, spinal anaesthesia while epidural is not recommended, regional blocks only if the anaesthetist is proficient, and general intravenous while general inhalation is very difficult to achieve.

CONCLUSIONS

Anaesthesia of quality in the field remains a challenge due to weak healthcare systems and lack of adequate human resources and material. However, anaesthesia should aim for the best possible quality that can be offered in a given context.

DONATION AFTER CARDIAC DEATH (DCD) : ARE WE READY?

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Organ donation after cardiac death (DCD) is not new concept but one that has gained increased attention in the past several years as a viable and appropriate method of recovering organs. This was the first method of organ donor recovery ever utilised and was called “non-heart beating donation”. In those early years only kidneys were recovered due to a variety of limitation including surgical technique, ischaemia and available methods of preservation. To day, kidneys, liver, pancreas and in some cases lungs and hearts can also be recovered and successfully transplanted from donors who have had a cardiac arrest. DCD is an option for families of patients who have a severe neurological injury and/or irreversible brain damage but still have minimal brain function. After a physician has determined that a patient has no chance for recovery and the family has decided to withdrawn support, the family is offered the option of DCD. This allow them to honour their loved one’s decision to be an organ donor and directly helps those awaiting a life-saving organ transplant. Throughout the process, there are conflict-of-interest safe guards, with separate times and personnel for important decisions. Organ recovery staff is separate from those are providing care for the patient. The determination that a patient has suffered a life ending injury and decision to withdraw support are made prior to any request, decision for organ donation.

SYMPOSIUM 7

ALLIED HEALTH 1 : COMMUNICATION DURING PATIENT CARE

COMMUNICATING TREATMENT GOALS IN ACUTE PAIN MANAGEMENT: COMMUNICATION DURING PATIENT CARE

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Managing patient’s pain is an art which requires passions and skills to provide best treatment because pain is very subjective. As a provider a lot of issues run in mind while dealing with patient’s pain. The common questions are, “how much can you trust your patient’s pain complaint”, ‘is the patient telling the truth or he is just malingering?’.

In delivering a good acute pain management it is very important to have a good communication skill; however to create a good communication health care provider are require to:

- Have knowledge on assessment of pain, principle of pain management, drugs for analgesia, various techniques in providing pain relief
- Understand patient’s perceptions and level of understanding in expressing their pain, the patient’s knowledge on their right’s for pain relief and option that can be provided for them.
- Have feelings of empathy, sympathy and willingness’ to provide help or care to patient’s and most importance is to listen and trust the patient’s word

TIVA IN DAY SURGERY

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Successful ambulatory surgery requires the use of an anaesthetic technique that produces good quality of recovery in the physiological, functional, emotional and cognitive domains, in combination with appropriate logistic arrangements. To this end, propofol based total intravenous anaesthesia (TIVA) technique is eminently suitable to achieve these aims. With the availability of open target controlled infusion (TCI) systems and generic propofol the costs are no longer prohibitive and yet its uptake is not as widespread as it could be. This lecture will review some of the reasons why it may be advantageous to use TIVA in the day case setting, explore some of the barriers to the use of TIVA and dispel some common misconceptions associated with its use as well as providing some tips and tricks in adopting this technique.

EXTENDED CRITERIA FOR DAYCARE PATIENTS

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The relative safety of daycare surgery has led to an expansion of daycare to increasingly elderly and frail patient population. Advances in noninvasive surgical techniques and modern anaesthesia have allowed an increasing number of patients with complex medical conditions to undergo daycare surgery. Shrinking hospital resources have similarly increased the complexity of procedures offered as daycare.

Is daycare surgery safe? Is age an independent risk factor for adverse perioperative events? Are the obese at an increased risk of unanticipated hospital admission following daycare surgery? Can 'ASA 3' patients be safely done in day surgery setting?

Unanticipated admission has been suggested as a patient safety marker to assess daycare surgical outcomes as well as a way to identify unsuitable daycare surgical candidates.

Daycare surgery has moved well beyond the 'ASA 1 and 2' patient and research on daycare surgery should now focus on identifying the risk and benefits of this model of care. As provision of daycare surgery expands, widening of the selection criteria safely may be a way to achieve 75% of surgery done on a daycare basis.

ANAESTHESIOLOGY AND THE LAW

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Anaesthesiology is a high risk specialty and even more risky in certain subspecial areas of anaesthesia services (e.g. obstetrics, trauma etc). Unfortunately many patients are not fully aware of the independent risks anaesthesia carry apart from risks that are dependent on the type of procedure and performer. These risks can sometimes outweigh the surgical benefits.

Unfortunately the anaesthesiologist generally spends the least time with the surgical patient, coming in between or even only on the day of the procedure itself. There is little rapport built and often, minimal information shared and discussed.

Anaesthesiologists are involved in medical negligence either directly (as a consequence of anaesthesia outcome) or more often indirectly as a part of the surgical team.

Negligence can be described in terms of a duty imposed by the law. The components of medical negligence can be classified as the 4 D's.

NAMELY

1. Duty of care that is imposed (by law, in contract or implied as in professional dealing)
2. Dereliction of that duty of care
3. Direct causation of an adverse outcome due to the dereliction of the duty
4. Damage as a result

As a profession that is exposed to medical negligence, such a topic is least taught or emphasized during our training years. Data from medicolegal insurance firms show an increasing trend in medical litigation and anaesthesia is not an exception.

A few simple steps to reduce, avoid, equip and prepare ourselves in such situations will be discussed.

HAEMODYNAMIC MONITORING FOR PERIOPERATIVE OPTIMIZATION

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The optimization of oxygen delivery (DO₂) represents the keystone of goal-directed therapy in high-risk surgical patients. To this end, it is important to monitor and improve blood oxygenation and cardiac output (CO).

Haemodynamic monitoring can be helpful in the perioperative setting, as monitoring allows preemptive actions to be performed before a significant problem arises. A typical scenario is the patient in whom monitoring can be used to detect hypovolemia (e.g., bleeding) or low DO₂ early, enabling timely corrective therapy to be initiated.

There are now many different monitoring systems available. CO measurement using the thermodilution method is regarded as the gold standard technique in haemodynamically stable subjects. However, pulmonary artery catheter insertion is an invasive procedure with associated complication risks.

Echocardiography allows measurement of CO using standard two-dimensional imaging or, more commonly, Doppler-based methods. It can be used not only for measurement of CO but also for the additional assessment of cardiac function.

Several pulse contour methods have been developed. These are less invasive beat-by-beat monitoring techniques using specific algorithms to compute CO from analysis of arterial pressure waveforms.

Also, bioimpedance has been introduced. It measures changes in the frequency of the electrical currents traversing the chest. This technique is non-invasive and can be applied quickly.

All these systems are important in the perioperative setting, as they serve as advanced haemodynamic monitoring to optimize preload, CO and DO₂ with the so called “haemodynamic goal-directed therapy (HGDT)”. These tools can be particularly helpful in the early (e-HGDT) stages of resuscitation, but are less useful when organ failure is established.

Finally, for perioperative optimization it is important to select the system most appropriate for each patient and for each type of problem.

ESSENTIAL SET UP OF POST ANAESTHETIC CARE UNIT (PACU)

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Since 2102, the Department of Anesthesiology and Intensive Care Universiti Kebangsaan Malaysia Medical Center (UKMMC) has developed Post Anaesthetic Care Unit (PACU), an extended recovery bay that receives high risk patients following anaesthesia. We realised that many high risks cases for anaesthesia had their cases postponed as they had to compete for Intensive Care Unit(ICU) beds. Most of the times, these patients may need extra observations or prolong post anaesthetic recovery in ICU that may be less than 24 hours.

Ideally the PACU must be in the operating theatre next to the recovery bay, equipped with intensive care facilities. The staffs should be ICU trained and able to recognise and manage post anaesthesia complications. There should also be strict selection criteria for admission and discharge. The PACU should have its own governance and should be treated as its own unit of management.

This area has to kept clean and should not be admitting infectious cases. In our PACU we do not admit patients that may need prolonged ICU stay or multiple interventions for its management. Patients should not stay more than 24hours in PACU. The running cost of PACU will be similar to the cost of managing a mini ICU. It is not cheap. However, PACU may be able to reduce the rate of postponement of cases that need ICU post anaesthesia care and at the same time reduce the burden of ICU.

MYTHS AND FACTS OF POSTOPERATIVE NAUSEA VOMITING

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Postoperative nausea and vomiting (PONV) is a major concern for patients presenting for surgery. It is a very distressing symptom that may increase medical cost and delay discharge and recovery. The causes of PONV are multifactorial and can be categorized as patient risk factors, anaesthetic technique, and surgical procedure. Multiple tools exist to stratify patients according to their risk of developing PONV. Additionally multiple PONV treatment guidelines exist to help healthcare providers in managing PONV in general. Antiemetics work on several different receptor sites to prevent or treat PONV. A multimodal approach to PONV should not be limited to drug therapy alone but should involve a holistic approach starting before operation and continuing intraoperatively with risk reduction strategies according to the assessed patient risk for PONV.

BEST PRACTICES WITH HEALTH INFORMATICS

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“Information is the lifeblood of modern medicine [and] health information technology is destined to be its circulatory system...” (Blumenthal, 2010). Health Informatics will then be defined and related to the best practices within the scope of anesthesia and critical care. Examples will be presented during the presentation include the concepts of Enterprise Information Management, development of clinical paths and decision support and analytics system for the healthcare enterprise promoting the best practices especially related to patient safety and efficiency of healthcare processes. The challenges for both best practices and health informatics will be discussed as a conclusion to the presentation for the attendees to take home.

MUSCLE RELAXANTS FOR THE DIFFICULT AIRWAY

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A difficult airway is defined as the clinical situation in which a conventionally trained anaesthesiologist experiences difficulty with facemask ventilation of the upper airway, difficulty with tracheal intubation, or both.¹

Muscle relaxants might be required if endotracheal intubation is needed as it facilitates a safe intubation and allows rapid sequence intubation (RSI) if aspiration is at risk. Intubating a patient with a known or suspected difficult intubation means that the most optimal positioning of the patient with a maximum muscle relaxation is required while different and alternative methods for intubation in which the attending anaesthesiologist is experienced should be available. We will not go in detail of these methods but focus on achieving a safe deep NMB.

The properties of such a NMB: rapid and reliable onset of complete muscle paralysis (the onset time should be less than 1 minute and have a narrow standard deviation and few outliers); a short clinical duration to allow rapid awakening or reversal before desaturation in case of cannot ventilate, cannot intubate but also an easy prolongation of the deep NMB if more time is required to intubate. Suxamethonium (succinylcholine) has some of these properties but requires extra doses to keep a longer deep NMB while giving mask ventilation in between several attempts to intubate. Rocuronium can be given at a dose of 1.0 mg/kg IBW and achieve a comparable rapid curarisation. When first magnesium and lidocaine is given an even faster induction is possible at 30 seconds after giving rocuronium.

Suxamethonium compared to rocuronium gives a more rapid desaturation in overweight patients.² The safe apnoea time (until desaturation to 92%) is significantly shorter after suxamethonium than after rocuronium (283 s vs. 329 s), and the recovery period to 97% saturation after beginning of ventilation is longer after suxamethonium as compared to rocuronium (48 s vs. 36 s). This difference may be attributed to the increased muscle oxygen consumption induced by suxamethonium related skeletal muscle fasciculations.³

Suxamethonium has a plethora of undesirable side effects, ranging from the inconsequential to the catastrophic events. (Increased intra gastric pressure, nausea, muscle pain, increased intra ocular pressure, hyperkalaemia, bradycardia and risk for cardiac arrest, anaphylaxis, phase II block and reduced plasma cholinesterase activity can cause prolonged NMB, malignant hyperthermia in susceptible patients.) Reversal with sugammadex is possible after rocuronium at every moment and is even shorter than the spontaneous reversal of suxamethonium. This is important for the cannot intubate, cannot ventilate patient. As long as mask ventilation is possible and more intubation attempts are required no extra bolus should be given after rocuronium compared to suxamethonium making intubation conditions continuous ideal. While using both drugs one should not forget to add extra intravenous hypnotics as long as inhalation agents are not given yet.

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AIRWAY ULTRASOUND

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Airway ultrasound is a valuable, non-invasive, simple, and portable point of care ultrasound (POCUS) for evaluation of airway management even in anatomy distorted by pathology or trauma¹. Ultrasound enables us to identify important sonoanatomy of the upper airway such as thyroid cartilage, epiglottis, cricoid cartilage, cricothyroid membrane, tracheal cartilages, and esophagus. Understanding this applied sonoanatomy facilitates clinician to use ultrasound in assessment of airway anatomy for difficult intubation, ETT and LMA placement and depth², assessment of airway size, ultrasound-guided invasive procedures such as percutaneous needle cricothyroidotomy and tracheostomy, prediction of postextubation stridor and left double-lumen bronchial tube size, and detecting upper airway pathologies. Widespread POCUS awareness, better technological advancements, portability, and availability of ultrasound in most critical areas facilitate upper airway ultrasound to become the potential first-line non-invasive airway assessment tool in the future¹.

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FUTURE OF SUPRAGLOTTIC AIRWAY DEVICE

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Supraglottic airway devices (SAD) is used to describe a group of airway devices that have a ventilation orifice or orifices above the glottis. The Classic laryngeal mask airway was introduced into clinical practice in 1988, and since then there are multiple type of SADs invented. SADs have important roles in anaesthesia, airway rescue after failed intubation, out of hospital use and as a conduit to assist difficult tracheal intubation. The limitations of the Classic LMA particularly in controlled ventilation and airway protection give rise to second generation of SADs; they have design features intended to reduce the risk of aspiration, thereby increasing the safety of use. This improvement has gained interest in pre-hospital use of SADs, where the risk of aspiration and regurgitation are high. Even though tracheal intubation has been viewed as the best airway management during out of hospital cardiac arrest (OHCA), SADs are faster, easier to insert and may reduce the complications related to intubation such as interruption in chest compressions and delays in accessing definitive care. New AHA guidelines in recent years also advocating limitations in CPR interruptions. However, a secondary analysis of data from North America (Resuscitation Outcome Consortium and Cardiac Arrest Registry to Enhance Survival) showed that tracheal intubation was associated with better outcomes than the used of SADs in those patients. As both were observational studies, AIRWAYS-2 (UK) and Pragmatic Airway Resuscitation Trial – PART (US) are efforts to identify the best advanced airway management strategy through randomized control trials.

ARTERIAL PRESSURE MONITORING IN ANAESTHESIA

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Arterial pressure monitoring is essential in anaesthesia. Indeed, arterial hypotension could be responsible for tissue hypoperfusion, increased morbidity and mortality. Opposite, hypertension can be responsible for organ damage and potential haemorrhage.

Often the arterial pressure is monitored to assess systolic, diastolic and mean arterial pressure. Actually, the arterial pressure wave morphology provides additional information on preload, afterload, myocardial contractility and arterial tone.

Many blood pressure monitoring have been introduced in clinical practice. These devices offer systolic, diastolic and mean blood pressure but, more importantly, they can provide advanced haemodynamic variables.

For instance, the slope of the ascending part of the systolic phase gives information on myocardial function and arterial elastance. Also, the position of the dicrotic notch on the wave (the point of the arterial wave at which the aortic valve closes) is an indirect index of arterial tone and vascular resistances. Systolic and pulse pressure variations in mechanically ventilated patients can be used as a surrogate index to evaluate the fluid responsiveness. Finally, the area under the systolic part of the arterial wave is directly correlated with the stroke volume.

These haemodynamic variables are particularly important in high-risk patients undergoing general anaesthesia, as they may serve to guide the administration of fluids, inotropes and vasoactive drugs to avoid or reduce perioperative complications.

However, some particular conditions (e.g., underdamping, overdamping) may affect the quality of the arterial pressure wave. These can be responsible for errors in the interpretation of the aforementioned haemodynamic parameters.

Adequate interpretation of the pressure wave morphology can help clinicians in selecting appropriate therapy with the aim to improve outcome after surgery and in intensive care unit.

ADEQUACY OF ANAESTHESIA – NMT/ENTROPY/BIS

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Measurement parameters help the clinician deliver tailor-made anesthesia to the patient, meet the patient's individual needs, adjust drug delivery to perioperative events and avoid under- and over-dosage situations.

Entropy helps to assess unconsciousness. Entropy is indicated for adult and pediatric patients older than 2 years within a hospital for monitoring the state of the brain by data acquisition of electroencephalograph (EEG) and frontal electromyograph (FEMG) signals. High values of Entropy indicate high irregularity of the signal signifying that the patient is awake. A more regular signal produces low Entropy values which can be associated with low probability of consciousness. Compared to bispectral index (BIS), The UK National Institute for Clinical Excellence (NICE) Diagnostics Guidance has stated that Entropy is broadly equivalent to BIS.

Neuromuscular Transmission is used to assess surgical paralysis or immobility. There is significant inter-patient variability in response to NMBAs. Residual neuromuscular blockade can be minimized with NMT monitoring, as well as reducing the risk of adverse respiratory events during early recovery from anesthesia. The 2015 "Recommendations for standards of monitoring during anaesthesia and recovery" published by the Association of Anaesthetists of Great Britain and Ireland (AAGBI) mandates that "a peripheral nerve stimulator must be used whenever neuromuscular blocking drugs are given." These recommendations also list a peripheral nerve stimulator (if neuromuscular blocking drugs are used) as part of the "minimum monitoring for anaesthesia" along with pulse oximetry and capnography.

CVP WAVEFORMS – THE FORGOTTEN MONITOR

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One of the most important goals in the management of patients with perfusion abnormalities is to optimize preload through volume resuscitation. The central venous pressure (CVP) has been considered a reliable indicator of right ventricular preload. It has been used to assess cardiac preload and volume status in critically ill patients, assist in the diagnosis of right-sided heart failure, and help guide fluid resuscitation. CVP is measured in the superior vena cava close to the right atrium; and for clinical purposes is assumed to equal right atrial pressure and right ventricular end-diastolic pressure. This pressure is monitored as a surrogate for right ventricular filling volume,

The characteristics and amplitude of the CVP waveform components change significantly with atrial fibrillation, junctional rhythm, tricuspid valve disease and reduced right ventricular compliance.

Junctional rhythm disturbances may lead to delayed retrograde atrial depolarization. This delay may cause the right atrium to contract against a closed tricuspid valve, producing large waves called cannon a waves.

Tricuspid stenosis may also lead to large a waves due to resistance of blood flow through the tricuspid valve causing increased atrial pressure during right atrial contraction. Tricuspid regurgitation, on the other hand, may lead to giant v waves, or ventricularization, as the pressure generated during right ventricular contraction is detected at the catheter tip. In cases of cardiac tamponade, the x descent steepens as increased right atrial pressure hastens emptying of blood into the right ventricle through the tricuspid valve

Examples of normal and abnormal CVP waveforms will be shown.

SAVE BLOOD, SAVE LIVES

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Preoperative anaemia and perioperative blood transfusion are both identifiable and preventable surgical risks. Patient blood management is a multimodal approach to address this issue. It focuses on three pillars of care: the detection and treatment of preoperative anaemia; the reduction of perioperative blood loss; and harnessing and optimizing the patient-specific physiological reserve of anaemia, including restrictive haemoglobin transfusion triggers. This lecture reviews why patient blood management is needed and strategies for its incorporation into surgical pathways.

Anaemia is common in surgical practice. Both anaemia and blood transfusion are independently associated with adverse outcomes. Functional iron deficiency (iron restriction due to increased levels of hepcidin) is the most common cause of preoperative anaemia, and should be treated with intravenous iron. Intraoperative blood loss can be reduced with antifibrinolytic drugs such as tranexamic acid, and cell salvage should be used. A restrictive transfusion practice should be the standard of care after surgery.

The significance of preoperative anaemia appears underappreciated, and its detection should lead to routine investigation and treatment before elective surgery. The risks of unnecessary blood transfusion are increasingly being recognized. Strategic adoption of patient blood management in surgical practice is recommended, and will reduce costs and improve outcomes in surgery.

SYMPOSIUM 12

VENTILATION STRATEGIES

MANAGEMENT OF ATELECTASIS

Joseph Abueg

GE Healthcare ASEAN, Singapore

Atelectasis during anesthesia, occurs in almost all anesthetized patients and persist post-p in some. It occurs rapidly during mask ventilation and intubation and may cause deterioration in gas exchange and lung mechanics. This can lead to severe pulmonary complications in susceptible patients. Lung recruitment reopens collapsed lungs and improves gas exchange. PEEP alone is ineffective to reopen collapsed lungs but after recruitment keeps the lungs open over time. Automated procedures may be helpful in delivering lung ventilation maneuvers precisely and reproducibly, by simplifying manual alveolar recruitment strategy. A combination of vital capacity breaths, lung recruitment maneuvers and maintenance PEEP may produce best results.

HELMET CPAP

Adi Osman

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Non-invasive mechanical ventilation (NIV) has proved to be an excellent technique in selected critically ill patients with different forms of acute respiratory failure. However, NIV can fail on account of the severity of the disease and technical problems, particularly at the interface. The helmet could be an alternative interface compared to face mask to improve NIV success. This lecture will discuss the main physiological and clinical studies assessing the efficacy and related issues of NIV delivered with a helmet CPAP.

NASAL HIGH FLOW OXYGEN THERAPY

Raha Abdul Rahman

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Nasal high flow system has been used as a mode of oxygen therapy for many years but has been more popular in neonates and infant as compared to adult patients. Recently, there were quite a number of randomised control trial comparing its use in adult critically ill patients as an alternative mode of oxygen therapy. It is also known as nasal high-flow ventilation, high-flow therapy and high-flow nasal cannula (HFNC) oxygen therapy. The system comprises of an air/oxygen blender, an active heated humidifier, a single heated circuit and a nasal cannula. At the air/oxygen blender, the inspiratory fraction of oxygen (FIO₂) is set from 0.21 to 1.0 in a flow of up to 60 L/min. The gas is heated and humidified with an active humidifier and delivered through the heated circuit. Although delivered through an open system the high flow overcomes resistance against the expiratory flow and creates positive nasopharyngeal pressure.

The relatively low pressure generated from the high flow is considered adequate to increase lung volume or recruit collapsed alveoli. The end-expiratory lung volume was shown to be greater with HFNC than with low-flow oxygen therapy. There is also evidence that suggests less dead space with HFNC. However, the airway pressure achieved varies on the amount of flow delivered (the higher the flow, the higher the pressure), the type of breathing (with a significantly lower pressure in mouth breathers), the moment of the respiratory cycle, and the degree of respiratory failure.

The HFNC therapy was shown to improve preoxygenation prior to intubation in critically ill patients and reduced prevalence of severe hypoxemia. Its use in treating mild to moderate hypoxaemia was associated with significant reductions in breathing frequency, heart rate, dyspnea score, supraclavicular retraction and thoracoabdominal asynchrony, and significant improvement in SpO₂. Compared with the Venturi mask, HFNC therapy results in better oxygenation for the same set FiO₂ after extubation in critically ill patients and was associated with better comfort, fewer desaturations and interface displacements, and a lower reintubation rate.

However, a few important issues remain to be resolved, such as its indication, timing of starting and stopping HFNC, and escalating treatment. Despite these, HFNC oxygen therapy is an innovative and effective modality for the early treatment of adults with respiratory failure with diverse underlying diseases.

OPTIMISING OXYGEN DELIVERY DURING EXTRACORPOREAL CIRCULATION

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Systemic oxygen delivery during extracorporeal circuit is probably one of the most important determinants of optimal perfusion. Oxygen delivery is determined by the pump flow rate and the arterial oxygen content. The design of components of the cardiopulmonary bypass circuit may also influence tissue perfusion and outcomes.

Optimal perfusion can be defined as a state where patient undergone cardiopulmonary bypass and survives without life-threatening complications. It represents a unique clinical state in which nearly all aspect of perfusion can be determined by clinicians. Management of these physiologic variables will focus on the primary determinants of tissue oxygen supply and demand; which include mean arterial pressure, bypass flow rates, haematocrit values, systemic oxygen delivery, temperature, type of flow and acid-base management.

Currently, there is considerable controversy relating to appropriate management of physiologic variables during cardiopulmonary bypass. Mean arterial pressure of 50-60 mmHg is well tolerated in low-risk patients whereas higher-risk patients may benefit from mean arterial pressure above 70 mmHg. Studies have shown that most patients tolerated haematocrit level of 22-23% without obvious adverse effects and the flow rate commonly used during cardiopulmonary bypass is 2.2-2.5L / min/ m².

Hypothermia can reduce oxygen demand and increase ischaemic tolerance, although current evidence does not support one temperature management strategy for all patients. The delivery of pulsatile perfusion is said to improve major organs blood flow and augments tissue oxygen delivery.

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VISCOELASTIC TEST OF COAGULATION IN CARDIAC SURGERY

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Monitoring of blood coagulation in cardiothoracic surgery is important to better determine the causes of hemorrhage, to guide hemostatic therapies, and to predict the risk of bleeding perioperatively. Coagulation testing using thromboelastography dates back to the late 1940s when Dr. Hartert initially described the thromboelastograph to be used for physical blood analysis. Among coagulation monitoring modalities used to assess the viscoelastic properties of whole blood includes thromboelastography, rotational thromboelastometry, and Sonoclot® analysis which may overcome several limitations of routine coagulation tests in the perioperative setting. Viscoelastic test of coagulation devices are increasingly being used in clinical practice, especially in the management of patients undergoing cardiac surgery. Postoperative hemorrhage remains a major cause of morbidity after cardiopulmonary bypass (CPB). Viscoelastic test of coagulation have a more significant role in managing perioperative bleeding as compared to routine coagulation tests.

LIBERAL VS RESTRICTIVE TRANSFUSION THRESHOLD IN CARDIAC SURGERY

Andrew A Klein

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LEARNING OBJECTIVES

- Understand the difference between restrictive and liberal blood transfusion and the evidence for both practices.
- Develop an understanding of the use of an Hb trigger to support evidence-based transfusion of red blood cells.
- Understand the effect of the volume of fluid administered intravenously during surgery on patient homeostasis.
- Critically appraise the different technologies for measuring intravascular volume.
- Develop a plan for intravenous fluid administration in different patients and different surgeries.

Systematic reviews of randomised trials of liberal vs. restrictive blood transfusion strategies support a general default trigger threshold Hb 70 g/L for most patient groups. Compared with liberal strategies, restrictive transfusion strategies were associated with a reduction in the number of red blood cell units transfused and number of patients being transfused

Mortality, overall morbidity, and myocardial infarction seemed to be unaltered.

Restrictive transfusion strategies are safe in most clinical settings.

NIGHTMARE OF ANAPHYLAXIS

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Anaphylaxis is one of the most feared perioperative complications by anaesthetists. The incidence of perioperative anaphylaxis is approximately 1:350 -1:10000. This potentially life threatening emergency requires prompt recognition and appropriate management by the anaesthetist and all involved healthcare professionals.

OBJECTIVES

- Review epidemiology of perioperative anaphylaxis
- Discuss the diagnosis of perioperative anaphylaxis
- Review recent guidelines for the management of perioperative anaphylaxis mainly the 2016 ANZAAG (Australian and New Zealand Anaesthetic Allergy Group) guidelines
- Discuss further management and referral to the Anaesthetic Allergy Clinic
- Share the Malaysian data on perioperative anaphylaxis
- Work-flow of the team at the Anaesthetic Allergy Clinic
- Discuss case scenarios

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SAFETY STANDARDS IN MANAGEMENT OF DRUGS LISTED UNDER DANGEROUS DRUGS ACT

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The incidence of drug abuse amongst health care personnel in Malaysia is currently unknown due to lack of surveillance system. Nevertheless, trends in substance abuse amongst healthcare personnel other countries would suggest that this problem can arise in Malaysia. Unless we strengthen existing regulations on the storage and prescribing of DDA drugs in hospital care setting, the problem can spiral out of control and hence compromise patient and staff safety

This lecture deals with the implementation of new guidelines for proper supplying, storing, prescribing, administering, recording, and disposal of DDA drugs in the peri-operative area.

BULLYING AND HARASSMENT IN THE OPERATING THEATRE

Richard H Riley

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BACKGROUND

Patients expect that their care will not be compromised by the presence of bullying and harassment in the workplace. However, anaesthetists, surgeons and other proceduralists, nurses and operating theatre support staff are not exempt from such unprofessional behaviours that exist in other domains.

EVIDENCE

Several published studies have determined that bullying, harassment and discrimination are common in doctors in training in the U.K. and Australia. Further, several cases of bullying among surgical trainees have become publicised in the mainstream press and forced some medical colleges to reassess their policies and methods that impact upon trainee welfare.

APPROACH

It has become imperative that hospitals and medical colleges and societies develop policies and procedures to assist all healthcare workers recognise the variety of behaviours that can be perceived as bullying and harassment. Everyone needs understand the impact of poor behaviours on delivery of care and the welfare of their colleagues, especially those in vulnerable positions; such as junior doctors and nurses, and women. Confidential and formal processes to deal with complaints of such behaviour should be advertised and implemented. All staff require education to reinforce standards of acceptable behaviour and the consequences of bullying, harassment, and discrimination. Support strategies for all staff include discussions groups, assertiveness training, and counselling and mentorship programs.

CONCLUSION

Bullying and harassment may exist at a subtle level and be perceived by junior staff as inevitable and that their complaints may adversely impact upon their future employment. It is therefore incumbent that senior staff become active managers in reducing poor behaviours and continually reassess their relevant policies.

CONSENT OF THE MINOR

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In Malaysia, Child's Act 2001 defines "child" as a person who is under the age of 18 years old but legal age of marriage is 16 years old. In some countries, at the age of 16-17, if the patient is deemed mature enough to understand the surgical procedure, he/she is allowed to consent to the surgeries. Some of us may have adapted the same concept as well especially when treating a neonate whose mother is a 16 years old but whether this is considered acceptable? Let us look briefly at the existing laws from a doctor's perspective and discuss a few situations at which consent in the minor may be an issue.

PERIOPERATIVE TRAUMA STABILIZATION

Adi Osman

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Trauma remains the the top 5 leading cause of death in those less than 44 years of age in the our country. The management of patients with traumatic injuries presents a variety of challenges. Patients have usually undergone multidisciplinary evaluation, resuscitation and stabilization in the emergency department and possible operative intervention prior to inpatient admission. Patients remain at risk for complications due to unrecognized injuries, or related to initial or ongoing management. Ongoing inpatient assessment and monitoring are critical to managing injured patients. This is particularly true in patients who have undergone damage control surgery or those with injuries that are being managed nonoperatively such as blunt splenic, hepatic, duodenal or pancreatic injury. Recognition of the full extent of traumatic injury requires an accurate history, skillful physical examination, and timely and judicious use of diagnostic studies.

WAR SURGERY IN HUMANITARIAN SETTINGS

Lynette B Dominguez, Miguel A Trelles

Medecins Sans Frontieres Operational Center Brussels, Brussels, Belgium

OBJECTIVES

We enumerate and describe the minimal prerequisites to perform quality surgery in a war context. We describe the orthopedic procedures that save limbs from amputation, the provision of maternity care during war, the common surgical interventions performed, and how to ensure quality in surgical activities. Monitoring of surgical infection gives reflection on quality. The number of disability adjusted life years (DALYs) averted by a trauma center in a conflict area gives the importance of a trauma center in a war context.

METHOD

This is a retrospective description of MSF in a war context.

SUMMARY

MSF has pursued opening projects in countries with active conflicts. To ensure quality, minimum standards of the following were assured: water, electricity, infrastructure, drugs, material and equipment, infection control and hygiene, sterilization, blood transfusion and human resources.

Analysis of the type of surgical procedures over 4 years in all projects showed that specialist skills include the ability to perform external fixation and cesarean section. Amputations for open fractures is in one trauma center is at 20% while external fixation helped to salvage limbs. From 2008 to 2012, out of 93, 385 surgical interventions, the most common procedure was a cesarean section (24, 182 or 25.9%).

Monitoring of surgical activities and surgical infection done in one war surgery project over two years showed an intra-operative mortality rate for all orthopaedic procedures of 0.05%. Post-operative infection rate over one year was 2.4%. In one such project, the Kunduz trauma center in Afghanistan, was able to avert 154, 250 disability life years (95% confidence interval) over 4 years.

CONCLUSION

The presence of a humanitarian organization in the midst of a conflict area is valuable in not only in saving lives but also preventing disabilities. It is possible to put in quality in place in a war context.

PREGNANT MOTHERS AND ANAESTHESIA

Chan See Yun

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Anaesthetic management for pregnant mothers is very challenging as there are numerous endocrinal, systemic and physiological alterations and also the need to balance the requirements of two patients. Thorough knowledge and understanding of these facts can help in delivering safe anaesthesia services. Under usual circumstances, surgery is only conducted during pregnancy when it is absolutely necessary for the wellbeing of the mother, fetus, or both.

This lecture explores approaches to the perioperative care of pregnant women. Considerations such as the anatomical and physiological changes that occur during pregnancy are addressed, as well as adaptations to perioperative care made necessary by these changes. Airway and aspiration risks, importance of prevention of aortocaval compression are stressed. Ideally there should be continuous maternal and foetal monitoring intraoperatively and an obstetrician is available for immediate delivery if necessary. Regional anaesthesia is highly desirable, although there are particular considerations during pregnancy.

Whatever procedure is carried out during this period, it requires a good team effort from all quarters, especially the anaesthesiologist and the obstetrician, to provide a safe atmosphere for both the mother and the foetus.

The potential limitations, constraints and difficulties faced when planning and implementing care are discussed.

I'M CONFUSED: POST OP DELIRIUM / EMERGENCE DELIRIUM / POCD

Haslan Ghazali

Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia

Delirium is an acute confusional state manifested by an alteration of consciousness with poor ability to focus, sustain, or shift attention. This results in a cognitive or perceptual disturbance that is not better accounted for by a preexisting, established, or evolving dementia. Delirium has been shown to be associated with longer and more costly hospital stay and a higher risk of death within 6 months or postoperative period. Post operative cognitive dysfunction (POCD) has been associated with increased mortality and morbidity and affect the socioeconomic status of patients. Emergence from anaesthesia is often accompanied by signs of delirium, including fluctuating mental status and inattention. Failure to return to normal consciousness in a timely fashion following administration of general anaesthesia may manifest as delayed emergence or emergence delirium. In most cases, these conditions are temporary and gradually resolve as anaesthetic agents are metabolised and eliminated. Rarely, the cause is a serious medical or neurologic condition that requires urgent intervention.

HYPNOSEDATION IN THE 21ST CENTURY: IS IT TIME FOR ANAESTHETISTS TO EMBRACE HYPNOSIS?

Alan Soh Hock Guan

London College of Clinical Hypnosis, Kuala Lumpur, Malaysia

The use of hypnosis as anaesthesia for surgery was first recorded by Dr Jules Cloquet in 1829 in Paris. Since then, the understanding of hypnosis has grown, and many of the earlier myths surrounding it have been dispelled. Increasingly medical centres around the world have incorporated hypnosis as an adjunct to medical and surgical procedures and its benefits as an affordable treatment without side effect is increasingly valued.

Evidence has shown that hypnosis is effective in reducing anxiety and pain perioperatively, as well as improving haemodynamic functioning and reducing analgesic requirements and length of hospital stay. Neuroscientific research shows that hypnosis has a direct effect in altering activities in the pain neuromatrix.

This lecture will present the evidences in support of the use of hypnosis in the management of acute and chronic pain.

SYMPOSIUM 18 OBSTETRIC ANAESTHESIA

ABNORMAL INVASIVE PLACENTA: AVOIDING BLOODBATH

Azlin Masdar

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Obstetric haemorrhage remains the major cause of maternal morbidity and mortality worldwide. Latest report on the Confidential Enquiries into Maternal Deaths in Malaysia, post partum haemorrhage (PPH) ranked the third cause of maternal death, behind medical conditions and thromboembolism. Uterine atony sits at the top of the list of PPH origin, others include morbidly adherent placenta. The increasing trend of caesarean section has resulted in an increase in the repeat caesarean section rate, which led to a worrying trend in the incidence of morbidly adherent placenta. This lecture will elaborate further about abnormal invasive placenta, which will also include massive obstetric haemorrhage and massive transfusion protocol, as well as measures in preventing bloodbath.

POINT OF CARE COAGULATION TESTING IN THE MANAGEMENT OF POST PARTUM HAEMORRHAGE

Chan See Yun

Hospital Raja Permaisuri Bainun, Ipoh, Perak, Malaysia

Postpartum haemorrhage (PPH) is a major risk factor for maternal morbidity and mortality worldwide. PPH has numerous causative factors, which makes its occurrence and severity unpredictable. The underlying haemostatic imbalances such as consumptive and dilutional coagulopathies may develop during PPH. Monitoring coagulation status in patients with PPH may be crucial for effective haemostatic management, goal-directed therapy, and improved outcomes.

“Point of care” (POC) devices are increasingly being used perioperatively for rapid, detailed testing of haemostatic function and for treatment monitoring in patients with coagulopathies. Recent studies have shown that hypofibrinogenemia is an important predictor for the later development of severe PPH. POC technologies, such as thromboelastography and rotational thromboelastometry, can identify decreased fibrin-clot quality during PPH, which correlate with low fibrinogen levels.

Many laboratory-based tests are unsuitable for emergency use due to their long turnaround times, so have limited value for the management of PPH. Emerging evidence suggests that POC tests may be useful for rapid assessment and for guiding haemostatic therapy during PPH.

This lecture will briefly discuss the benefits and limitations of POC coagulation testing-in particular, its effects on the rate of perioperative transfusion of blood products and on the clinical outcome.

ENHANCED RECOVERY PATHWAY AFTER CAESAREAN SECTION

Nora Azura Dintan

Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

Caesarean section (CS) is one of the most common surgical procedures performed in tertiary hospital worldwide. CS is associated with longer hospital stays than spontaneous birth. Women have expressed a strong desire for earlier discharge after elective CS provided their care needs are met. The proportion of women leaving hospital the day after elective CS continues to rise in UK, suggesting that enhanced recovery (ER) principles are being practised, albeit inconsistently. Implementation of ER pathways in obstetric and other clinical fields remains a key challenge. Future research exploring implementation of this pathway may help increase the likelihood of sustained change with benefit for both patients and services.

ALS UPDATES 2015

Murniati Mustafa

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THIS IS AN UPDATE AND NOT A COMPLETE REVISION OF THE 2010 GUIDELINES

1. Danger – other than blood spills, sharps, electrical wires; to include unsteady bed or patient's trolley
2. Position – Victim found on the floor should initially be managed on the floor, face down patient should be rolled carefully to supine, air filled mattress should be deflated during CPR, backboard not recommended due to potential delay of initiating CPR and risk of dislodging tubes and catheters
3. Chest compression – depth is 5-6 cm, at 100-120 /min, with minimal interruptions, < 5 seconds for intubation or defibrillation
4. Defibrillation – emphasis on self adhesive pads, the “CLEAR” chant is reduced to just one chant of “EVERYBODY CLEAR”; for refrillation - higher energy of >200J for biphasic or 360J for monophasic; fine VF to be treated as asystole therefore not necessary to check other leads or increase size of lead.
5. 5H and 5T have been changed to 4Hs (hypoxia, hypovolaemia, hypothermia, hypo/ hyper K) and 4Ts (cardiac tamponade, tension pneumothorax, thrombosis, toxins)
6. Atrial ectopics = Premature Atrial Complexes (PAC), Ventricular ectopics = Premature Ventricular Complexes (PVC)
7. Vasopressin is taken out of the Adult ALS Algorithm
8. Post-resuscitation Care – maintain temperature of 32-36°C [instead of 32 -34°C] for at least 24 hours; keep oxygen saturation in arterial blood at 94-98% [instead of 94-96%]

PREVENTION OF HYPOTHERMIA IN THE NEONATE

Lakshmi Thiyagarajan

Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia

Perioperative care for the neonate encompasses many steps to ensure a good outcome for surgery in the neonate. One of them is prevention of hypothermia. Hypothermia is one of the leading causes of neonatal morbidity in the operating theatre and one of the most easily preventable. How do we ensure the little one stays warm when the chilly operating environment, the anatomy of the neonate and anaesthesia itself favours heat loss?

There are many simple steps an anaesthetist and support staff can take to prevent hypothermia which are easy to establish in their everyday routine of preparing patients for surgery and easy on the pocket. In this lecture, I aim to increase awareness on hypothermia, highlight the consequences of a severely hypothermic baby and some simple changes in our everyday practice that can really change the outcome.

PRACTICALS IN CLINICAL HYPNOSIS

Alan Soh Hock Guan, Sheila Menon

London College of Clinical Hypnosis, Kuala Lumpur, Malaysia

Participants will be exposed to the methodology of preparing patients for hypnosedation for medical/surgical procedures.

A video demonstration of surgery being done with hypnosis as the sole anesthetic vs as an adjunct will be shown, with discussion of patient responses and differences in management.

Participants will also have a hands-on experience of hypnotic induction, deepener, reorientation and awakening from trance.

A live stage demonstration of hypnoanaesthetic induction will also be performed, and a discussion held regarding the roles and benefits of using clinical hypnosis within anaesthesia.

SYMPOSIUM 20

PAEDIATRIC ANAESTHESIA

CHALLENGES OF THE NEONATE

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Many anaesthetists may face apprehension when handling a neonate in the operating theatre. Although Paediatric Anaesthesia is part of any General Anaesthesia speciality training, many would find that they handle neonates only occasionally in their practise unless they work in a hospital with Paediatric Anaesthesia and Surgical services.

What is so special about these little ones? We can't treat them as small adults because they differ in every way- in their anatomy, physiology and pharmacology. Pain assessment and management is challenging because of the limited number of drugs used to treat pain in this age group and the tendency to 'undertreat' because of the fear of side effects namely respiratory depression.

I will highlight the common challenges of perioperative management in the neonate in this lecture aimed at the General Anaesthetist.

TIVA IN CHILDREN

Teo Shu Ching

Hospital Umum Sarawak, Kuching, Sarawak, Malaysia

TIVA in children has been getting more attention among the anaesthesiologist, partly due to more exposure and the availability of suitable equipment. However, there are still some resistance in such technique. We will look at the advantage of TIVA in children as well as the practical aspect of it.

URTI ANAESTHESIA RISK? EVIDENCE VS TRADITIONAL PRACTICE?

Yoga Bhavani a/p M Shanmuganathan

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- Anaesthetizing the paediatric patient presenting for elective surgery with a history of recent or ongoing upper respiratory tract infection (URTI) has more often than not posed as a dilemma to the anaesthetist. Despite having moved away from the traditional practice of 'blanket' cancellation, evidence based guidelines are difficult to develop given differences in study design, URTI criteria and outcomes.
- However, several pertinent factors need to be taken into account before deciding to proceed or to defer. This symposium aims to clear the air of doubts and focus on moving with confidence and aiming for good outcomes with safety as the foremost.

ADVANCES IN ICU: WHAT CAN MICROCIRCULATION TELL US?

Sabino Scolletta

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Critically ill patients sometimes have severe impairment of microcirculation that is responsible for organ dysfunction and failure.

Haemodynamic parameters, such as arterial blood pressure and cardiac output may be not correlated with the microcirculatory variables, as there are distinct responses of macro- and micro-vessels to various agents (e.g. drugs, inflammatory molecules), as a result of different anatomical structure (e.g., large vs small vessels). In addition, there are numerous physiological mechanisms that differently control the macro- and micro-circulations.

In case of circulatory shock, sepsis and severe hypovolemia the microcirculatory function can be severely compromised. Under these circumstances studying the microcirculation at peripheral sites (es: muscles, tongue) may provide early information on heterogeneous distribution of oxygen delivery to tissues.

New non-invasive techniques have been introduced in clinical practice in order to analyze the microcirculatory function at the bedside. These devices are monitors that assess tissue oxygenation or they are handheld videomicroscopes that allow monitoring of the sublingual mucosal vasculature as a surrogate for the microcirculation as a whole.

These devices help clinicians with additional information and give the opportunity of monitoring the microcirculatory response to therapy in critically ill patients admitted at the intensive care unit.



**ORAL FREE PAPER PRESENTATIONS FOR
MSA AWARD /
MSA-ASTRAZENECA YOUNG INVESTIGATOR AWARD
COMPETITION**

ORAL FREE PAPER PRESENTATIONS FOR MSA AWARD / MSA-ASTRAZENECA YOUNG INVESTIGATOR AWARD COMPETITION

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INVESTIGATION OF TUALANG HONEY AND ITS ASSOCIATION WITH ANTIOXIDANT PROPERTY ON RATS IN AN ACUTE INFLAMMATORY PAIN MODEL

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BACKGROUND

Tualang honey has been used widely because of its therapeutic effects as antibacterial, antitumor, antioxidants and is well-known for its anti-inflammatory activities and probably has a role as an anti-nociceptive agent.

OBJECTIVES

The aim of the present investigation was to evaluate the anti-nociceptive mechanism of Tualang honey by determining its effect on oxidative stress markers in the blood.

METHODS

24 adult male Sprague-Dawley rats were used. The rats were randomised into 3 groups: control (C) and Tualang honey (AO1) and vitamin C (AO2), as positive control. Distilled water or Tualang honey 1.2mg/kg or vitamin C (20mg/kg) was administered orally by gavage feeding to the rats daily for 10 days, 0.5 ml for both. On the 10th day, intraplantar formalin (1%) injection was injected to the right paw. The rats paw diameter was measured using a digital calliper before and 2 hours post formalin injection. The changes in the paw diameter were than recorded. All the rats were subjected to behavioural testing. Rats were sacrificed two hours post formalin injection and blood taken. The blood specimen was collected based on guideline for specimen collection for oxidative stress markers.

RESULTS

There was a significant reduction of the paw oedema ($p < 0.001$) in AO1 and AO2 groups compared to control group. The pain behaviour score was significantly lower ($p < 0.05$) at minute 5 (phase 1), 10, 20, 25, 35 and 50 min (phase 2) post-formalin injection in AO1 group when compared to control.

CONCLUSION

There was a correlation between the oxidative stress parameters and pain behaviour score with preemptive administration of Tualang Honey. The results from the study would give some knowledge regarding preemptive role of Tualang Honey in inflammatory pain. Hence, clinical trial is indicated to apply this new knowledge or findings into practice.

COMPARISON BETWEEN ULTRASOUND GUIDED FEMORAL 3 IN 1 BLOCK VERSUS BLIND FASCIA ILIACA COMPARTMENT BLOCK AS ANALGESIA PRIOR POSITIONING FOR SPINAL ANAESTHESIA

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OBJECTIVES

This study aimed to evaluate the efficacy of ultrasound guided femoral 3 in 1 block versus the blind technique single shot fascia iliaca compartment block as an analgesia method in patients prior positioning for spinal anaesthesia in femur fracture surgery.

METHODOLOGY

This study was a prospective, single blinded and randomized controlled trial. A total of 60 patients aged between 18 to 65 years old consisted of ASA I to III were included in this study. Patients were divided into two groups by using computer assisted randomization. Group A received single shot blind fascia iliaca compartment block whereas group B received ultrasound guided femoral 3 in 1 block. The pain score at rest, upon movement and at interval of 5-10 minutes after block performed were recorded using Visual Analog Score (VAS).

RESULTS

Ultrasound guided femoral 3 in 1 block provides faster reduction of VAS at least 5 minutes' post block and significant VAS reduction at 20 minutes' post block. Less intravenous fentanyl required for rescue analgesia in femoral 3 in 1 block group. However, both blocks were comparable in term of reduction of VAS at 30 minutes' post block.

CONCLUSION

Femoral 3 in 1 block provides significantly faster relief of pain in femoral bone fracture. However, after 30 minutes' total pain reduction in both techniques are similar. Both are equally effective and safe.

COMPARISON BETWEEN THE EFFICACY OF NEOSTIGMINE VERSUS SUGAMMADEX FOR REVERSAL OF ROCURONIUM INDUCED NEUROMUSCULAR BLOCKADE IN PAEDIATRIC PATIENTS

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OBJECTIVES

The aim of this study is to compare the efficacy between these 2 reversal agents, sugammadex and neostigmine in antagonizing the effects of rocuronium in the paediatric population.

MATERIALS & METHODS

This was a double-blinded, randomized controlled trial involving 80 paediatric patients aged between 2-12 years old for surgery under general anaesthesia with rocuronium neuromuscular blockade. They were randomized into two groups, for reversal with neostigmine or sugammadex. All patients were induced with sevoflurane, once IV access was obtained, 2mcg/kg of fentanyl was given followed by 0.6mg/kg of rocuronium. The TOF-Watch SX was used to monitor neuromuscular function and all patients were intubated once TOF response was not detected. Once surgery finished the patients were reversed according to the group allocated, 0.05mg/kg of neostigmine with 0.02mg/kg of atropine or 2mg/kg sugammadex. The neuromuscular recovery time, from reversal administration at TOF count 2 to TOF ratio 0.9 and haemodynamic parameters was documented. The patients were extubated at TOF 0.9, any complications post-extubation were also documented.

RESULTS

There was a statistically significant ($p = 0.001$) in neuromuscular recovery time from TOF count 2 to TOF ratio 0.9 post-reversal in the sugammadex group, with a mean of 84.45 ± 42.67 seconds as compared to only 501.58 ± 115.82 seconds in the neostigmine group. The time from reversal to extubation was also significantly faster ($p = 0.001$) in the sugammadex group with mean time of 105.77 ± 32.86 compared to neostigmine 712.98 ± 132.45 . There were no significant changes in the blood pressure but there was significant increase in the heart rate in neostigmine group after reversal. There was a higher incidence of post-operative nausea vomiting post-reversal in the neostigmine group with 17.5% (7 patients), no complications were noted in the sugammadex group.

CONCLUSION

Sugammadex has a significantly shorter recovery time as compared to neostigmine.

NOVEL NEEDLE NAVIGATION TECHNOLOGY COMPARED WITH CONVENTIONAL ULTRASOUND FOR CENTRAL VENOUS VASCULAR ACCESS – A PROSPECTIVE RANDOMIZED STUDY

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BACKGROUND

Central venous catheter insertion is a very common procedure in the intensive care setting. A recent international guidelines advocated the use of ultrasound for routine internal jugular central venous catheter insertion. The needle navigation technology is a new innovation, also known as guided positioning system (GPS) which allows clinician to visualize the needle position and trajectory in real time as it approaches the target. We hypothesised that the use of needle navigation technology would increase success rates and decrease performance times of vascular access procedures.

OBJECTIVES

To compare the success, efficacy and safety of central venous catheter insertion via internal jugular vein using the ultrasound guidance with conventional method versus needle navigation technology.

METHODOLOGY

This was a prospective randomized controlled study in a single centre – intensive care unit, University of Malaya Medical Centre, Kuala Lumpur, Malaysia; February till October 2016. (NMRR-16-334-29476). 100 patients were randomized into two groups (50 each each), using computer generated randomized assignment. Subjects would receive central venous catheter insertion via internal jugular vein using ultrasound guidance out of plane approach by conventional method versus using needle navigation technology. Outcomes measured were the procedure efficacy determined by successful cannulation, performance time taken to successful puncture of the vessel and number of attempts; procedure safety, determined by any potential complication arise from this procedure (secondary tissue injury, hematoma, bleeding, pneumothorax, haemothorax or arterial puncture); and the level of operators' experience and satisfaction.

RESULTS

All patients had successful cannulation of central venous catheter insertion with 1st attempt except for 1 case which required 2nd attempt (conventional method group). The median performance time for GPS method was longer than the conventional method (25.5 seconds versus 15.0 seconds; $p = 0.01$). 86% of the operators had more than 3 years of experience in anaesthesia field. No complications observed in both study groups. In terms of satisfaction level, only 88% of the operators using GPS method were satisfied compared to 100% satisfaction in the conventional method.

CONCLUSION

This study demonstrated that ultrasound guided central venous catheter insertion via internal jugular vein is a safe procedure, be it using conventional method or needle navigation technology. However needle navigation technology did not confer additional benefit, in fact slower performance time and lower satisfaction level amongst the experienced operators.

DERIVATION OF A MULTI-BIOMARKER MODEL AND SCORE AS A PREDICTOR OF 30-DAY MORTALITY IN CRITICALLY ILL SEPSIS PATIENTS: A PROSPECTIVE COHORT STUDY

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OBJECTIVE

The objective of this study was to assess five biomarkers in sepsis: procalcitonin (PCT), interleukin-6 (IL-6), paraoxonase (PON) and arylesterase (ARE) activities of PON-1 and white blood cell (WBC) count in order to derive a multi-biomarker risk stratification model and score to predict 30-day mortality in critically ill patients with sepsis.

METHODS

This was a secondary analysis of a prospective, single-center, observational cohort performed in a 12-bed ICU in Hospital Tengku Ampuan Afzan, Pahang, Malaysia. There were 159 patients enrolled. Inclusion criteria: 1) adult patients of ≥ 18 years 2) presence of suspected or documented infection; and 3) a rise in SOFA score by 2 or more points. The five biomarkers were assayed within 24 hours of admission and subsequently at 24 and 48 hours later. Multivariable logistic regression was used to identify an optimal combination of biomarkers to create a panel. The derived formula for weighting biomarker values was used to calculate a "Sepsis Mortality Score," which was the predicted probability of the primary outcome of 30-day mortality.

RESULTS

The primary outcome of 30-day mortality was reached in 46 (28.9%) of patients. Day 1 PCT, Day 3 IL-6 and Day 3 ARE were selected in the final step of the regression model. The AUC for the accuracy of the Sepsis Mortality Score derived from these three biomarkers was 0.83 (95% CI 0.74-0.91, $P = 0.000$), suggesting very good model discrimination. When included in multivariate models with clinical variables, the score remained highly significant ($p < 0.001$) with an OR 25.63 (95% CI 5.45-120.56).

CONCLUSIONS

A biomarker panel of Day 1 PCT, Day 3 IL-6 and Day 3 ARE was predictive of 30-day mortality in critically ill patients with sepsis. Further study is warranted to prospectively validate the clinical utility of these biomarkers and the Sepsis Mortality Score in risk-stratifying patients with sepsis.

COMPARISON OF CLINICAL PERFORMANCE OF SIZE 1.5 SUPREME LMA AND PROSEAL LMA AMONG ANESTHETIZED INFANTS

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OBJECTIVES

Supraglottic airway devices are routinely used in anesthetic practice. We compared the clinical performance of the LMA Supreme and the LMA ProSeal size 1.5 in anesthetized infants. The primary outcome measured was the oropharyngeal leak pressure (OLP). The rate of successful insertion, fiberoptic view of larynx and airway complications for each device were also assessed.

METHODS

A prospective randomized clinical trial was conducted in 60 children, weighing 5-10 kg, ASA physical status I-II, who were scheduled for elective surgery under general anesthesia. Participants were randomly assigned to either Supreme or ProSeal group and a standard anesthesia protocol was followed.

RESULTS

There were no statistically significant differences between LMA Supreme and LMA ProSeal in mean (\pm SD), oropharyngeal leak pressure (19.07 (\pm 5.48) cmH₂O vs 19.77 (\pm 4.47) cmH₂O, $p = 0.68$); time to insertion (20.8 (\pm 8.3) s vs 22.1 (\pm 8.3) s, $p = 0.57$), success rate for device insertion, fiberoptic view of larynx and airway complications. Secondary analysis of the data reviewed that the failure rate for device insertion was statistically significant when the patient's weight was < 6 kg in the ProSeal group but not in the Supreme group.

CONCLUSIONS

The clinical performance of LMA Supreme 1.5 was comparable with LMA ProSeal 1.5 and both devices were able to maintain airway effectively without clinical significant complications. However, the incidence of fail insertion was significantly higher in ProSeal group if patient's weight was < 6 kg. This would suggest that choosing a smaller size LMA might be appropriate in this group of patients.

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A CASE REPORT OF INTRAOPERATIVE PULMONARY EMBOLISM IN ELECTIVE ORTHOPAEDIC SURGERY

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BACKGROUND

Pulmonary embolism (PE) is the commonest cause of preventable death among hospitalized patients. Due to the occult and insidious nature of clinical thrombosis, first presentation of PE in an asymptomatic patient may as well be an acute cardiorespiratory collapse in the intraoperative setting.

REPORT

A 39 year old male, heavy smoker with type 2 diabetes mellitus, presented for elective iliazarof for fractured distal 3rd left Tibia Fibula under uneventful subarachnoid block. During positioning of the affected limb by orthopaedic colleagues, patient suddenly complained of chest pain, shortness of breath and becoming unresponsive. Cardiac arrest ensued, CPR commenced and continued for total duration of 90 minutes. Transesophageal echo confirmed the diagnoses of pulmonary embolism. Patient underwent successful surgical embolectomy to remove clots from main, right and left pulmonary artery. Patient was discharged to ward with tracheostomy after 3 weeks stay in Cardiothoracic ICU .

CONCLUSION

Early resuscitation with fluid , inotropes and vasopressor as well as administration of anticoagulant are part of the initial treatment of acute PE. The diagnosis of PE needs to be supported by more objective test to justify the institution of primary reperfusion therapy which are not devoid of possible adverse side effects. Furthermore clinical presentation of PE in the event of cardiorespiratory collapse can mimics other condition especially in patients under general anaesthesia. Transthoracic echocardiography is widely available and may show the evidence of acute pulmonary hypertension and RV dysfunction. Transoesophageal echocardiography has added advantage in the ability to allow direct visualization of thrombi in the pulmonary artery and its main branches . The choice of primary reperfusion therapy with surgical embolectomy or interventional approach depends on the availability of expert personnel and amenities where as careful judgement of benefit against risk of bleeding should be made if pharmacological thrombolysis is considered in the intraoperative settings.

ANESTHETIC APPROACH TO A PATIENT WITH BRUGADA SYNDROME

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Brugada syndrome (BrS) is a rare cardiac ion channel disorder in the patient with structurally normal heart, at risk of cardiac arrhythmia and sudden death. Safe anesthesia in this group of patients is always a challenge to the anesthesiologist as these patients carry a high risk of malignant arrhythmia in the perioperative period.

In this report, we highlight the anesthetic concerns related to management of a 57 years old gentleman with BrS, awaiting ICD insertion, undergoing septoplasty and turbinoplasty for symptomatic deviated nasal septum. To the best of our knowledge, this is the first case report on sugammadex as a reversal in BrS patients in Malaysia.

Biochemical examination revealed normal electrolytes level. ECG showed typical coved-shape ST-elevation in right precordial leads. The chest X- ray and echocardiography were normal.

Before surgery, invasive arterial blood pressure monitoring and external defibrillator pads were prepared along with standard monitoring. Induction was achieved with fentanyl 2mcg/kg, propofol 2mg/kg and rocuronium 0.6mg/kg. Intubation was uneventful. Anesthesia was maintained with desflurane. Intra-operatively, hemodynamic stability was maintained with several rescue doses of ephedrine. He was reversed with sugammadex 2mg/kg and the patient was extubated smoothly.

The practical considerations of anesthesia include avoidance of physiological and pharmacological factors that may increase the risk of precipitating arrhythmias. Propofol, volatile agents, narcotics and muscle relaxants are found to be relatively safe. Pharmacological activities of neostigmine may be hazardous to patients, though some case reports show no adverse effects. Recently, a few authors have introduced the usage of sugammadex in BrS patients. The uneventful reversal of our patient with sugammadex is another successful example.

In conclusion, current evidence is still limited, further studies are needed to shed the light on the best way to conduct anesthesia in BrS patients

ANAESTHESIA MANAGEMENT OF A PATIENT UNDERGOING AN EX UTERO INTRAPARTUM TREATMENT (EXIT) PROCEDURE: A CASE REPORT

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The EXIT procedure involves partial delivery of the fetus in order for intrapartum assessment and performance of live-saving procedures on the fetus, while it is still on utero-placental support. It is utilised for any fetal anomaly in which resuscitation of the newborn may be compromised, including airway obstruction and other life threatening conditions. This allows management of obstructive fetal airway via direct laryngoscopy, bronchoscopy, tracheostomy or surgical intervention. These complex procedures are extremely challenging, especially in our limited experience. Recent advances in prenatal diagnosis of fetal congenital malformations particularly abnormalities involving the fetal airway, have allowed for the development of EXIT procedure. It helps to convert potentially catastrophic situations during fetal delivery to a controlled environment.

Multidisciplinary team approach should be consider in managing EXIT procedure. These to ensure positive maternal and fetal outcomes. The goal of anaesthesia are to achieve maximum hypotonia of uterus, maintaining maternal blood pressure, avoiding placenta abruption, prioritising fetal airway establishment and providing return of uterine tone. The anaesthesia provider must aware of significant risk of maternal haemorrhage due to uterine atony. We reported a case of EXIT procedure for congenital high airway obstruction (CHAOS).

SUCCESSFUL TREATMENT OF PAEDIATRICS PULMONARY STENOSIS VIA TRANSCATHETER METHOD UNDER BALANCED ANAESTHESIA: CASE SERIES

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Background: Right heart catheterization is done in pediatrics with congenital heart disease for diagnostic as well as interventional purposes. Anaesthesiologists are playing an increasingly important role in the management of paediatric patients with complex congenital cardiac diseases. There is no single ideal anaesthetic technique and the decision of giving total intravenous anaesthesia or inhalational anaesthesia has to be made by the attending anaesthesiologists.

Report: The authors have used a balanced anaesthesia technique with a combination of opioid, IV induction agent, sevoflurane and atracurium for anaesthesia for transcatheter cardiac procedures in paediatrics with underlying pulmonary stenosis and complex congenital heart diseases.

The following series include 5 cases of paediatrics pulmonary stenosis, with underlying complex congenital heart diseases, which are two cases of congenital cyanotic heart disease with right to left shunt (1. Transposition of great arteries and ventricular septal defect 2. Ventricular septal defect and atrial septal defect), a case of LEOPARD syndrome with hypertrophic obstructive cardiomyopathy and LVOTO, a case of Tetralogy of fallot(corrected) and a case of pulmonary stenosis with underlying mixed clotting factor deficiency and bilateral cleft lip and palate.

The anaesthetic method used was able to produce stable hemodynamic control, good analgesia and immobility and the outcomes were excellent with low morbidity.

SEVERE INTRA-OPERATIVE TRANSFUSION-RELATED ACUTE LUNG INJURY (TRALI): CHALLENGES IN ANAESTHETIC MANAGEMENT AND POST-OPERATIVE CRITICAL CARE

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REPORT

TRALI, as the leading cause of transfusion-related mortality, is an important entity to anaesthesia and critical care providers. Prompt recognition of TRALI is crucial, as early supportive measures significantly reduce the risk of fatal outcome.

We report a case of 33-year-old, ASA 1E male, who presented to our centre following a blunt trauma to his abdomen. He underwent exploratory laparotomy for pelvic bone fracture and suspected mesenteric injury.

Induction and maintenance of anaesthesia have been uneventful. Fresh frozen plasma (FFP) transfusion was initiated intra-operatively to correct coagulopathy. Approximately thirty minutes into the transfusion, there was worsening of hypoxaemia with a PaO₂/FiO₂ ratio of 60. There were generalized coarse crepitations on auscultation of the lungs with no raised jugular venous pulse. On-table lung ultrasound revealed generalised lung rockets (B-lines) consistent with interstitial syndrome. FFP and crystalloids were immediately withheld and intravenous (IV) hydrocortisone and frusemide were administered. Mechanical ventilation with lung protective strategies was employed.

The patient was transferred to ICU post-operation where he required high settings of airway release pressure ventilation and multiple inotropes/vasopressors. Chest radiograph revealed bilateral pulmonary infiltrates. Echocardiography showed good cardiac contractility and an IVC with respirophasic variation. Urgent Transfusion Medicine consultation was sought and the working diagnosis was TRALI. His oxygenation parameters progressively improved over the subsequent 72 hours and he was successfully extubated on Day 6 post-trauma. IV methylprednisolone was completed for 21 days.

We aim to discuss via this case report on the challenges in diagnosing TRALI and its implications on peri-operative management.

CARCINOID CRISIS MASQUERADING AS ANAPHYLACTIC SHOCK

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BACKGROUND

Carcinoid crisis is a rare syndrome characterized by flushing, bronchospasm, tachycardia, and fluctuating blood pressure caused by anaesthetic, radiological and surgical interventions marked by the release of vasoactive mediators. This can create serious problems to the anaesthetist, both by the nature and variability of clinical manifestations and by the complications that can occur intraoperatively.

REPORT

A 41 year old man presented to a tertiary centre with neck swelling for 6 months. He was diagnosed with suspected thyroid carcinoma, and was scheduled for a right hemithyroidectomy. The first operation was abandoned as patient developed severe hypotension and tachycardia post induction. A morphine induced anaphylactic shock was suspected. A second operation was scheduled at our centre. The operation was abandoned again due to hemodynamic instability. Additional history revealed that patient has diarrhea since 6 months ago, associated with flushing, palpitation and sweating. Medullary thyroid carcinoma (MTC) positive for calcitonin and chromogranin was confirmed from a fine needle aspiration cytology. Blood calcitonin levels were raised. This led to the diagnosis of carcinoid crisis. The third operation was performed at our centre. The landmark of management involved the administration of octreotide. The operation was completed successfully.

CONCLUSION

This case illustrates the severity of carcinoid crisis and the value of a complete history. Although carcinoid syndrome from medullary thyroid carcinoma is rare, there is a known association. Recognition of this syndrome is critical for institution of appropriate therapy.

SUPRAGLOTTIC EDEMA: A RARE CASE OF HYPERSENSITIVE REACTION AFTER A SINGLE DOSE OF METOCLOPRAMIDE

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A 54 year old gentleman with no drug or food allergy presented with left scrotal swelling and was diagnosed with Fournier's Gangrene. He underwent three operations for wound debridement under general anesthesia uneventfully. He was then posted for the fourth operation for split skin graft over the perineum under general anesthesia.

All preoperative vital signs and laboratory results were normal. Patient was induced with intravenous propofol 160mg and fentanyl 100mcg. Airway secured with Proseal® Laryngeal Mask Airway (LMA). Anesthesia was maintained with volatile anaesthetics and morphine 8mg was given for analgesia.

It was a 3 hours surgery. Proseal LMA was removed prior to transferring patient to recovery bay. Vital signs recorded at recovery bay were blood pressure 145/82mmHg, heart rate 70-80 beats per minute, saturation 100% under facemask 5L/minute with respiratory rate 19 breaths per minute.

Patient complained of nausea and vomiting, hence intravenous metoclopramide 10mg was administered. 30 minutes later, he complained in normal voice of difficulty in breathing, and became restless. On auscultation, his lung findings were normal. He became tachycardic and hypertensive but saturation was maintained. Arterial blood gas taken was normal. Intravenous promethazine 25 mg (bolus times three) was given with no clinical improvement. He was only relieved when we supported him with Non Invasive Ventilation (NIV). He was observed in PACU overnight. The next morning, we noted that his voice had changed to higher pitch. We referred to ORL for a scope and it confirmed airway edema. intravenous dexamethasone 8mg was given and he was subsequently weaned off from NIV and discharged back to general ward after another 24 hours of monitoring at recovery bay.

Patient recovered well and was allowed home on day 12 post operation.

Literature search had not yielded any reports of isolated airway edema secondary to maxolon. We feel the need to report it as this is potentially lethal.

EXPECTING THE UNEXPECTED: INTRACTABLE INTRAOPERATIVE BRAIN HERNIATION

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CASE REPORT

A 63-year-old man electively admitted for bifrontal craniotomy and tumour debulking of suprasellar tumour with intraventricular extension. He had no neurological deficits or signs of raised intracranial pressure. Magnetic resonance imaging showed suprasellar mass extended superiorly into third ventricle and inferiorly into the sella with some mass effect onto the pituitary gland with obstructive hydrocephalus. Induction was performed using target controlled infusion (TCI) remifentanyl, intravenous propofol and rocuronium. Anaesthesia was maintained with sevoflurane at minimum alveolar concentration of 0.8-1.0. PaCO₂ was kept at 34-37mmHg. Unfortunately, much bleeding was encountered due to the vascularity of tumour. The operative window via the lamina terminalis gradually became narrower as both frontal lobes were herniating transcalvarially. Physiological parameters prior to brain herniation were all within normal range. Moderate hyperventilation was immediately initiated. Maintenance of anaesthesia was switched to total intravenous anaesthesia with TCI propofol. Mannitol 20% 100ml also administered. Clinical suspicion of surgical cause of brain swelling prompted the insertion of external ventricular drains into both frontal horns which revealed bilateral intraventricular haemorrhage (IVH) and confirmed with intraoperative computed tomographic (CT) imaging. Prior attempts to tamponade the bleeding had precipitated the herniation due to retrograde flow of blood upwards into the lateral ventricles. The craniotomy was then extended to bilateral temporal regions to allow more space for brain expansion. Right IVH was aspirated. The brain was strongly pulsatile upon closure.

LEARNING POINTS

It is prudent to swiftly identify the possible cause(s) of acute intraoperative brain herniation in order to institute appropriate anaesthetic and/or surgical measures to minimize neurological damage. Close communication between surgical and anaesthetic teams using a comprehensive checklist allows systematic approach to rule out potential anaesthetic and/or surgical contributions of a bulged brain. Advances in intraoperative imaging like on-table CT not only enabling diagnosis but evaluating the extent of problem to allow timely interventions.

CASE REPORT: PERCUTANEOUS CLOSURE OF RUPTURED SINUS OF VALSALVA ANEURYSM AND ITS MANAGEMENT

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INTRODUCTION

Sinus of Valsalva aneurysm (SVA) is rare, prevalence being one percent of all congenital anomalies of heart and circulation. Surgical repair has been the gold standard but limited by severe hemodynamic instability and patch leak requires second operation. We would like to report successful percutaneous closure that was being done in our institution.

CASE DESCRIPTION

A twenty-year old Chinese gentleman, no known medical illness, presented with one day history of palpitation, tachycardia and continuous murmur. Blood investigation showed acute renal failure and transaminitis. ECG showed sinus tachycardia and ECHO revealed ruptured sinus of Valsalva aneurysm into the right atrium. Patient underwent percutaneous closure three days later. He was premedicated with midazolam and invasive monitoring was set up prior to induction. General anaesthesia was maintained with sevoflurane and rocuronium. Transoesophageal echocardiogram showed a large perforation of SVA at right coronary cusp into the right atrium measuring 7mm x 8mm. Successful closure was done with PDA occluder. Post-operatively, patient was transferred to CCU and extubated four hours later. Renal failure and transaminitis resolved after a week and he was discharged home.

DISCUSSION

SVA is more often congenital than acquired in origin. Our patient has features of high arch palate, pectus excavatum and arm span of 182cm which are characteristics of Marfan's syndrome. Death from congestive cardiac failure usually occurs within a year of rupture. Surgical closure is either by simple suture closure or by patch closure of ruptured SVA. Percutaneous device implantation was performed under fluoroscopic guidance under general anaesthesia. It is minimally invasive with minimal blood loss, avoids cardiopulmonary bypass risks and complication when compared to open surgery, hence promote faster recovery in general.

CONCLUSION

Ruptured SVA is uncommon and percutaneous closure is a promising alternative to surgery in appropriately selected patient.

BLOOD AGGLUTINATION AT COLD TEMPERATURE; IMPLICATION IN CARDIAC SURGERY: A CASE REPORT

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Blood cross match investigation could be more useful than just determining blood compatibility to intended recipient. A 68 years old gentleman with Ischaemic Heart Disease with no history of travelling overseas, was referred for Coronary Artery Bypass Grafting. Upon serological investigation revealed antibody screening was positive. He was initially planned for on pump bypass grafting, however upon insertion of femoral artery cannula, noted unilateral leg livedo reticularis, and later was confirmed case of cold agglutinin by blood bank. The intended on pump bypass grafting was then done off pump. The surgery went well off pump, and patient was kept warm throughout the surgery. Another 58 years old gentleman with aneurysm of right coronary artery planning for aneurysm repair and right coronary artery bypass grafting. His serology revealed antibody positive but was confirmed by blood bank was not a case of cold agglutinin. However upon low temperature, the blood clotted in the circuit and later on had to do surgery under normothermia with warm cardioplegia. When the circuit was disconnected, blood was noted clotting in circuit and cardioplegia tube. Cold agglutinin disease, despite its rarity, caused agglutination of red cells, complement fixation with subsequent microvascular occlusion, and ischemia. Antibody binding occurs best at low temperatures, whereas complement fixation occurs best at high temperatures. Hemolysis occurs in the thermal range of 10°C to 30°C because this is the optimal range of overlap between antibody binding and complement fixation. Detection of cold agglutinin disease over clinically relevant temperatures can be accomplished at the time of cross-matching by direct Coomb's test. It is important especially cases that required on pump surgery which involved lowering the core body temperature to hypothermic level and using cold cardioplegia solution to paralyze the heart. This disease needed multidisciplinary approach of management preoperatively, intraoperatively and postoperatively.

HUMIDIFICATION AND NON-INVASIVE VENTILATION IN PAEDIATRIC PATIENT: A CASE REPORT

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INTRODUCTION

Delayed post-operative airway obstruction in a child can be a difficult problem to manage. This case report describes the plan that was executed to successfully relieve the airway obstruction of a child with respiratory complication and to discuss the importance of humidification in non-invasive ventilation in paediatric patients in general.

REPORT

A three year-old boy with a significant respiratory disorder that required multiple hospital admissions was treated for recurrent pneumonia over a period of nine months. Clinical findings discovered a left lung thoracic cystic mass and the child was referred to Sarawak General Hospital for thoracotomy and mediastinal teratoma excision. The operation was successful and he was extubated, and discharged to the Paediatrics Intensive Care Unit with nasal prong of 2 L/min and lower thoracic epidural for post-operative analgesia.

The next day, the child developed pain at the surgical site along with shallow respiration resulting in desaturation. After nebulization, Respiroic BiPAP was applied without an active humidifier. However, his oxygen requirement increased rapidly and he developed biphasic stridor. He was sent to the operating theatre for bronchoscopy with BiPAP to determine the cause of the biphasic stridor. Anaesthesia was administered using TIVA technique. An obstructing flap just below the vocal cord was found, flapping with respiration. It was removed and sent for HPE, which reported a fibropurulent material. He was ventilated overnight and successfully extubated the next day.

CONCLUSION

Upon ruling out other causes of stridor and respiratory failure in this patient, we were able to conclude that the crustation had resulted in the airway obstruction. This particular case highlights the importance of applying active humidification during the use of any forms of high flow positive pressure ventilation in paediatric patients.

A MESSY MASS: DIFFICULT INTUBATION IN A CASE OF MEDIASTINAL MASS

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REPORT

Mediastinal mass is uncommon in the adult population but its first presentation can be life-threatening. Most of these cases are anterior mediastinal mass in which only 15% are symptomatic. The objective is to present a case of mediastinal mass complicated with difficult intubation, focusing on the importance of appropriate difficult airway protocol.

Mr CK is a 64 years old, non-obese Chinese gentleman with underlying hypertension, dyslipidaemia and presumed COAD, who came with impending respiratory failure. He presented with 2 weeks history of worsening hoarseness of voice, positional dyspnoea, orthopnoea and productive cough, associated with 30 years history of daytime somnolence and loud snoring. He was initially intubated by the ED team after given IV suxamethonium, but 2 attempts failed. Thus, laryngeal mask size 4 was inserted to maintain oxygenation, but ventilation was difficult. He was then immediately transferred to OT.

METHODS

In OR, he was given inhalational induction with IV fentanyl to preserve his spontaneous breathing. CMAC video laryngoscopy revealed Cormack Lehane 1 and he was successfully intubated using bougie with size 7.0 ETT. Subsequent bronchoscopy showed tracheal inflammation and mucosal oedema with no obvious intra-luminal mass. His CXR was reviewed and showed widened mediastinum with obvious tracheal C-shaped rightward deviation. He was weaned in ICU and failed extubation once but was reintubated uneventfully. Differential diagnosis at that time was tracheomalacia secondary to likely anterior mediastinal mass. He was weaned again and re-extubated to VM 40% on the 4th day. He was discharged well to general ward without oxygen supplement and was given TCA for CT Thorax which he has defaulted.

RESULTS

In conclusion, a case of upper airway obstruction secondary to suspected mediastinal mass must be induced with inhalational induction as maintenance of patient's spontaneous breathing is mandatory until trachea is properly secured.

EPIDURAL ANAESTHESIA AND INVASIVE HEMODYNAMIC MONITORING FOR CAESAREAN SECTION IN PARTURIENT WITH PERIPARTUM CARDIOMYOPATHY: A CASE REPORT

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BACKGROUND

Anaesthetic management of patients with peripartum cardiomyopathy (PPCM) undergoing caesarean section remains a formidable task as risk of decompensated heart failure may ensue pregnancy and subsequent delivery.

REPORT

We describe a 35-year-old, Gravida-3 Para-2 lady with PPCM and cardiac thrombus who had a caesarean section and bilateral tubal ligation. She was first diagnosed with PPCM 4 months after her second delivery. She presented with failure symptoms and echocardiography showed left ventricular ejection fraction (EF) of 37% and thrombus. Unfortunately, she defaulted follow-up after 6 months. Upon antenatal review during current pregnancy, she had residual cardiovascular compromise (EF of 25-35% with global hypokinesia). In view of the high risk pregnancy, a multidisciplinary discussion was held to focus on safe anaesthesia and timing of delivery to minimize morbidity and mortality. Right radial arterial cannulation and right internal jugular vein triple lumen were inserted under local anaesthesia with ultrasound guidance. Caesarean section was performed at 32 weeks of gestation. Titrated lumbar epidural was the mode of anaesthesia. A total of 15ml of levobupivacaine 0.5% was given to achieve a block up to T6 dermatome. No additional boluses were required intra-operatively. Close continuous hemodynamics monitoring was achieved with invasive hemodynamics monitoring device (EV1000, Edwards Lifesciences). Dynamic indices were used to guide inotropic and fluid requirement with the aim for hemodynamic stability. Slow oxytocin infusion was given to prevent tachycardia and cardiovascular compromise associated with bolus administration. Continuous epidural infusion was given for post-operative analgesia.

CONCLUSION

The uneventful operation was attributable to the sound co-operation between anaesthesiologists and surgeons which enabled early pre-operative stabilization and optimization of the patient. Safe anaesthesia and stable intra-operative hemodynamics allowed uneventful recovery and prevention of imminent complications. Long-term surveillance is recommended in view of the vast spectrum of outcome in PPCM.

MOTOR SPARING ANALGESIA FOR KNEE SURGERY – THE ADDUCTOR CANAL BLOCK

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INTRODUCTION

Early mobilization, physiotherapy and rehabilitation for post op knee surgery, such as knee arthroplasty and knee arthroscopy repair, have always been the goal for orthopedic communities.

This can be achieved with the adductor canal block which provides good analgesia and spares quadriceps muscles. This allows earlier, more efficient rehabilitation, thus reducing post-operative morbidity and shorter hospital stay.

Adductor canal block (ACB) is usually combined with general anaesthesia (GA) or subarachnoid anaesthesia (SAB) as it is not adequate to provide anaesthesia.

By using ultrasound guided technique, 15-30mL local anaesthetic agent (LA) inject into adductor canal to block saphenous nerve. The procedure itself is of low risk relatively and easy to perform.

METHODS

6 patients were recruited into our study comparing the outcome of GA + ACB versus combined spinal epidural (CSE), and each wing had 3 subjects. All patients were ASA II and were going for total knee replacement operation.

RESULTS

All 6 patients had uneventful operations. Patients in group of ACB+GA had better post-op pain control, mobilized earlier and shorter hospital stays.

CONCLUSION

ACB provided good analgesia in all 3 patients without any complications. It only blocked the sensory nerves which allowed the patients to start their physiotherapy and mobilized much earlier. This block maybe offered to patient if adequate expertise and support such as good ultrasound machine and physiotherapy facilities is available to carry out safely.

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“ICE” – A RARE CAUSE FOR COAGULOPATHY IN A CASE OF MASSIVE POST-PARTUM HEMORRHAGE

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A case of massive post-partum hemorrhage in East-Malaysia, associated with 3-4 methylene-dioxy-methamphetamine (MDMA) abuse otherwise known as Ecstasy or locally as “ICE”, injected by the patient as a means to suppress labor pains prior to hospital presentation. We report a rare case of substance abuse that lead to life threatening hemorrhage in a maternal patient of productive age group. Presenting to the labor suite in second stage of labor with breech presentation, exhibiting active neuropsychiatric symptoms of intoxication like euphoria, drowsiness, mydriasis but able to obey commands. A rapid response by the Obstetric on-call team proceeded with an assisted-breech delivery. Post-delivery, a baby girl with poor Apgar score was born and intubated. The mother was then posted for an Examination Under Anesthesia as she was noted to have slow blood oozing per-vaginally using a single shot spinal as she exhibited features of difficult intubation and high risk of aspiration. During the procedure, she tipped into massive PPH complicated with DIVC, and was rushed into the intensive care unit for stabilization and then back in to the operation theatre, needing a total abdominal hysterectomy (TAH) as definitive bleeding control. She required large scale resuscitative efforts peri-operatively including extra manpower, equipment, blood products, inotropes and vasopressor support, continuous veno-venous hemofiltration (CVVH) as well as intensive care consultation from a different city. We describe, chronologically the anesthetic challenges faced in managing a patient who was in acute substance intoxication at time of presentation to our district hospital in wee hours of the morning. We then explain the pharmacodynamics of MDMA in provoking coagulopathy. No reports of similar cases in the South-East Asia region.

ANAESTHETIC MANAGEMENT OF A NEONATE WITH VALLECULAR CYST: AN AIRWAY CHALLENGE

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Vallecular cyst is a rare cause of stridor in neonates, which may present as a life threatening airway obstruction. Because of the location and mass effect, the usual maneuvers to relieve obstruction through supraglottic measures such as an oral airway or laryngeal mask airway will not be effective. There is also the risk of rupturing the cyst and causing aspiration with laryngeal mask airway insertion or direct laryngoscopy. Keeping the patient breathing spontaneously with Total Intravenous Anaesthesia (TIVA) remifentanil and propofol also facilitated successful the airway management.

We report a case of congenital vallecular cyst in a neonate causing airway compromise and our airway management.

CASE REPORT: PETHIDINE PHLEBITIS

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INTRODUCTION

Pethidine effectively controls shivering in patients under spinal anaesthesia. We report an unusual side effect from intravenous (IV) Pethidine administration and its implication.

CASE DESCRIPTION

A previously well 37 years old female, G2P0+1 at 10weeks period of gestation, was admitted for incomplete miscarriage. Evacuation of retained product of conception was scheduled. Preoperatively, she was anaemic but asymptomatic, physical examination was unremarkable. She was anaesthetized with subarachnoid block. Ten minutes into the procedure, she was given IV Pethidine 25mg for shivering through a 20G IV line on her left hand which was running Sodium Chloride 0.9% (Normal Saline). Few minutes later, she complained of pain over her left arm. We noticed severe redness in the distribution of the vein with wheals and flare into which it was injected up to her left cubital fossa. We flushed the line with Normal Saline. IV Chlorpheniramine maleate 10mg and IV Hydrocortisone 100mg was given stat. Another branula was inserted on her right hand as we removed the affected side branula. Otherwise she was well. The redness resolved slowly after 30 minutes.

CONCLUSION

Pethidine is effective in the treatment of post anaesthesia shivering. Acute self-limiting phlebitis secondary to IV Pethidine is rare but a few cases have been reported. The pathophysiology is still unknown but local histamine release cannot be ruled out. Treatment is supportive starting with ceasing the infusion and remove the branula on the affected site. In our case, the advanced stage of phlebitis was accompanied with wheals and flare around the course of veins, hence antihistamine and steroid was given.

REPORT: ACUTE PAROTITIS AND 'RED EAR' FOLLOWING GENERAL ANAESTHESIA

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Acute inflammation of the parotid glands has been reported in a variety of surgical and endoscopic procedures done under general anaesthesia. These 'anaesthesia mumps' commonly occurs post induction or immediately after surgery. It is transient and usually resolves spontaneously within a few hours or up to a few weeks after surgery. Possible causes include obstruction to the parotid duct with positioning, retained secretions, dehydration, venous congestion and excessive coughing during the procedure. We report a case of a 12 year old boy who developed not only acute parotitis, but also inflamed ear on the dependent side of the operation, post craniotomy and evacuation of subdural collection under general anaesthesia. We also explore and postulate the possible causes for this interesting phenomena.

A CASE OF PERIMORTEM CAESAREAN DELIVERY WITH SURVIVAL FOLLOWING MATERNAL CARDIAC ARREST

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Perimortem caesarean delivery (PMCD) is a caesarean section being performed during maternal cardiac arrest or during impending maternal cardiac arrest. We present our first experience in our hospital, a patient who survived a PMCD. The patient was brought in by the husband in asystole, CPR was immediately instituted and airway was secured. ROSC attained after 1 cycle of CPR and PMCD was performed in view of logistic reason to transport unstable patient to the operation theatre. The patient had survived without any neurological sequelae but unfortunately the baby suffered a hypoxic ischemic brain damage.

KEYWORDS

Perimortem, cardiac arrest, caesarean delivery

LIFE-SAVING PERCUTANEOUS CARDIOPULMONARY SUPPORT SYSTEM IN CARDIAC ARREST DURING CORONARY ANGIOGRAPHY: A CASE REPORT

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REPORT

Percutaneous cardiopulmonary support (PCPS) composed of a centrifugal pump and a membranous artificial lung. It can provide mechanical circulatory support via the femoral artery and vein. PCPS is able to provide hemodynamic stability in the absence of an intrinsic cardiac rhythm or effective cardiac output.

We present a case of a 57 year-old man with underlying hypertension, stable angina, and Wolff-Parkinson-White (WPW) syndrome who presented to our hospital with unstable angina. He was subsequently planned for an elective coronary artery bypass graft (CABG) surgery. However, he complaint of severe refractory chest pain in ward and an emergency coronary angiogram was performed. Unfortunately, during the procedure, he developed cardiogenic shock and pulseless ventricular tachycardia (VT). Cardiopulmonary resuscitation was commenced immediately and multiple defibrillations were given until there was a return of spontaneous circulation. His haemodynamic was supported by Dobutamine, Dopamine and Noradrenaline. PCPS was inserted by cardiologist under fluoroscopy guidance and it reduced his inotropics requirement significantly. He then underwent an emergency on-pump beating heart CABG. His hemodynamic parameters remain stable intraoperatively on PCPS. Intra-aortic balloon pump (IABP) was inserted before removal of PCPS prior to the end of surgery since the latter has short duration of action. He was extubated successfully on post-operative day one without any neurologic sequelae and was weaned off IABP on the post-operative day two. Despite the remarkable post-operative recovery, the patient was re-intubated on the 5th day post-operation for circulatory arrest secondary to ventricular fibrillation. Regrettably, he developed ventilator associated pneumonia (VAP) during the stay and succumbed to septic shock secondary to VAP on post-operative Day 30.

The feasibility of initiating emergency cardiopulmonary bypass at the bedside is a prominent feature of PCPS. Although it has some limitations, it can act as rescue tools and bridging to save patient lives.

PATIENT-PROSTHESIS MISMATCH IN A MOTHER WITH TWIN PREGNANCY

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REPORT

Patient-prosthesis mismatch (PPM) occur when effective orifice area (EOA) of functioning prosthetic heart valve is too small in relation to the patient's body size, resulting in abnormally high transvalvular pressure gradient. This can lead to poor hemodynamic and symptomatic status, increased mortality, and an elevated rate of cardiac events.

We present a case of a 26 years old lady gravida 2 para 1, at 32 week of gestation with dichorionic diamniotic twins electively planned for Lower Segment Caesarean Section and Bilateral Tubal Ligation (BTL). She had history of bio-prosthetic aortic valve replacement and mitral valve repair at age 15. Seven years later she had uneventful first pregnancy and spontaneous vaginal delivery. However, this current pregnancy, she complaint of orthopnoea and exertional dyspnea with reduced effort tolerance since 23 weeks of gestation. Transthoracic echocardiogram at that time showed mild to moderate mitral regurgitation and mild aortic regurgitation with abnormal AV prosthetic valve gradient (mean pressure gradient of 39mmHg). The impression, was Aortic Valve patient-prosthesis mismatch. She was admitted and monitored closely in ICU pre-operatively with placement of invasive monitoring such as arterial line, central venous catheter and cardiac output monitoring device EV1000. She had general anaesthesia for her Caesarean Section and BTL. Intraoperatively, her haemodynamic was stable supported by noradrenaline and dopamine. She was sent to ICU postoperative and was extubated 6 hours later after the vasopressor and inotrope were weaned off. She recovered well in the postpartum period.

The effect of PPM on outcomes differs markedly depending on its severity as well as on the patient's preoperative status.

ACUTE CEREBRAL SUBDURAL HEMATOMA FOLLOWING SPINAL ANAESTHESIA FOR CAESAREAN SECTION

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BACKGROUND

Spinal anaesthesia has become current standards for obstetric procedures with proven safety and efficacy. Incidences of benign complications such as post-dural puncture headache (PDPH) are relatively common. Although cerebral subdural hemorrhage (SDH) following spinal anaesthesia is extremely rare, with the incidence of 1:500,000, it need to be diagnosed early considering the potentially fatal implications.

REPORT

We report a case of a 25-year-old primigravida, at term, underwent emergency lower segment caesarean section under spinal anaesthesia for acute foetal distress. Spinal anaesthesia was performed in sitting position at L3-L4 level, using a 25-gauge Quincke needle, attempted twice. Hypotension after spinal anaesthesia was corrected with 2 bolus doses of 6mg ephedrine. Operation was uneventful with estimated blood loss of 400mL. Post operation day 1 she was given a dose of subcutaneous enoxaparin 40mg for deep vein thrombosis prophylaxis. She was tolerating orally and ambulating, did not have any PDPH and neurological symptoms. Patient remained well for the next 34 hours' post operation, until she was found unresponsive in ward. Her Glasgow Coma Score (GCS) was E1V2M5 with unequal pupils. An urgent computed tomographic (CT) brain revealed a right fronto-temporo-parietal subdural hematoma with midline shift and cerebral oedema. Patient underwent right craniotomy, clot evacuation and tracheostomy. Cerebral angiography done later did not reveal any cerebral aneurysm or arterio-venous malformation. Post operatively, she was complicated with poor GCS recovery, subclinical seizure and hospital acquired infection which required few episodes of readmission to ICU. She was discharged home after 3 months with GCS of E4VTM4 and left sided residual hemiparesis.

CONCLUSION

Although cerebral SDH is a rare complication, clinicians should remain alert on the possibility of the formation of SDH after spinal anaesthesia. It could be life-threatening if not detected early and it can be indistinct without any alarming symptoms until the bleeding is lethal.

A CASE OF PROLONG BRADYCARDIA POST PENETRATING TRAUMA TO THE EYE WITH ZYGOMATIC FRACTURE DUE TO OCULAR CARDIAC REFLEX

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28 years old ASA 1 patient with history of trauma of the right eye presented to ED with bradycardia (40-45bpm) otherwise hemodynamically stable. On examination, there is deep laceration wound at the right upper eye lid (about 2cm) with penetrating eye globe injury of the right eye. The lower eye lid was inverted and pushed in under the right eye. There is another laceration wound at the right lateral side with discontinuity of the bone felt on palpation. There is no neurological deficit. CT scan shows blowout zygomatic fracture with involvement of roof, floor, medial and lateral wall of right orbit, right frontal sinus, right maxillary sinus wall and right Mandibular fossa. During admission, patient remained bradycardia. Upon induction, patient developed hemodynamic instability and heart rate further decrease to 35-38bpm. Multiple dose of ephedrine needed during the surgery due to multiple times of bradycardia. Patient become hemodynamically stable and hr normalized after underlying lesion is corrected.

HOW DID WE MANAGE A LARGE TRACHEAL RUPTURE? A SUCCESSFUL STORY

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BACKGROUND

Iatrogenic post intubation tracheal rupture (PiTR) is an extremely rare complication, but it can cause serious life threatening complication. The clinical presentation can be varies from early phase with asymptomatic clinical finding, and becoming more brutal with respiratory failure, cervical emphysema, pneumothorax and haemoptysis. A very high index of suspicion is needed to recognize PiTR. The diagnosis is usually confirmed via bronchoscopy.

REPORT

We presented a successful management of tracheal rupture in our center with good outcome and minimal complication to the patient. The patient underwent elective bilateral video assisted thoracoscopy (VATS) sympathectomy who required double lumen tube (DLT) intubation. A highly suspicious of bilateral pneumomediastinum was detected intraoperatively lead to urgent bronchoscopy at the end of surgery. The finding was a linear longitudinal lesion in the membranous wall of the trachea measuring 4cm in length and 1.5 cm from the carina. A multidisciplinary discussion agreed to treat the patient conservatively as the surgical complication would confer higher mortality. As the lesion was longer than 2cm, we subjected the patient under ECMO support with lung protective strategy to promote spontaneous healing of the trachea. At the day 5 of ECMO support, a repeat bronchoscopy showed the lesion was getting smaller and endobronchial stent placement was feasible to be deployed, to facilitate further healing process. The patient was extubated at day 6 and discharged home at day 11. The endobronchial stent was removed after 12 weeks with complete tracheal wall healing as evidenced by CT thorax and surveillance bronchoscopy.

CONCLUSION

We presumed that the tracheal rupture was due to over-inflation of the DLT cuff. Therefore, we recommend cuff monitoring pressure after cuff inflation especially in DLT. In clinically stable patient with no mediastinitis, conservative management is safe and can be considered in lesion more than 2 cm.

CASE REPORT: ANAESTHETIC CONSIDERATIONS IN A PARTURIENT WITH CONCEALED PLACENTAL ABRUPTIO SECONDARY TO ABDOMINAL PREGNANCY

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BACKGROUND

Abdominal pregnancy is a rare and potentially fatal obstetric condition, which commonly occur as a variant of ectopic pregnancies. Late presentation due to non-specific presenting symptoms and diagnostic difficulties during early routine abdominal ultrasound can have a significant impact on both the maternal and foetal outcome. Spontaneous bleeding due to abnormal placental attachments can lead to severe anemia and hypovolaemic shock if prompt diagnosis and timely management is not instituted.

REPORT

We report a 29 year old, Gravida 5 Para 2 parturient at 20 weeks of gestation with previous history of salpingectomy for ectopic pregnancy during her third pregnancy. She presented with vague abdominal pain for duration of 4 weeks and was found to be anemic (Hb7.0g/dl) despite being clinically asymptomatic during routine antenatal follow-up. A transvaginal ultrasound at our centre subsequently revealed an intra-abdominal foetus in a well-demarcated amniotic sac with surrounding free fluid. The placenta was located on the fundus and anterior wall of the uterus with invasion into the myometrium. She underwent an emergency exploratory laparotomy and hysterectomy with good surgical outcome although her foetus was not viable at delivery. The anaesthetic management and considerations for potential haemodynamic instability and bleeding risks in abdominal pregnancy are discussed.



CASE REPORT: CONTINUOUS SPINAL ANALGESIA FOR CAESAREAN SECTION IN SEVERE MITRAL STENOSIS AND PULMONARY HYPERTENSION IN PREGNANCY

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The ideal anaesthetic management of severe mitral stenosis and pulmonary hypertension in pregnancy for caesarean section remains controversial whereby the anaesthetic technique adopted may have a significant impact on maternal and foetal outcome. Thorough planning with a multidisciplinary team and a careful anaesthetic strategy is required to avoid maternal hemodynamic decompensation during the peripartum period. We present a 39 years old parturient, gravida 3 para 1 with underlying hypertension and bronchial asthma, diagnosed to have severe mitral stenosis (mitral valve area 0.8 cm²) and moderate mitral regurgitation with severe pulmonary hypertension (pulmonary artery systolic pressure of 94 mmHg) who refused termination of pregnancy. An elective caesarean section was carried out at 32 weeks gestation using continuous spinal anaesthesia technique and FloTracTM continuous cardiac output monitoring. Intravenous vasopressin infusion was used to maintain hemodynamic stability and to counteract the hypotension associated with spinal anaesthesia. Both mother and baby had an uneventful recovery and were discharged home well.

FIRST-PASS ENDOTRACHEAL INTUBATION SUCCESS RATE AMONG ANAESTHESIOLOGY MEDICAL OFFICERS PREPARING PAEDIATRIC PATIENTS FOR ELECTIVE SURGERY

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OBJECTIVES

The objective of this study was to determine the first-pass success rate of endotracheal intubations performed by Anaesthesiology medical officers on paediatric patients undergoing elective surgery at our tertiary referral centre. Secondary objectives were to determine the rate of adverse events, and examine factors associated with failure at first intubation attempt.

METHODOLOGY

Data was collected on 88 elective intubations performed by Anaesthesiology medical officers on children undergoing elective surgery at our centre. Upon obtaining informed consent, a pretested questionnaire was filled by the attending medical officer, to collect patient and medical officer details, as well as details of the intubation technique, adverse events, and factors associated with failed intubation attempts. Exclusion criteria were endotracheal intubations performed for emergency surgery, unplanned endotracheal intubations after failed supraglottic airway insertion, and nasotracheal intubations. Data was analysed using SPSS v20.

RESULTS

First-pass success rate in this study was 80.7%, and overall success rate was 98.9%. The use of inhalational induction was significantly associated with increased first-pass success. The rate of adverse events during intubation was 6.8%. Failure at first intubation attempt was strongly associated with an increased incidence of adverse events during intubation. The majority of failures at first intubation attempt were attributed to medical officer factors, the most common being inappropriate choice of endotracheal tube size.

CONCLUSIONS

The first-pass intubation success rate among medical officers in this study is relatively high compared to other published studies. This study highlights the importance of efforts to improve first-pass intubation success, to reduce the incidence of adverse events and improve patient safety. The use of standardized checklists prior to intubation, incorporating age-based formulae for estimation of endotracheal tube size, may improve first-pass success.

ASSESSMENT OF LEVEL OF PAIN IN PAEDIATRIC PATIENTS POST HYPOSPADIAS SURGERY: A PROSPECTIVE OBSERVATIONAL STUDY OF ANAESTHESIA AND ANALGESIA TECHNIQUES IN HYPOSPADIAS REPAIR IN PAEDIATRIC INSTITUTE HOSPITAL KUALA LUMPUR

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BACKGROUND

Hypospadias is a relatively common congenital defect where urinary meatus is on ventral surface of penis. Best time for hypospadias repair is between 6 to 18 months. In most cases, surgery is straightforward when meatus is in mid or distal penis, but will be complex if meatus is at base of penis or perineum. For surgery, general anaesthesia is often combined with regional technique and caudal block is increasingly used due to favourable analgesia. In some centres, additive eg. clonidine is used to prolong the duration of caudal block, while some use caudal or lumbar catheter with continuous local anaesthetic infusion. In cases that parents disagree for central neural blockade, opioid would be the alternative. Penile nerve block may suitable for distal hypospadias. This study was conducted in Paediatric Institute HKL, with objectives to describe and to assess effectiveness of different anaesthetic and analgesic techniques used in hypospadias repairs, by assessing postoperative pain and also on other parameters.

METHOD

Prospective observational study was conducted over a year, enrolled 143 patients aged 6 years and less. Choices of anaesthetic and analgesic techniques were depended on anaesthetists. Data collection included: demographics, operation details, anaesthetic techniques, analgesic medications, duration of hospital stay, postoperative pain ratings, ability to sleep and parents' satisfaction. FLACC (Face, Legs, Activity, Cry, Consolability scale) was used to assess pain.

RESULT

86.7% of patients received caudal block, 7% received opioid as main analgesia without regional technique, only 2.1% received epidural catheter insertion, 2.1% penile block, 2.1% local infiltration. Average FLACC score was less than 2 throughout hospital stay and average hospital stay is only 3 days. Patients with epidural catheter needed longer stay of 6 days. 96.5% of parents were satisfied with pain management.

CONCLUSION

With caudal block received, post hypospadias pain observed to be easily managed with oral analgesia as supplementation.

COMPARISON BETWEEN DIFFERENT EQUATIONS FOR ESTIMATING GLOMERULAR FILTRATION RATE (GFR) WITH KINETIC ESTIMATES OF GFR IN THE CRITICALLY ILL

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INTRODUCTION

Accurate assessment of GFR in ICU patients is very important for institution of supportive therapy, preventive therapy early renal support, drug dosing modification or avoidance of nephrotoxic drugs and modification of drug dosing. Kinetic estimate of GFR (keGFR) takes into account the changes of creatinine over time, creatinine production rate, and the volume of distribution, hence postulated to be a more accurate estimate of GFR in the acute settings, where there are rapidly changing kidney functions as in the critically ill. We evaluated the association of the keGFR with estimated GFR by conventional method.

METHODS

This is an interim analysis of single centre, prospective observational study of critically ill patients. The study has been registered with the National Medical Research Register (NMRR-14-1897-21447) and has obtained ethics approval. Inclusion criteria were patients older than 18 years old with sepsis, defined as clinical infection and acute increase in SOFA score >2, and plasma procalcitonin >0.5ng/ml. Plasma creatinine were measured at seven time points, and eGFR were calculated by the Cockcroft-Gault, MDRD, CKD-EPI and keGFR equations.

RESULTS

Twenty-four patients were recruited so far, of which 10 (41.7%) had AKI. Two patients need dialysis, and one died. Ten patients developed AKI within 24 hours of ICU admission. keGFR strongly correlated with eGFR by CKD-EPI equation ($r=0.92$, $p<0.0001$) at all time points in all patients. Whereas, keGFR only moderately correlated with eGFR by MDRD and Cockcroft-Gault equations ($r=0.79$ and 0.77 , respectively). eGFR by MDRD only strongly correlated with keGFR in subcohort of patients with AKI.

CONCLUSIONS

The new equation, keGFR strongly correlated with the eGFR by the CKD-EPI equation. In the absence of serial plasma creatinine measurement, eGFR can accurately be estimated by the CKD-EPI equation compared to others. Further analysis would involve analysis of the association with urinary creatinine clearance, and plasma Cystatin C.

AN AUDIT OF ELECTIVE SURGERIES WITH DAY CARE POTENTIAL IN HOSPITAL SULTANAH AMINAH JOHOR BAHRU (HSAJB) FROM OCTOBER 2015 – SEPTEMBER 2016

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OBJECTIVE

HSAJB is a tertiary hospital without day surgery services. This audit aims to evaluate the proportion of elective surgeries by different surgical disciplines which can be performed as day cases.

METHOD

This is an observational study with retrospective data collection and secondary data analysis. All patients undergoing elective surgeries at HSAJB from 1st October 2015 until 30th September 2016 are included in the study. Potential day cases are selected from the list based on the pre-set criteria defined in the Protocols for Day Care Anaesthesia by the Medical Development Division, Ministry of Health Malaysia. Data on patient demographics, surgical discipline, duration and types of surgery are extracted from COTDS.

RESULTS

A total of 5523 elective surgeries were performed over the 1 year period, of which 3141 involved patients between the ages of 6.5 months to 75 years old, and were completed in less than 90 minutes. 1125 (35.8%) of these cases were identified as suitable for day surgery, and have been performed in other centres as such. Disciplines with the highest percentage of potential day cases are Paediatric surgery (39.3%), General surgery (17.6%) and Otorhinolaryngology (14.5%).

CONCLUSION

The need for day surgery centres in Malaysian hospitals is long overdue, as evident in this audit by the number of cases with day care potential. Alternative ways of setting up such centres need to be considered amidst the constraints posed by hospital setup and limited resources.

MATERNOFETAL OUTCOMES OF DENGUE INFECTION IN PREGNANCY (NMRR-16-1881-32526)

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INTRODUCTION

The dengue epidemic has alarmed major concerns amongst clinicians and public health advocates globally. While efforts to combat the dengue menace at community and national levels were vigorous, clinicians strive to provide the best tertiary care in vulnerable populations (e.g. pregnant mothers) at highest risk of morbidity and mortality. There is paucity of literatures in exploring the clinical outcomes of aftercare among pregnant mothers with dengue fever.

OBJECTIVE

This study aimed to explore maternofetal outcomes of dengue infection in pregnancy.

METHODS

A retrospective study was performed using patient records from medical archives retrieved between 1st January 2014 and 31st December 2015. Inclusion criteria were pregnant mothers aged 18 years and above, diagnosed with dengue fever as per protocol definition enumerated in the Malaysian Clinical Practice Guidelines and WHO Framework of dengue management, and patients receiving ICU care. Subject anonymity and confidentiality were assured during analyses. Ethical approval was obtained (NMRR).

RESULTS

Thirty subjects fulfilled inclusion criteria: 13.3% had dengue fever with warning signs, 86.7% had severe dengue. Most patients were aged 25 years or older (80.0%) and being on their third trimester (53.3%). Outcomes from ICU care found that caesarean sections and spontaneous vaginal deliveries constituted of 6 (20%) cases each. Three babies were delivered prematurely; one of which delivered via caesarean section and two had spontaneous vaginal delivery.

CONCLUSION

This data highlighted possible outcomes of dengue infection among pregnant mothers receiving ICU care. The emerging findings in this study could lay a foundation for future testable hypothesis using robust methodological techniques to ensure temporality between covariates.

EFFECT OF EDUCATION PROGRAMS ON COMPLIANCE TO VENTILATOR CARE BUNDLE AMONG ANAESTHESIA TRAINEES IN A TERTIARY TEACHING HOSPITAL INTENSIVE CARE UNIT

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INTRODUCTION

Ventilator-associated pneumonia may develop after 48 hours of mechanical ventilation. Implementation of the ventilator care bundle would decrease the incidence of ventilator associated pneumonia in intensive care units. Elements of ventilator care bundle are elevation of the head of the bed to 30° to 45°, daily sedation vacation and assessment of readiness to extubate, peptic ulcer disease prophylaxis, and deep venous thrombosis prophylaxis. We aimed to determine whether an education initiative could increase the compliance of anaesthesia trainees to implement the ventilator care bundle.

METHODOLOGY

Following our institution's ethics committee approval, this observational study using pre- and post- intervention design was conducted in a tertiary teaching hospital intensive care unit over 10 months duration. Midway through the study period, a month of education programs was conducted. The education programs consisted of weekly continuous medical education sessions, regular reminders via electronic-mail and short message service to the trainees, together with the ventilator care bundle reminder chart displayed on each patient's observation table. Percentages of compliance to the ventilator care bundle and its individual elements were measured.

RESULTS

Sixty-Three anaesthesia trainees were rotated to the unit before and after the intervention period. Compliance to the ventilator care bundle increased from 4.8% to 36.5% after the education programs ($p < 0.01$). Compliance to the individual elements of the bundle before the education programs was: (1) Head of bed elevation more than 30°: 31.7%, (2) Sedation vacation: 17.5%, (3) Peptic ulcer disease prophylaxis: 68.3%, (4) Deep venous thrombosis prophylaxis: 36.5%. After the education programs, compliance to the elements of the bundle increased significantly 87.3%, 41.3%, 98.4%, and 87.3% respectively ($p < 0.01$ for all the increased in compliance percentages).

CONCLUSION

The multimodal education program applied improved compliance of anaesthesia trainees to implement the ventilator care bundle in our intensive care unit.

CLINICAL AUDIT ON TOWARDS ZERO CANCELLATION RATE OF ELECTIVE SURGERY DUE TO NO INTENSIVE CARE UNIT (ICU) BED FOR POST OPERATIVE

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BACKGROUND

Cancellation of elective surgery is an important issue as it can lead to patients and surgeon dissatisfactory, worsening of the disease, wasted of operation theater time and can end up with public complaint. The limited number of Intensive Care (ICU) bed in our hospital and increasing number of patients who required post operative ICU Care create problem.

OBJECTIVE

Towards zero cancellation rate of elective surgery due to no ICU bed for post operative.

METHODS

It is a retrospective study on Clinical audit on all elective surgeries that required ICU bed post operative. First audit was performed from Mei 2013 till April 2014. Data was taken from elective surgical list and from ICU request book. After analyzing data and remedial action taken, re audit was performed from June 2014 till May 2015.

RESULTS

In the first audit (Mei 2013 till April 2014), 25 cases out of total 184 cases that required post operative ICU care were cancelled due to no ICU bed.

Remedial action was taken by developing a Post Anesthesia Care Unit (PACU).

Re audit (June 2014 till May 2015) 6 cases out of total 176 cases that required ICU care was cancelled. From the study, it shows reduction of cancellations case from 13.6% (25 cases) to 3.4% (6 cases)

CONCLUSION

The presences of PACU help to reduce cancellation of elective surgeries due to no ICU bed in our hospital by 3 fold

PREVALENCE OF AUGMENTED RENAL CLEARANCE IN A MALAYSIAN INTENSIVE CARE SETTING

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INTRODUCTION

Augmented renal clearance (ARC) is a phenomenon where there is elevated renal clearance and defined by adjusted body weight creatinine clearance $> 130\text{ml/min}$. ARC results in changes of the pharmacokinetic and pharmacodynamic of antimicrobial therapy being administered, which may result in its subtherapeutic dose. We evaluated the prevalence of ARC in critically ill patients with sepsis.

METHODS

This is an interim analysis of single centre, prospective observational study of critically ill patients. The study has been registered with the National Medical Research Register (NMRR-14-1897-21447) and has obtained ethics approval. Inclusion criteria were patients older than 18 years old with sepsis, defined as clinical infection and acute increase in SOFA score >2 , plasma procalcitonin $>0.5\text{ng/ml}$. Only those with plasma creatinine $>130\text{mmol/l}$ were analysed. ARC is defined as eGFR of more 130ml/min . Cardiac index were measured using the Ultrasonic Cardiac Output Monitoring. eGFR is calculated using the CKD-EPI equation.

RESULTS

Fourteen patients were analysed so far, of which 7 (50%) had ARC on ICU admission. Of those with ARC, 6 persisted on day 2 and 4 on day 3. In these patients, eGFR correlated well with cardiac index on (r=0.65, p=0.01) on ICU admission. This correlation persisted on day 2 (r=0.56, p=0.04), but not on day 2. There were no differences in the SAPS II or SOFA score between patients with and without ARC (p=0.06 and 0.30 respectively).

CONCLUSIONS

ARC occur in almost half of critically ill patients with sepsis, and most persisted over the next 3 days of ICU stay. It is correlated with high cardiac index commonly seen septic patients. Hence, adequate monitoring the GFR is needed to evaluate the impact of subtherapeutic dosing of antimicrobial therapy in these patients.

A RETROSPECTIVE ANALYSIS ON ANAESTHESIA MANAGEMENT AND PATIENT OUTCOME OF CARDIAC DISEASE IN PREGNANCY AT SARAWAK GENERAL HOSPITAL

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BACKGROUND

The cardiovascular system in women is significantly stressed by pregnancy. It may compromise more in pre-existing heart disease, increasing peripartum morbidity and mortality. We conducted a retrospective analysis of pregnant women with cardiac disease at Sarawak General Hospital between 2011 until 2017.

OBJECTIVE

The aim of this study is to review the most common causes of cardiac disease, the anaesthesia management and the outcome of these patients.

METHODS

We analysed our hospital's medical records and found 32 pregnant women with cardiac disease however only 30 patients had surgery for Caesarean section or termination of pregnancy. Their demographic data, obstetric and anaesthesia forms were inspected.

RESULTS

Twenty (66.7%) pregnancies were classified into the high-risk category (WHO Class III/IV). Among cardiac disease in pregnancy, valvular lesion rates were higher (63.2%) followed by congenital heart disease (13.3%) and cardiomyopathy (13.3%) then rhythm disorder (10%). Of 30 pregnancies with cardiac disease, 26 (86.7%) were New York Heart Association (NYHA) class 1/2 and 4(13.3%) were NYHA class 3. Caesarean section was performed in 56.6% of cases compare to Caesarean section with bilateral tubal ligation (BTL) (36.7%) and Suction & Curettage with BTL (6.7%). Twenty (66.6%) patients received general anaesthesia, and 10 (33.4%) received regional anaesthesia (3 spinal, 5 epidural and 2 CSE). Pregnant women with higher NYHA had higher general anaesthesia rates. ($p=0.016$). A rate of 66.7% of 12 NYHA class I patients were undergoing general anaesthesia, 64.3% for NYHA class II and 75% for NYHA class III. The relationship between existing cardiac disease and anaesthesia management was not significant ($p=0.32$). There was one mortality and 2 patients transferred to cardiac centre.

CONCLUSION

We determined that valvular heart disease is the most common cause of cardiac disease in pregnancy in our population. General anaesthesia was preferred for those who had higher NYHA classifications.

POST-OPERATIVE BARIATRIC RYGB SURGERY – TOWARDS MINIMIZING MORBIDITY AND MORTALITY

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BACKGROUND

In bariatric surgery, Roux-en-y Gastric Bypass (RYGB) is one of the effective treatment options for morbid obesity. It improves quality of life and decrease the risk of obesity related disorders. While generally regarded as a safe procedure, studies have reported early post-operative complication rates of up to 10%. Various risk factors contribute to the morbidity and mortality, making outcome prediction and post-operative care of this group of patients very challenging.

OBJECTIVES

Our objective was to determine age, gender, BMI, ASA, co-morbid and duration of surgery in association with the occurrence of clinical complications within 48 hour post RYGB surgery.

METHODS

A retrospective review was conducted for patients undergoing RYGB surgery over 4 year period in Hospital Sungai Buloh. Data was collected from registry database and any complications occurring within first 48 hours was noted. Patients who developed complications were further analyzed to identify contributing risk factors that could be used as outcome predictors.

RESULTS

A total of 66 patients underwent RYGB surgery within the study period. The incidence of early post-operative complications was 10.6% which were related to respiratory, renal and surgery. Specific contributing risk factors for the occurrence of complications were identified as females under the age of 40 years, BMI > 40, underlying diabetes mellitus or hypertension, and prolonged surgery of more than 3 hours duration.

CONCLUSIONS

This study shows that the early complication rate post bariatric surgery in our institution is comparable with that of quoted international standards. Close monitoring, early recognition and early intervention in a High Dependency Ward may further reduce morbidity rates moving us closer towards achieving our goal of zero mortality.

USE OF DEPLOYABLE OPERATION THEATRE COMPLEX (DOTC) IN DISASTER: HSAJB EXPERIENCE

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BACKGROUND

Disasters claim lives and compromises the safety of the remaining facilities. Field hospitals and mobile operating rooms have been deployed to disaster areas to meet medical needs. On 25 October 2016, a fire broke out in Intensive Care Unit located in the main building of Hospital Sultanah Aminah Johor Bahru (HSAJB) which also housed the Operating Theatres (OT) and all surgical wards. This resulted in the shutdown of all surgical services and shunted all surgeries to other adjacent hospitals, but the demand was too overwhelming. The Malaysian Armed Forces Mobile Operation Theatre Complex (AMOT) was deployed to HSAJB a week later to manage selective emergency operations.

OBJECTIVES

To describe our experiences and challenges of providing operative care in DOTC.

METHODS

This is a retrospective crossed sectional study. All patients who had undergone surgeries in AMOT were included. Records on the DOTC were retrospectively analysed, including the OT register, booking forms, temperature records, complaint log and personal communications.

RESULTS

A total of 271 procedures were done on 266 patients. Median duration of surgery was 48 min (IQR 25, 70.5). Majority of cases were from general surgery (42.8%) and orthopaedic (35.7%) department. Common procedures were wound debridement (n=47), laparotomy (n=42), appendicectomy (n=35) and limb amputation (n=29). 69% received general anaesthesia and 25.4% had spinal anaesthesia. Challenges faced included the OT temperature that was poikilothermic, cylinder oxygen supply made the use of low flow and nitrous oxides desirable, long waits for ambulance transfer, water supply from reservoir that had to be topped up intermittently, electrical supply from on board generator which produced noise and vibration, and the rough terrain made transfer of delicate electronic medical devices to AMOT undesirable.

CONCLUSION

Although there were many challenges, DOTC had enabled HSAJB surgical teams to continue serving the community effectively.

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JOHOR, MALAYSIA