



Malaysian Society
of Anaesthesiologists



College of
Anaesthesiologists, AMM

Malaysian Society of Anaesthesiologists & College of Anaesthesiologists, AMM

ANNUAL SCIENTIFIC CONGRESS 2021 (VIRTUAL)

MyAnaesthesia 2021: Dawn of a New Era

6th - 8th August 2021



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MESSAGE



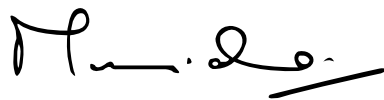
Welcome to the Malaysian Society of Anaesthesiologists and College of Anaesthesiologists Annual Scientific Congress (ASC) 2021 or in short known as MyAnaesthesia 2021. I would like to thank Tan Sri Dato' Seri Dr Noor Hisham Abdullah, Director-General of Health Malaysia, for gracing this occasion despite his busy schedule and the great challenges in fighting the Covid-19 pandemic in the country. This is the first virtual congress that we have ever organised, therefore, we are both excited and anxious that everything will turn out as planned.

It has been more than 18 months since we have been battling the unforgiving virus. Along the way, we had to cancel the Annual Scientific Congress which was supposed to be held in March 2020 due to the uncertainties of the pandemic and our unfamiliarity with using the virtual media.

The theme of this year's ASC "Dawn of a New Era" is very apt as we have to adapt to the new way of living. In line with the theme, we have added many topics in the scientific programme that are related to the Covid-19 pandemic which are affecting our lives. There are plenty of interesting and stimulating plenaries, symposium sessions, problem-based learning and refresher courses to choose from.

Please do not forget to visit the virtual booths by the biomedical industry and I promise you that it will be as exciting as the conventional physical booths, featuring latest information on the available pharmacotherapy and technology in anaesthesia, lucky draws and so on. I would like to thank the Organising Committee who has been accommodating new ideas and working very hard to make this virtual meeting a success. My special thanks also to the Scientific Committee that is led by Dato Dr Jahizah Hassan and Associate Professor Dr Azarinah Izaham, partners from the biomedical industry, the secretariat, the virtual platform provider and, last but not least, all participants of the Congress. There are thousands of free meetings and congresses that you can choose from but you have decided to be with us. I cannot express my gratitude and appreciation to all of you in words.

I wish everyone a successful, enjoyable and fruitful Congress.



Professor Dr Marzida Mansor
President, Malaysian Society of Anaesthesiologists &
Organising Chairperson, MSA/CoA Annual Scientific Congress 2021

MESSAGE



It is my great pleasure to welcome you to the Annual Scientific Congress of the Malaysian Society of Anaesthesiologists and the College of Anaesthesiologists, Academy of Medicine of Malaysia on 6th to 8th August 2021. This is the first time that the Congress is being held virtually. This is the part of the MyAnaesthesia series of both the MSA and the CoA and the theme this year is “Dawn of a New Era”.

The Organising Committee has steadily walked the very long path to this conference. The Scientific Committee has spared no effort in planning a very academic and stimulating scientific programme taking into consideration that this is a virtual conference. While the past eighteen months have crippled us to organise physical events, it has showed us the convenience of virtual and online events. The programme covers a very extensive array of areas and topics and even focuses on Covid-19 to be delivered by both local and international speakers.

This annual conference is a time when we will usually interact and renew acquaintances and, during these times, I believe that it is even more important for us to remain connected through the digital platform.

I would like to express special thanks to the hard work and dedication of Associate Professor Dr Azarinah Izaham and Dr Hasmizy Muhammad, my Co-Chair and Deputy Chair in the Scientific Committee respectively. My gratitude also goes to all the biomedical industry and partners that support this conference and hope that all the participants, both local and overseas, will benefit from it. Lastly, my deep appreciation to the faculty who has so willingly come forward to share their knowledge and experience with us.

The Organising Committee and I look forward to welcoming you to this Congress.

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

Dato Dr Jahizah Hassan
President
College of Anaesthesiologists, AMM

MSA HONORARY MEMBER

Professor Dr Hj Karis Misiran

Citation by Dato Dr Jahizah Hassan



Dr Karis Misiran was born on 20th April 1953 in Batu Pahat, Johor. He is the third child in a family of 10 children. His father worked initially as a clerk at Sri Medan Bauxite Mining and later in the 1960's in a rubber plantation sector while his mother was a housewife. Despite his hardship during childhood, his parents brought him up extremely well and he excelled in his studies starting with his primary, secondary and higher education and then pursued his ambition to be a medical doctor at Universiti Kebangsaan Malaysia (UKM).

He underwent six years of training with 43 other medical students as the UKM's first batch of medical undergraduates in 1973. The Medical Campus was located at Jalan Raja Muda and the Clinical Teaching was done at Kuala Lumpur General Hospital @ HKL. Despite challenges of being in the pioneer batch, Dr Karis was able to progress through the course smoothly and graduated in 1979 with a MD degree.

Dr Karis did his housemanship in the Kuala Terengganu General Hospital (KLGH), now known as Hospital Sultanah Nur Zahirah. Upon completion of the internship, he was stationed at KLGH OPD for a few months before joining the UKM's Department of Anaesthesiology as an anaesthesiology trainee. Since UKM did not have a teaching hospital back then, he was stationed in HKL.

In 1984, Dr Karis, through UKM, was given the Australian Universities and Colleges Awards (AUIDP/IDP) scholarship to be trained as an anaesthesiologist in Melbourne, Australia. There, he had training rotations at various hospitals and was exposed to various anaesthesiology subspecialities including cardiothoracic anaesthesia. In 1987, he returned to the UKM to begin a new chapter of anaesthesiology training in Malaysia.

Master of Anaesthesiology

UKM wanted its own Department of Anaesthesiology to start the Anaesthesiology Speciality Programme as many of other major surgical disciplines, such as the Orthopaedics, the General Surgery and also the Paediatric fraternities had already started theirs. In 1984, a working paper was presented to the UKM senate. The working paper was approved and, hence, UKM became the first university in Malaysia to offer postgraduate training in Anaesthesiology. The first intake was in April 1985 with a total of seven students (six UKM trainees and one from the army). In 1987, Dr Karis was recalled from Australia and appointed as the head of department as well as the supervisor of postgraduate training. Unfortunately, at that point in time, the department had very limited manpower and besides Dr Karis, there were only two other specialists. In the early stages of the Master of Medicine (Anaesthesiology) programme, Dr Karis's contribution was very vital as without him, the structured local postgraduate training would have

MSA HONORARY MEMBER

Professor Dr Hj Karis Misiran

Citation by Dato Dr Jahizah Hassan

failed or “terkubur”. The first batch took their Part II examination in April to May 1988 and all candidates (except one) passed. It was a huge achievement, considering they were the first batch who graduated.

Contribution to UKM

Dr Karis’s contribution to UKM had been enormous. He brought fame to UKM through managing the Masters’ programme with great success. Apart from the postgraduate training, he was actively involved with the undergraduate teaching and learning, and other contributions through various administrative posts.

Leadership

Although Dr Karis had not shown leadership qualities during his student days, this came to the forefront when it was needed and mattered most. Due to the events mentioned previously, he had to step up into the HOD post and managed the Masters’ programme efficiently. His success was proven as he was later entrusted with various administrative posts including the Deputy Dean and the Medical Director UKM Specialist Centre. His tenacity to continue to contribute, after retirement, needs no proof as he was employed by Universiti Teknologi MARA Shah Alam (UiTM) and became the founding Head of the Department of Anaesthesiology, Faculty of Medicine, UiTM and later Chairman, Surgical Sciences Cluster at the same Faculty. History repeated itself as he had to develop another postgraduate training in anaesthesiology and critical care in UiTM. As a result, UiTM will admit their first batch of postgraduate trainees in anaesthesiology and critical care this December 2021.

In addition, Dr Karis is also a prolific researcher, and has published more than 70 articles, abstracts and posters. He has also served as an editorial board member for journals and, currently, is on the editorial board for Ecronicon orthopaedic open access journal.

Personal Life

In 1979, Professor Dr Karis Misiran married Professor Dr Noor Hayati Mohd Esa, a consultant parasitologist, and are blessed with six children and, to date, nine grandchildren. The couple’s wonderful influence led to their children’s successes being in different vocation.

His hobbies include swimming, cycling, travelling, gardening and teaching. Apart from that, Professor Dr Karis now enjoys reciting the Quran and learning in-depth the beauty of Quran from a few “tok gurus”. He also teaches his friends to read Quran. His one other hobby for which we are honouring him today is his life-long passion of teaching.

MALAYSIAN SOCIETY OF ANAESTHESIOLOGISTS EXECUTIVE COMMITTEE MEMBERS 2020-2021

President	Professor Dr Marzida Mansor
Immediate Past President	Dato Dr Jahizah Hassan
President-Elect	Professor Dr Ina Ismiarti Shariffuddin
Chairman	Datin Dr V Sivasakthi
Hon Secretary	Dato' Dr Yong Chow Yen
Hon Treasurer	Dr Seah Keh Seng
Committee Members	Dr Azizan Ghazali Dr Gunalan Palari Associate Professor Dr Loh Pui San Associate Professor Dr Muhammad Maaya Dr Shahridan Mohd Fathil
Coopted Committee Members	Associate Professor Dr Azarinah Izaham Dato' Dr Subrahmanyam Balan

COLLEGE OF ANAESTHESIOLOGISTS, AMM COUNCIL 2020-2021

President	Dato Dr Jahizah Hassan
Vice President	Professor Dr Marzida Mansor
Hon Secretary	Dr Gunalan Palari
Hon Treasurer	Dato' Dr Wan Rahiza Wan Mat
Council Members	Associate Professor Dr Azarinah Izaham Dr Hasmizy Muhammad Dr Seah Keh Seng Dato' Dr Subrahmanyam Balan
Coopted Council Members	Dr Melor @ Mohd Yusof Mohd Mansor Datin Dr Vanitha Sivanaser

ORGANISING COMMITTEE

Advisor	Datin Dr V Sivasakthi
Organising Chairperson	Professor Dr Marzida Mansor
Deputy Organising Chairperson / Sponsorship	Dato Dr Jahizah Hassan
Honorary Secretary / Technical Committee	Dato' Dr Yong Chow Yen
Honorary Secretary / Sponsorship & Trade	Dr Gunalan Palari
Honorary Treasurer / Sponsorship & Trade	Dr Seah Keh Seng
Honorary Treasurer / Publications	Dato' Dr Wan Rahiza Wan Mat
Sponsorship & Trade	Dato' Dr Subrahmanyam Balan
Publications	Associate Professor Dr Muhammad Maaya Datin Dr Vanitha Sivanaser
Promotion & Publicity	Dr Shahridan Mohd Fathil Dr Melor @ Mohd Yusof Mohd Mansor
Social	Professor Dr Ina Ismiarti Shariffuddin Dr Mohd Azizan Ghazali
Social / Technical Committee	Dr Hasmizy Muhammad
Technical Committee	Associate Professor Dr Loh Pui San



SCIENTIFIC COMMITTEE

Co-Chairpersons	Dato Dr Jahizah Hassan Associate Professor Dr Azarinah Izaham
Deputy Chairperson	Dr Hasmizy Muhammad
Airway Anaesthesia	Associate Professor Dr Muhammad Maaya
Critical Care	Dato' Dr Wan Rahiza Wan Mat
Obstetrics Anaesthesia	Dr Mohd Azizan Ghazali
Neuroanaesthesia	Datin Dr Vanitha Sivanaser
Paediatric Anaesthesia	Professor Dr Ina Ismiarti Shariffuddin
Pain Management	Professor Dr Marzida Mansor
Perioperative Medicine	Associate Professor Dr Loh Pui San
Regional Anaesthesia	Dr Shahridan Mohd Fathil
Thoracic Anaesthesia	Dato' Dr Yong Chow Yen
Ultrasound / Cardiac Anaesthesia	Dr Hasmizy Muhammad



INTERNATIONAL FACULTY



Imran Ahmad

Deputy Clinical Director
Guy's & St Thomas' NHS Trust
United Kingdom



John Doyle

Professor of Anesthesiology
Cleveland Clinic
Cleveland Clinic Lerner College of Medicine
of Case
Western Reserve University
USA



Joseph F Answine

Clinical Associate Professor
Pennsylvania State University Hospital
Hershey
Pennsylvania
USA



Ross Freebairn

Intensive Care Consultant
Hawke's Bay Fallen Soldiers' Memorial
Hospital
Hastings
New Zealand



Hans Donald de Boer

Consultant Anesthesiologist and Pain
Specialist
Martini General Hospital
Groningen
The Netherlands



Bernd Froessler

Consultant Anaesthetist
Lyell McEwin Hospital
Adelaide
Australia



Davy Cheng

Distinguished University Professor Emeritus
Department of Anesthesia and Perioperative
Medicine
Western University
Ontario
Canada



Adrian W Gelb

President
World Federation of Societies of
Anaesthesiologists
Professor (Emeritus)
Department of Anesthesia and Perioperative
Care
University of California
San Francisco
USA



Chin Ki-Jinn

Professor
Department of Anesthesiology and Pain
Medicine
University of Toronto
Toronto
Canada



Karmakar Manoj Kumar

Professor
Department of Anaesthesia and Intensive Care
Faculty of Medicine
The Chinese University of Hong Kong
Hong Kong



Chong Chin Ted

Senior Consultant and Neuroanaesthesia
Service Head
Department of Anaesthesiology, Intensive
Care and Pain Medicine
Tan Tock Seng Hospital
Singapore



Deborah Khoo

Consultant Anaesthetist
National University Hospital
Singapore

INTERNATIONAL FACULTY



Jin-Tae Kim

Professor
Department of Anesthesiology and Pain
Medicine
Seoul National University
College of Medicine
Seoul
South Korea



Friedrich Puhringer

Professor and Chairman
Department of Anaesthesiology and Intensive
Care Medicine
Klinikum am Steinberg
Reutlingen
Germany



Tae-Yop Kim

Professor
Anesthesiology
Konkuk University Medical Center
Konkuk University School of Medicine
Seoul
South Korea



Colin Royse

Professor
Academic Director Continuing and
Professional Education
Faculty of Medicine
Dentistry and Health Sciences
University of Melbourne
Melbourne
Australia



Justin Sangwook Ko

Associate Professor
Department of Anesthesiology and Pain
Medicine
Sungkyunkwan University School of Medicine
Samsung Medical Center
Seoul
South Korea



Edwin Seet

Clinical Director and Senior Consultant
Anesthesiologist
Khoo Teck Puat Hospital
Singapore



Lars Konge

Cardio-Thoracic Surgeon
Head of Research
Copenhagen Academy for Medical Education
and Simulation
Rigshospitalet
Copenhagen
Denmark



Deepak Sharma

The Virginia and Prentice Bloedel Professor
and Division Chief
Neuroanesthesiology and Perioperative
Neurosciences
Departments of Anesthesiology and Pain
Medicine and Neurological Surgery
University of Washington
Seattle
USA



Jeffrey Lipman

Executive Director
Burns, Trauma, Critical Care Research Centre
The University of Queensland
Brisbane
Australia



Alex Sia Tiong Heng

Professor
Senior Consultant Anesthesiologist
Chief Executive Officer
KK Women's and Children's Hospital
Singapore



Suraphong Lorsomradee

Associate Professor
Cardiac Anesthesiologist
Chiang Mai University Hospital
Chiang Mai
Thailand



Audrey Tan

Consultant Anaesthetist
St. George's University Hospitals
NHS Foundation Trust
London
United Kingdom

INTERNATIONAL FACULTY



Ti Lian Kah

Director of Cardiac Anaesthesia and Senior Consultant
Department of Anaesthesia
Yong Loo Lin School of Medicine
National University Health System
Singapore



Shigeki Yamaguchi

Professor and Chairman
Department of Anesthesiology
Dokkyo Medical University
School of Medicine
Mibu
Japan



Jolin Wong

Consultant Anaesthesiologist and Intensivist
Department of Surgical Intensive Care
Singapore General Hospital
Singapore

LOCAL FACULTY



Ahmad Afifi Mohd Arshad

Consultant Anaesthesiologist and Pain Specialist
Hospital Sultanah Bahiyah
Alor Setar
Kedah



Gunalan Palari

Consultant Anaesthesiologist
Subang Jaya Medical Centre
Subang Jaya
Selangor



Aliza Mohamad Yusof

Anaesthesiologist / Intensivist
Department of Anaesthesiology and Intensive Care
Universiti Kebangsaan Malaysia Medical Centre
Kuala Lumpur



Andrew Gunn Kean Beng

Consultant Surgeon
Gleneagles Hospital Medini
Nusajaya
Johor



Ariffin Marzuki Mokhtar

Clinician / Intensivist
Department of Anaesthesiology and Intensive Care
School of Medical Sciences
Universiti Sains Malaysia
Kota Bharu
Kelantan



Hasmizy Muhammad

Consultant Cardiothoracic Anaesthesiologist and Head
Department of Anaesthesiology and Intensive Care
Sarawak Heart Centre
Kota Samarahan
Sarawak



Azrin Mohd Azidin

Consultant Anaesthesiologist
Hospital Kuala Lumpur
Kuala Lumpur



Intan Zarina Fakir Mohamed

Consultant Paediatric Anaesthetist
Department of Anaesthesiology and Intensive Care
Hospital Tunku Azizah
Kuala Lumpur



Beh Zhi Yuen

Consultant Anaesthesiologist
OSC Orthopaedic Specialist Centre
Subang Jaya
Selangor



Jusmidar Abdul Jamil

Consultant Cardiothoracic Anaesthesiologist
Penang General Hospital
George Town
Pulau Pinang



Chua Chen Chen

Consultant of Cardiothoracic Anaesthesia and Perfusion Department
Hospital Queen Elizabeth II
Kota Kinabalu
Sabah



Khairul Idzam Muslim

Regional Anaesthetist
Anaesthesiology Department
Hospital Kuala Lumpur
Kuala Lumpur

LOCAL FACULTY



Khong Tak Loon

Associate Professor
Department of Surgery
Faculty of Medicine
University of Malaya
Kuala Lumpur



Mary Suma Cardosa

Consultant Anaesthesiologist and Pain
Specialist
Hospital Selayang
Batu Caves
Selangor



Khoo Eng Lea

Consultant Anaesthesiologist and Pain
Specialist
Sunway Medical Centre Velocity
Kuala Lumpur



Marzida Mansor

Professor
Department of Anaesthesiology
Faculty of Medicine
University of Malaya
Kuala Lumpur



Kuljit Singh

Consultant ENT Surgeon
Prince Court Medical Centre
Kuala Lumpur



Melor @ Mohd Yusof Mohd Mansor

Head of Anesthesiology and Intensive Care
Department
Hospital Kuala Lumpur
Kuala Lumpur



Lim Thiam Aun

Fellow Lecturer
Department of Anaesthesia and Intensive Care
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
Seri Kembangan
Selangor



Mohamad Azlan Ariffin

Consultant Anaesthesiologist
Hospital Angkatan Tentera Tuanku Mizan
Kuala Lumpur



Mafeitzeral Mamat

Consultant Anaesthesiologist
Gleneagles Hospital Medini
Nusajaya
Johor



Mohamed Hassan Mohamed Ariff

Senior Consultant Anaesthesiologist and
Intensivist
Institut Jantung Negara
Kuala Lumpur



Mahazir Kassim

Consultant Intensivist
Department of Anaesthesiology and Intensive
Care
Hospital Sultanah Aminah
Johor Bahru
Johor



Mohd Basri Mat Nor

Consultant Intensivist
Head of Department
Department of Anaesthesiology
Kulliyah of Medicine
International Islamic University Malaysia
Kuala Lumpur

LOCAL FACULTY



Mohd Fakhzan Hassan

Anaesthesiologist
Hospital Kuala Lumpur
Kuala Lumpur



Omar Sulaiman

Consultant Anaesthesiologist and Head of
Department
Department of Anaesthesia and Intensive Care
Hospital Sultanah Aminah
Johor Bahru
Johor



Mohd Fahmi Lukman

Senior Lecturer and Anaesthesiologist
Faculty of Medicine
National Defence University of Malaysia
Kuala Lumpur



Petrick Periyasamy

Head of Infectious Diseases Unit
Department of Internal Medicine
Universiti Kebangsaan Malaysia Medical Centre
Kuala Lumpur



Nadia Md Nor

Consultant Anaesthesiologist and Lecturer
Department of Anaesthesiology and Intensive
Care
Universiti Kebangsaan Malaysia Medical Centre
Kuala Lumpur



Raha Abdul Rahman

Senior Consultant Anaesthesiologist and
Intensivist
Department of Anaesthesiology and Intensive
Care
Universiti Kebangsaan Malaysia Medical Centre
Kuala Lumpur



Nazuha Mohd Najid

Consultant Anaesthesiologist
Anaesthesia and Intensive Care Department
Hospital Sultan Abdul Halim
Sungai Petani
Kedah



Sabariah Faizah Jamaluddin

Professor
Emergency Medicine
Universiti Teknologi MARA
Shah Alam
Selangor



Kevin Ng Wei Shan

Senior Medical Lecturer and Anaesthesiologist
Department of Anaesthesiology
Faculty of Medicine
University of Malaya
Kuala Lumpur



Sivaraj Chandran

Paediatric Anaesthesiologist
Hospital Tengku Ampuan Afzan
Kuantan
Pahang



Noor Airini Ibrahim

Senior lecturer and Consultant Intensivist
Head of Department
Anaesthesia and Intensive Care
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
Seri Kembangan
Selangor



Thohiroh Abdul Razak

Consultant Obstetric Anaesthesiologist and
Head of Department
Department of Anaesthesiology and Intensive
Care
Hospital Tunku Azizah
Kuala Lumpur

LOCAL FACULTY



Wan Aizat Wan Zakaria

Lecturer and Anaesthesiologist
Department of Anaesthesiology
Faculty of Medicine
University of Malaya
Kuala Lumpur



Yeat Choi Ling

General Physician
Hospital Raja Permaisuri Bainun
Ipoh
Perak



Wan Fadzlina Wan Muhd Shukeri

Consultant Anaesthesiologist and Senior
Lecturer
Department of Anaesthesiology and Intensive
Care
School of Medical Sciences
Hospital Universiti Sains Malaysia
Kota Bharu
Kelantan



Carolyn Yim Chue Wai

Head
Unit of Obstetric Anaesthetic Services
University Malaya Medical Centre
Kuala Lumpur



Wan Nazaruddin Wan Hassan

Associate Professor
Department of Anaesthesiology and Intensive
Care
School of Medical Sciences
Universiti Sains Malaysia
Kota Bharu
Kelantan

PROGRAMME SUMMARY

Date Time	6 th August 2021 (Friday)	7 th August 2021 (Saturday)	8 th August 2021 (Sunday)
0800 - 0900	Registration / Login		
0900 - 0930	PLENARY 1	PLENARY 3	PLENARY 5
0930 - 1000			
1000 - 1030	PLENARY 2	OPENING CEREMONY	SYMPOSIA 10 11
1030 - 1100	Morning Break / Virtual Booth Visit		
1100 - 1130	SYMPOSIA 1 2	SYMPOSIA 5 6 7	Morning Break / Virtual Booth Visit
1130 - 1200			
1200 - 1230	LUNCH SYMPOSIUM 1	LUNCH SYMPOSIUM 2	Morning Break / Virtual Booth Visit
1230 - 1300			
1300 - 1330	SPONSORED SESSION	PLENARY 4	REFRESHER COURSE 5 MEET THE EXAMINERS
1330 - 1400			
1400 - 1430	REFRESHER COURSE 3 MSA AWARD & YOUNG INVESTIGATOR AWARD	TEA SYMPOSIA 3 4	
1430 - 1500			SYMPOSIA 10 11
1500 - 1530	SYMPOSIA 12 13	TEA SYMPOSIA 3 4	
1530 - 1600			REFRESHER COURSE 4 PROBLEM BASED LEARNING 3
1600 - 1630	Annual General Meeting of the Malaysian Society of Anaesthesiologists	Annual General Meeting of the College of Anaesthesiologists	
1630 - 1700			Annual General Meeting of the Malaysian Society of Anaesthesiologists
1700 - 1730	Annual General Meeting of the Malaysian Society of Anaesthesiologists	Annual General Meeting of the College of Anaesthesiologists	
1730 - 1800			Annual General Meeting of the Malaysian Society of Anaesthesiologists
1800 - 1830	Annual General Meeting of the Malaysian Society of Anaesthesiologists	Annual General Meeting of the College of Anaesthesiologists	

DAILY PROGRAMME

6th August 2021 (Friday)

0800 - 0900	Registration / Login						
0900 - 0945	PLENARY 1 Chairperson: <i>Marzida Mansor</i> The Role of Anesthesiologists in Controlling and Preventing COVID-19 Transmission in Surgical and Anesthetic Settings <i>Justin Sangwook Ko</i>			HALL 1			
0945 - 1030	PLENARY 2 Chairperson: <i>Ina Ismiarti Shariffuddin</i> Biased Opioid <i>John Doyle</i>			HALL 1			
1030 - 1045	Morning Break & Virtual Booth Visit						
1045 - 1215	HALL 1	1045 - 1215	HALL 2	1045 - 1215	HALL 3	1045 - 1215	HALL 4
SYMPOSIUM 1 Cardiac Anaesthesia Chairperson: <i>Hasmizy Muhammad</i> Blood Management Strategies in Cardiac Surgery: Drugs, Technologies and Techniques <i>Davy Cheng</i> Erector Spinae Plane Blocks for Cardiac Surgery <i>Colin Royse</i> Prothrombin Complex Concentrates and Fibrinogen Concentrates in the Era of Viscoelastic Monitors <i>Tae-Yop Kim</i>		SYMPOSIUM 2 Airway Management Chairperson: <i>Muhammad Maaya</i> The Shared Airway: To Tube Or Not To Tube <i>Imran Ahmad</i> Importance of COVID-19 Airway Management <i>Friedrich Puhringer</i> Awake Intubation: Necessity & Practicality <i>Wan Aizat Wan Zakaria</i>		REFRESHER COURSE 1 Pharmacology & Pharmacotherapy Chairperson: <i>Lim Thiam Aun</i> Muscle Relaxant & Reversal <i>Raha Abdul Rahman</i> Inotropic Agents <i>Mohd Basri Mat Nor</i> Remimazolam <i>Shigeki Yamaguchi</i>		PROBLEM BASED LEARNING 1 Pain Moderator: <i>Ahmad Afifi Mohd Arshad</i> <i>Mary Suma Cardoso / Khoo Eng Lea / Yeat Choi Ling</i>	
1230 - 1315	LUNCH SYMPOSIUM 1 (Aspen) Chairperson: <i>Beh Zhi Yuen</i> Maximizing the Analgesic Benefits of Regional Anaesthesia <i>Chin Ki-Jinn</i>			HALL 1			
1330 - 1400	SPONSORED SESSION (Fisher & Paykel) Chairperson: <i>Wan Rahiza Wan Mat</i> NHF: Mechanisms & Physiological Outcomes & Use in Clinical Practice <i>Ross Freebairn</i>			HALL 1			

DAILY PROGRAMME

6th August 2021 (Friday)

<p>1445 - 1615 HALL 1</p> <p>SYMPOSIUM 3 Perioperative Medicine Chairperson: <i>Gunalan Palari</i></p> <p>Postoperative Delirium <i>Ti Lian Kah</i></p> <p>Transdisciplinary Approach in Perioperative Medicine <i>Khong Tak Loon</i></p> <p>How COVID-19 has Changed Us - In and Out of OT <i>Mafeitzeral Mamat</i></p>	<p>1445 - 1615 HALL 2</p> <p>SYMPOSIUM 4 Thoracic Anaesthesia Chairperson: <i>Yong Chow Yen</i></p> <p>Bronchoscopy and the COVID-19 Pandemic <i>Lars Konge</i></p> <p>Peri-Operative Fluid Management in Thoracic Anaesthesia <i>Chua Chen Chen</i></p> <p>Regional Anaesthesia: Blocks of the Chest Wall... for Cardiac and Thoracic Surgeries <i>Azrin Mohd Azidin</i></p>	<p>1445 - 1615 HALL 3</p> <p>REFRESHER COURSE 2 Monitoring Chairperson: <i>Melor @ Mohd Yusof Mohd Mansor</i></p> <p>Hemodynamic Monitoring: From More or Less to Noninvasive <i>Suraphong Lorsomradee</i></p> <p>Role of Biochemical and Haematological Monitoring in COVID-19 <i>Aliza Mohamad Yusof</i></p> <p>Monitoring during Cardiopulmonary Bypass <i>Hasmizy Muhammad</i></p>	<p>1445 - 1615 HALL 4</p> <p>PROBLEM BASED LEARNING 2 Airway Management Moderator: <i>Nadia Md Nor</i></p> <p><i>Imran Ahmad / Friedrich Puhlinger /</i></p>
<p>1615 - 1645 HALL 1</p> <p>TEA SYMPOSIUM 1 (Baxter) Chairperson: <i>Marvin Ajon</i></p> <p>The Future of Anaesthesia: Balancing Patients' Outcomes & Environmental Sustainability (Why Desflurane is Still the Answer) <i>Joseph F Answine</i></p>	<p>1615 - 1645 HALL 3</p> <p>TEA SYMPOSIUM 2 (3M) Chairperson: <i>Marzida Mansor</i></p> <p>Preventing Hypothermia <i>Edwin Seet</i></p>		
<p>1645 - 1815 Annual General Meeting of the Malaysian Society of Anaesthesiologists <i>Members can join the AGM via the link provided in the e-mail after registering for the AGM</i></p>			

DAILY PROGRAMME

7th August 2021 (Saturday)

0845 - 0930		PLENARY 3					HALL 1
<p>Chairperson: <i>Sivasakthi Velayuthapillai</i></p> <p>Leadership and Vital Directions in Anesthesiology <i>Davy Cheng</i></p>							
0930 - 1045		OPENING CEREMONY					HALL 1
<p>National Anthem</p> <p>Recital of Doá <i>Dr Mafeitzeral Mamat</i></p> <p>Speeches by the Organising Chairperson, MSA/CoA Annual Scientific Congress 2021 & President, Malaysian Society of Anaesthesiologists <i>Professor Dr Marzida Mansor</i></p> <p>by the President, College of Anaesthesiologists, Academy of Medicine of Malaysia <i>Dato Dr Jahizah Hassan</i></p> <p>Keynote Lecture by the Director-General of Health Malaysia followed by Opening of the Congress <i>Tan Sri Dato' Seri Dr Noor Hisham Abdullah</i></p> <p>Conferment of the MSA Honorary Membership Citation on Professor Dr Hj Karis Misiran <i>Dato Dr Jahizah Hassan</i></p> <p>MSA/CoA Montage</p> <p>End of Function</p>							
1045 - 1100		Morning Break & Virtual Booth Visit					
1100 - 1230	HALL 1	1100 - 1230	HALL 2	1100 - 1230	HALL 3	1100 - 1300	HALL 4
SYMPOSIUM 5 Regional Anaesthesia Chairperson: <i>Shahridan Mohd Fathil</i>		SYMPOSIUM 6 Neuroanaesthesia Chairperson: <i>Vanitha Sivanaser</i>		SYMPOSIUM 7 Ultrasound Chairperson: <i>Hasmiyy Muhammad</i>		POSTER & CASE REPORT COMPETITION	
RA Dilemma: Awake or Asleep? <i>Khairul Idzam Muslim</i>		Neuroanesthesia During the COVID19 Pandemic <i>Deepak Sharma</i>		The Evolution of Ultrasound in Anaesthesia Practice <i>Colin Royse</i>			
The ESP Block - A RIP or VIP Technique <i>Chin Ki-Jinn</i>		ERAS in Neurosurgery <i>Chong Chin Ted</i>		Intraoperative Transesophageal Echocardiography for Tricuspid Valve Surgery <i>Tae-Yop Kim</i>			
Selective Trunk Block (SeTB): A "One Size Fits All" Technique for Upper Extremity Surgery <i>Karmakar Manoj Kumar</i>		Neuroanaesthesia Fellowship Training: The Path Forward <i>Audrey Tan</i>		Point of Care Ultrasound (POCUS) in Critical Care Medicine <i>Jolin Wong</i>			

DAILY PROGRAMME

7th August 2021 (Saturday)

1230 - 1330	LUNCH SYMPOSIUM 2 (Pfizer) Chairperson: <i>Lucy Chan</i> Versatility of Dexmedetomidine in Anesthesia Practice: Role in Procedural Sedation <i>John Doyle</i>	HALL 1
1330 - 1415	LUNCH SYMPOSIUM 3 (MSD) Chairperson: <i>Joseph Abeug</i> PONV, NMB Management and Latest Guidelines Updates <i>Hans Donald de Boer</i>	HALL 1
1415 - 1445	PLENARY 4 Chairperson: <i>Muhammad Maaya</i> Quality and Safety in Neuroanesthesia: The Way Forward <i>Deepak Sharma</i>	HALL 1
1445 - 1615	SYMPOSIUM 8 Critical Care Chairperson: <i>Wan Rahiza Wan Mat</i> PK/PD Optimised Therapy <i>Jeffrey Lipman</i> Steroid use in COVID Infection <i>Petrick Periyasamy</i> Challenges in Quality of End of Life Care During the COVID Pandemic <i>Noor Airini Ibrahim</i>	HALL 1
1445 - 1615	SYMPOSIUM 9 Obstetric Anesthesia Chairperson: <i>Mohd Azizan Ghazali</i> My Dawn <i>Carolyn Yim Chue Wai</i> Persistent Pain After Caesarean Delivery: Much Ado About Nothing? <i>Nazuha Mohd Najid</i> Labour Analgesia 2021 Redux <i>Alex Sia Tiong Heng</i>	HALL 2
1445 - 1615	REFRESHER COURSE 3 Trauma Anaesthesia Chairperson: <i>Shahridan Mohd Fathil</i> POCUS in Trauma <i>Ahmad Afifi Mohd Arshad</i> Regional Anaesthesia in Trauma <i>Mohd Fakhzan Hassan</i> Trauma Team <i>Andrew Gunn</i> Hemostatic Transfusion <i>Kevin Ng Wei Shan</i> Intensive Care for the Critically Injured <i>Mahazir Kassim</i>	HALL 3
1400 - 1600	MSA AWARD & YOUNG INVESTIGATOR AWARD	HALL 4
1615 - 1645	TEA SYMPOSIUM 3 (Medtronic) Chairperson: <i>Sheral Leo</i> Depth of Anesthesia: Density Spectral Array (DSA) <i>Lim Thiam Aun</i>	HALL 1
1615 - 1645	TEA SYMPOSIUM 4 (Primed) Chairperson: <i>Seah Keh Seng</i> Percutaneous Tracheostomy <i>Mohd Fahmi Lukman</i>	HALL 3
1645 - 1700	Afternoon Break & Virtual Booth Visit	
1700 - 1830	Annual General Meeting of the College of Anaesthesiologists <i>Members can join the AGM via the link provided in the e-mail after registering for the AGM</i>	

DAILY PROGRAMME

8th August 2021 (Sunday)

0900 - 0945 PLENARY 5 HALL 1 Chairperson: <i>Chan Yoo Kuen</i> Digitalisation and Artificial Intelligence as A New Paradigm in Healthcare <i>Ariffin Marzuki Mokhtar</i>			
0945 - 1115 SYMPOSIUM 10 Anaesthesia in Special Group Chairperson: <i>Patrick Tan Seow Koon</i> Optimal Postoperative Pain Management for Living Liver Donors <i>Justin Sangwook Ko</i> Impact of Anaesthetic Technique Upon Outcome in Oncological Surgery <i>Deborah Khoo</i> The Field Anesthesia: The Journey of Malaysia Armed Forces Anaesthetist <i>Mohamad Azlan Ariffin</i>	HALL 1	0945 - 1115 SYMPOSIUM 11 Paediatric Anaesthesia Chairperson: <i>Sushila Sivasubramaniam</i> Anaesthesia for Paediatric Bronchoscopy / Airway Surgery <i>Intan Zarina Fakir Mohamed</i> Anaesthesia and The Developing Brain: The Updates? <i>Sivaraj Chandran</i> Monitoring Cerebral Perfusion During Pediatric Cardiac Surgery <i>Jin-Tae Kim</i>	HALL 2
0945 - 1115 REFRESHER COURSE 4 Thoracic Chairperson: <i>Loh Pui San</i> One Lung Ventilation - Choosing the Best Airway Device for Your Patient <i>Jusmidar Abdul Jamil</i> OLV - How to Achieve Effective Lung Isolation <i>Ariffin Marzuki Mokhtar</i> Managing Hypoxia During One Lung Ventilation (OLV) <i>Marzida Mansor</i>	HALL 3	0945 - 1115 PROBLEM BASED LEARNING 3 Patient Blood Management <i>Kevin Ng Wei Shan / Bernd Froessler</i>	HALL 4
1115 - 1130 Morning Break & Virtual Booth Visit			
1130 - 1300 SYMPOSIUM 12 Pain Chairperson: <i>Mary Suma Cardoso</i> Chronic Pain Management - What's New <i>Marzida Mansor</i> The Role of Regional Anaesthesia in Personalised Post-Operative Pain Management <i>Beh Zhi Yuen</i> Pain Management During COVID-19 Pandemic <i>Shigeki Yamaguchi</i>	HALL 1	1130 - 1300 SYMPOSIUM 13 Professionalism & Safety Chairperson: <i>Seah Keh Seng</i> Consent to Medical Treatment in Patients Who are Minors <i>Mohamed Hassan Mohamed Ariff</i> Current Challenges and the Future of Private Healthcare in Malaysia: What Physicians Need to Know <i>Kuljit Singh</i> Perspectives of Anesthesiology Practice in Malaysia: What Lies Ahead? <i>Gunalan Palari</i>	HALL 2
1130 - 1300 REFRESHER COURSE 5 Resuscitation Chairperson: <i>Muhammad Maaya</i> Updates on Resuscitation 2020 <i>Sabariah Faizah Jamaluddin</i> CPR Modifications for the COVID-19 Patients <i>Wan Fadzlina Wan Muhd Shukeri</i> Resuscitation and Emergencies of the Parturients <i>Thohiroh Abdul Razak</i>	HALL 3	1130 - 1300 MEET THE EXAMINERS Chairperson: <i>Wan Rahiza Wan Mat</i> <i>Wan Nazaruddin Wan Hassan / Raha Abdul Rahman / Melor @ Mohd Yusof Mohd Mansor / Omar Sulaiman</i>	HALL 4
1300 - 1330 PLENARY 6 HALL 1 Chairperson: <i>Jahizah Hassan</i> Monitoring The Brain During The Anaesthesia - A Practical Approach <i>Adrian W Gelb</i>			

DAILY PROGRAMME

8th August 2021 (Sunday)

1330 - 1405

CLOSING CEREMONY

HALL 1

Closing Remarks by Organising Chairperson, MSA/CoA Annual Scientific Congress 2021 & President, Malaysian Society of Anaesthesiologists

Professor Dr Marzida Mansor

Presentation of Awards

- MSA Award
- MSA Young Investigators Award
- E-Poster
 - i. Research / Study / Audit
 - ii. Case Report / Case Series

Presentation of the Dato' Dr Radha Krishna Sabapathy Awards for the Best Students in Masters in Anaesthesiology

- November 2019 Examination
- November 2020 Examination
- May 2021 Examination

Welcome by Organising Chairperson, MSA/CoA Annual Scientific Congress 2022

Professor Dr Ina Ismiarti Shariffuddin

End of Function



PLENARY 1

THE ROLE OF ANESTHESIOLOGISTS IN CONTROLLING AND PREVENTING COVID-19 TRANSMISSION IN SURGICAL AND ANESTHETIC SETTINGS

Justin Sangwook Ko

Sungkyunkwan University School of Medicine, Samsung Medical Center, Seoul, South Korea

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) or coronavirus disease 2019 (COVID-19) present unique challenges to health care workers. In the pandemic, Anesthesiologists are working on the front lines in managing for the most vulnerable patients. Among the health care workers, anesthesiologists are at even higher risk for infection because of their close contact with the infected patients and the high potential exposure to respiratory droplets or aerosol from infected patients during airway manipulation.

The roles of anesthesiologists include airway management (intubation, ventilatory support), infection prevention and control in operating theaters, negative-pressure operating rooms, personal protective equipment (PPE), etc. Anesthesiologists should remain conscientious about respiratory precautions and aerosolization risks, and the occupational hazards of the specialty.

PLENARY 2

BIASED OPIOID

John Doyle

Cleveland Clinic, Cleveland, Ohio, USA

All opioid receptors signal via the G protein system, which is the most common method of intracellular signaling. When an opioid receptor is activated by the matching signaling molecule (ligand), activation of the G protein inside the cell in turn initiates a process that propagates throughout the cell via one or more “secondary messenger” molecules. The end result is that when an opioid such as morphine binds to one of its target receptors, the G protein in the opioid signaling chain acts on several targets, increasing ion conduction through potassium channels, decreasing ion conduction through calcium channels, as well as inhibiting adenylyl cyclase. Together, these changes attenuate the effect of the various signaling systems that deliver the sensation of pain.

While classical opioid agonists are remarkably effective at relieving severe acute pain, their many adverse effects (e.g., constipation, potential for addiction, respiratory depression) limit their clinical utility. Recent research has shown that the analgesic effect of opioids depends on a MOR receptor/G protein signaling pathway, whereas the undesirable side-effects of opioids occur via a newly identified “ β -arrestin 2” pathway. This important insight has led to a flurry of research activity with the goal of developing opioids agonists that are “biased” towards activating the G protein pathway over the “ β -arrestin 2” pathway responsible for opioid side effects.

SYMPOSIUM 1 - Cardiac Anaesthesia

BLOOD MANAGEMENT STRATEGIES IN CARDIAC SURGERY: DRUGS, TECHNOLOGIES AND TECHNIQUES

Davy Cheng

Western University, Ontario, Canada

To review the recent advance in perioperative blood transfusion (Restrictive, Age).

To discuss the evidence in efficacy and safety of drugs, technologies, and techniques to reduce allogeneic blood transfusion in cardiac surgery.

ERECTOR SPINAE PLANE BLOCKS FOR CARDIAC SURGERY

Colin Royse

University of Melbourne, Melbourne, Australia

ESP blocks had been made possible by the use of ultrasound to guide needle insertion. The ESP block appears very promising for chest wall surgeries including cardiac surgery-where a bilateral approach is required.

The data are few regarding efficacy and outcomes using this block in cardiac surgery. However, the studies that have been published show excellent analgesia and similar efficacy to high thoracic epidural. As a single shot, the block lasts approximately 10 hours, but to maintain analgesia, a catheter system is required. The ESP block provides good spread from head to toe, as well as in a lateral direction into the intercostal space. A typical block will cover the T1 to T10 region required for sternotomy.

A demonstration of the technique is included in the presentation, as well as some tips on adjunct pain relief and overall use of the block.

PROTHROMBIN COMPLEX CONCENTRATES AND FIBRINOGEN CONCENTRATES IN THE ERA OF VISCOELASTIC MONITORS

Tae-Yop Kim

Konkuk University Medical Center, Konkuk University School of Medicine, Seoul, South Korea

Point-of-care (POC) viscoelastic test-guided bleeding management has become an essential part of blood management.

Due to the considerable time delay requiring cross-matching and thawing, transfusion of fresh-frozen plasma (FFP) and cryoprecipitate complicates the timing of their transfusion for managing coagulopathy and bleeding. Furthermore, to effectively correct coagulopathy, it is necessary to infuse a considerably large volume of FFP (approximately > 15-20 ml/kg), which increases the risk of transfusion-related circulatory overload (TACO). In addition, co-administered residual plasma during FFP and cryoprecipitate transfusion can produce transfusion-related acute lung injury (TRALI).

The use of prothrombin complex concentrate (PCC) has become an initial treatment measure for the rapid restoration of coagulation factors as well as for warfarin reversal. The 4-factor PCC has factors II, IX, VII, and X, and some anticoagulant proteins (Protein C, Protein S, antithrombin, and heparin). Its use has been progressively increasing in the reversal of coagulopathy in trauma patients.

As PCC can be infused immediately and does not require the time-consuming routine processes for FFP transfusion such as blood-group testing, cross-matching, and thawing. In addition, its lyophilized and virus-inactivated feature is beneficial in reducing the risk of TRALI, TACO, and infection upon transfusing FFP.

During major hemorrhage, fibrinogen is the first factor to fall to critically low levels (<1.0 g/L vs. normal plasma level of 2.0-4.5 g/L). Its loss impairs coagulation and increases the likelihood of bleeding complications. Fibrinogen concentrate (FC) can be preferred since it has advantages over cryoprecipitate.

Nowadays, PCC and FC have become a primary choice for goal-directed coagulation management employing POC viscoelastic tests. Their immediate availability, rapid effect, absence of timing issues, and fewer complications enhances the value of goal-directed hemostatic therapy directed by the point-of-care viscoelastic test-based in managing massive bleeding patients.

THE SHARED AIRWAY: TO TUBE OR NOT TO TUBE

Imran Ahmad

Guy's & St Thomas' NHS Trust, United Kingdom

The Shared Airway: To tube or not to Tube. That is the question! In this talk I will be exploring the challenges of the shared airway.

Whenever we are faced with a shared airway case, the primary consideration must be safe management of the patient's airway to allow adequate ventilation and provide the optimal conditions for the surgeon to perform the operation. Therefore, these are unique circumstances as we need to consider both aspects when formulating an airway management plan.

In this talk I will be discussing the options available to us, covering tubeless techniques such as High Frequency Jet Ventilation and THRIVE, fine bore tube techniques such as transglottic catheters and transtracheal cannulae and wider bore tube placement techniques such as awake and videolaryngoscopy placement of microlaryngeal tubes.

I will also be covering combined techniques and how to manage challenging situations such as the difficult airway requiring tubeless surgery.

This talk will cover how we should approach the shared airway in a systematic way using all the options available to us to allow safe ventilation and optimal conditions for the surgeon to operate. This way we will have a happy anaesthetist, a happy surgeon and a happy patient!

REFRESHER COURSE 1 - Pharmacology & Pharmacotherapy

REMIMAZOLAM

Shigeki Yamaguchi

Dokkyo Medical University, School of Medicine, Mibu, Japan

Remimazolam was firstly approved in Japan, for general anesthesia in adult patients. Remimazolam is a new drug innovation in anesthesia. It combines the properties of two unique drugs already established in anesthesia - midazolam and remifentanyl. Remimazolam acts on GABA receptors like midazolam and has organ-independent metabolism like remifentanyl.

Briefly, features of remimazolam are as following; 1) ultra short-acting, 2) induces sedation with a rapid onset and rapid offset, 3) short context-sensitive half time after continuous infusion, 4) metabolized by widespread tissue esterase, 5) inactive metabolite, 6) low liability for respiratory and cardiovascular depression, 7) availability of a reversal agent (flumazenil), 8) short half life-time (48 to 49 minutes) and almost same as flumazenil (50 minutes), 9) wide safety, 10) benign toxicology profile, 11) low or absent drug-drug interaction potential. Therefore, remimazolam has a potential as a valuable adjunctive sedative-hypnotic agent all over the world in near future.

In this seminar, I would like to show the data about efficacy and safety of remimazolam versus propofol for general anesthesia: a multicenter, single-blind, randomized, parallel-group, phase IIb/III trial in Japan and introduce my current experiences in clinical settings to all in Malaysian Society of Anaesthesiologists and College of Anaesthesiologists.

CANCER PAIN - MORE THAN MEETS THE EYE; FROM PERIOPERATIVE CARE TO TERMINAL PHASE OF ILLNESS

Mary Suma Cardosa¹, Yeat Choi Ling², Ahmad Afifi Mohd Arshad³, Khoo Eng Lea⁴

¹Hospital Selayang, Batu Caves, Selangor, Malaysia

²Hospital Raja Permaisuri Bainun, Ipoh, Perak, Malaysia

³Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

⁴Sunway Velocity Medical Centre, Kuala Lumpur, Malaysia

This program would discuss two cancer patients who had a challenging journey towards the terminal phase. Issues related to each patient would be discussed in a moderated, non-provocative manner to focus on practical approaches to cancer pain at different stages of disease progression. The explored issues and difficulties would be relevant to any anaesthesiologists managing cancer patients at their workplace.

SYMPOSIUM 3 - Perioperative Medicine

POSTOPERATIVE DELIRIUM

Ti Lian Kah

Yong Loo Lin School of Medicine, National University Health System, Singapore

Postoperative delirium is a common complication of anaesthesia and surgery that particularly afflicts elderly patients, developing in up to 65% of patients aged 65 years or older. It is characterised by inattention and confusion, and is fluctuating in nature. It is distressing to both patients and families, and may also be associated with the need for more extensive postoperative care, progression to dementia, and increased mortality risk. Delirium is associated with increased resource utilization and healthcare costs. With few options for treatment, the emphasis is on prevention. It is estimated that up to 40% of postoperative delirium episodes can be prevented. In this presentation, I will discuss the postulated mechanisms, the local experience in Singapore, and the ways in which we as anaesthesiologists can help prevent it.

SYMPOSIUM 3 - Perioperative Medicine

TRANSDISCIPLINARY APPROACH IN PERIOPERATIVE MEDICINE

Khong Tak Loon

University of Malaya, Kuala Lumpur, Malaysia

Clinicians increasingly face challenges posed by patients with intricate web of complexities of comorbidities, organ dysfunction, limited functional reserve, frailty, and who present during the later stages of their surgical disease. Surgery in 'unfit' patients is associated with higher risks of complications leading to significant post-operative morbidity and mortality. Have we changed our clinical practice in perioperative care to accommodate for the current challenges and demands posed by our patients? A paradigm shift is required in the perioperative period where multidisciplinary team members collaborate closely to deliver holistic patient-centred care throughout the patients' journey. This talk will provide the evidence behind using risk stratification tools for early identification of at-risk patients for shared decision making. Furthermore, targeted intervention can be offered throughout the perioperative period for risk modification, leveraging on the expertise from a transdisciplinary approach, particularly in delivering a rehabilitative programme. The end goal is not solely to have patients recover well from surgery, but for them to be restored to their pre-operative functional capacity and thus allowing them to enjoy a good quality of life after surgery.

HOW COVID-19 HAS CHANGED US - IN AND OUT OF OT

Mafeitzeral Mamat

Gleneagles Hospital Medini, Nusajaya, Johor, Malaysia

Covid-19 pandemic has changed the global future outlook that has affected our livelihood in various ways. The new “norms” are embraced and slowly the world is learning how to live with this novel virus.

The infection can be transmitted to clinicians involved in their care, particularly during aerosol-generating procedures (eg, endotracheal intubation and extubation) which is the bread and butter of general anaesthesia.

This topic will discuss airway management precautions and other aspects of anesthetic care for patients with suspected or confirmed COVID-19, with a focus on infection control.

BRONCHOSCOPY AND THE COVID-19 PANDEMIC

Lars Konge

Copenhagen Academy for Medical Education and Simulation, Rigshospitalet, Copenhagen, Denmark

Flexible bronchoscopy was used to acquire the bronchoalveolar lavage (BAL) fluid that showed a completely new corona-virus causing the Covid-19 disease. BAL continues to be the gold standard for diagnosing Covid-19 and flexible bronchoscopy is also useful for treating atelectasis caused by the disease. However, bronchoscopy is an aerosol generating procedure with a potential risk to staff and future patients. In this lecture, Professor Lars Konge will give evidence-based recommendations on how to balance the pros and cons of flexible bronchoscopy in the ongoing pandemic.

PERI-OPERATIVE FLUID MANAGEMENT IN THORACIC ANAESTHESIA

Chua Chen Chen

Hospital Queen Elizabeth II, Kota Kinabalu, Sabah, Malaysia

Thoracic anaesthesia cover a wide range of procedures for diagnosis and therapeutic purposes. This group of patients is unique. They are prone to develop lung injury after surgical intervention. And, excessive fluid administration perioperatively has been proven to increase the incidence of post-operatively lung injury. Hence, careful and caution intravascular fluid administration is important in reducing the risk of post-operative lung injury besides protective lung ventilation strategy.

Stricter fluid management with the use of appropriate vasopressors and inotropes are important to avoid hypervolaemia and to maintain haemodynamic stability, perioperatively. This strategy reduces the incidence of pulmonary oedema, which ensure better lung function at the end of one lung ventilation, and reduces the incidence of organ dysfunction especially acute kidney injury with adequate organ perfusion. Although multiple proposals were suggested, but, individualised perioperative anaesthetic management is crucial to ensure a favourable outcome of the patient.

Our ultimate aim is to ensure that all our thoracic surgical patients have dry, clean, sealed and fully expanded lungs post-operatively.

REGIONAL ANAESTHESIA: BLOCKS OF THE CHEST WALL... FOR CARDIAC AND THORACIC SURGERIES

Azrin Mohd Azidin

Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

BACKGROUND

Both cardiac and thoracic surgeries are associated with highly debilitating acute pain with potential for chronic progression. Conventional analgesic management relied on the technically invasive epidural, paravertebral regional techniques, or titrated doses of intravenous analgesics. Fascial plane blocks, which are technically easier to perform, devoid of major procedural related complications and are clinically as efficient, are gaining popularity in the setting of minimally invasive cardiac and thoracic surgeries.

CURRENT TECHNIQUES AND EVIDENCE

Over the recent years, emerging myriad of fascial block options have found their way into cardio-thoracic practice. Current fascial block techniques - Serratus Plane (SPB), Erector Spinae Plane (ESP), PECS and to a lesser extent, Pecto-intercostal (PIF) and Transversus Thoracis Muscle (TTM) plane blocks, based on current understanding on postulated mechanisms of action, have the potential to be of benefit in providing analgesia for multiples types of surgeries covering various anatomical sites. *Kelava2020, Jack2020, Kar2020*

Recent systematic review and meta-analysis have shed quality evidence into immediate perioperative benefits of block for procedures namely SPB and ESPB in thoracic surgeries. *Chong2019, Liu2020, Zhang2020, Jack2020, Huang2020, Cai2020*. There has been emerging but limited evidence in terms of interfascial plane block use in cardiac surgery, namely SPB for minimally invasive thoracotomy; ESP and various options of 'Block of the Anterior Branches of the Intercostals' for sternotomy.

Toscano2020, Kelava2020, Misra2020, Kar2020

CONCLUSION

Emerging evidence are encouraging with regards to fascial plane block in cardio-thoracic surgeries. Anatomical consideration is paramount in terms of selection of appropriate block approach. Various levels of evidence have shown benefits from the potential application of Serratus Plane (SPB) and Erector Spinae Plane (ESP) blocks both in cardiac and thoracic surgeries in terms of reducing pain scores and analgesic requirements. Further accumulation of high-level evidence is required to corroborate these early interesting findings.

REFRESHER COURSE 2 - Monitoring

HEMODYNAMIC MONITORING: FROM MORE OR LESS TO NONINVASIVE

Suraphong Lorsomradee

Chiang Mai University Hospital, Chiang Mai, Thailand

Anesthetic successes and failures are often directly related to the skill of the anesthesiologists in manipulating cardiovascular physiology. The cardiovascular responses to anesthesia, hemorrhage, a Valsalva maneuver, position changes and exposure to surgical stimuli and vasoactive agents are complex patterns made up of a number of common physiological approaches. The most important key of clinical management in patients with shock or hemodynamic crisis is to foster and protect the cerebral perfusion and function of various vital organs to maintain normal homeostasis as fast as possible. The simplified clinical approach helps understanding in cardiovascular physiological monitoring and provides the practical decision making of appropriate amount of fluid resuscitation, the right inotropic and vasoconstrictor at the right time.

ROLE OF BIOCHEMICAL AND HAEMATOLOGICAL MONITORING IN COVID-19

Aliza Mohamad Yusof

Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

This webinar focuses on using standard laboratory markers to identify a patient at risk of COVID-19 infection, its role in monitoring the disease progression and recognising those who will progress into severe COVID-19 infection. The abnormalities of common laboratory markers in different phases of COVID-19 infection will be highlighted. The monitoring of specific treatments such as anticoagulant and detection of hypoinflammation state using research-based laboratory biomarkers will also be discussed.

MONITORING DURING CARDIOPULMONARY BYPASS

Hasmizy Muhammad

Sarawak Heart Centre, Kota Samarahan, Sarawak, Malaysia

Cardiopulmonary bypass (CPB) is an extracorporeal circulation in which the patient's physiologic functions of the heart and lungs are temporarily taken over by the heart-lung machine.

Monitoring during cardiopulmonary bypass can be divided into monitoring of the patient and monitoring of the heart lung machine.

Patient parameters that need to monitor during CPB includes electrocardiogram, to ensure isoelectric during cardioplegic arrest, mean arterial pressure which provides tissue perfusion, central venous pressure to assess blood volume in right heart, cerebral oximetry to monitor regional cerebral perfusion, Bispectral index or Entropy to assess depth of anaesthesia and volatile anaesthetic agent concentration to assess volatile anaesthetic agent that administered via the CPB circuit.

Other parameters are temperature for brain and vital organs protective strategy, peripheral nerve stimulator to assess degree of neuromuscular blockade and urine output as indicator for renal perfusion.

Arterial blood gases were taken regularly to look for haematocrit level, glucose, electrolytes, lactate and types of acidosis. Patient anticoagulation is measured by Activated Clotting Time (ACT). In some cases, thromboelastogram (TEG) may be needed to assess patient's coagulation profile.

Monitoring of heart lung machine includes oxygen saturation and temperature of the blood in the arterial and venous return line, oxygen concentration in the gas circuit to the oxygenator, arterial line pressure, cardioplegia delivery line pressure and temperature, blood flow rate generated by the arterial pump, temperature of water in the heater/cooler system, continuous "in line" monitoring screens (for Haemoglobin / Hct, arterial & venous O₂ saturation, CO₂ tension) and record of all fluids, drugs and blood products added to the extracorporeal circuit pre and peri-CPB.

In summary, the present of anaesthesiologist, cardiac surgeon, perfusionist and monitoring equipment during cardiopulmonary bypass will ensure patient safety during cardiac surgery.

PROBLEM BASED LEARNING: AIRWAY MANAGEMENT

Nadia Md Nor

Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Airway management is a fundamental skill and a routine task in our daily work as anaesthetists. The multitude of novel airway management tools currently available has contributed much in aiding us deal with unwelcomed 'difficult airway' situations, which in the past may have created heart stopping moments. Techniques and approaches to airway management have evolved in parallel with the advent of various pharmacological agents; namely sedatives utilised for invasive airway manipulation, and drugs for reversal of muscle relaxant. The traditional, modified, and less conventional practices will be explored, with the primary intent of providing safe anaesthesia for all patients as the ultimate objective.

This problem-based discourse on airway management will engage the participants into real-life situations where airway management is of paramount concern. The discussion hopes to incorporate the application of various devices, and the diverse possibilities of airway management in different clinical scenarios. It is hoped that at the end of the session any new knowledge gained by the participants can be applied and shared in their future practice.

PLENARY 3

LEADERSHIP AND VITAL DIRECTIONS IN ANESTHESIOLOGY

Davy Cheng

Western University, Ontario, Canada

Vital Directions and Value Proposition in Anesthesiology.

Leadership in Academic Anesthesiology: SOS (Secret of Success).

SYMPOSIUM 5 - Regional Anaesthesia

RA DILEMMA: AWAKE OR ASLEEP?

Khairul Idzam Muslim

Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

Performing regional anaesthesia (RA) whether when patient is awake or asleep, has been controversial for decades. Noteworthy, most of the RA in children have been safely performed in anaesthetized state. Complications of RA, such as peripheral nerve injury (PNI) and local anaesthetic systemic toxicity (LAST), occur depending on the site, type of block and other factors. Plexus block is considered riskier than plane block, though no concrete data to support this.

Nerve injury and LAST are overturned recently as there is insufficient data to fend it. Though intraneural injection can induce nerve injury and the injury prevention measures are yet to be clearly defined, intentional intraneural injection has been practiced to produce excellent nerve blocks. Asleep patients are previously deemed more risky to suffer LAST as the awakened state allow the LAST to be detected earlier, thus subsequently halt the LA injection and lower the risk of cardiac arrest. However, the introduction of ultrasound challenges this misconception; the application of ultrasound guides the anaesthetist to decrease LA dosage and lessen the LAST incidence. Accumulated evidence corroborated that the incidence of LAST are multifactorial, such as volumes of LA, intra-arterial injection and individual PK/PD, but not patients' consciousness (awake or asleep).

In aiming for safe RA administration to patients, further research to explore the complications of RA is warranted and knowledge dissemination is demanded. As a center of excellence, HKL will share our findings on PNI and LAST and their incidence for the past 5 years.

THE ESP BLOCK - A RIP OR VIP TECHNIQUE

Chin Ki-Jinn

University of Toronto, Toronto, Canada

The erector spinae plane (ESP) block has attracted both enthusiasm and controversy since its description in 2016. Originally described for thoracic analgesia, its indications have expanded to include acute and chronic pain of the abdomen, shoulder, hip and spine. Proponents point to its ease of performance (injection of local anesthetic into the fascial plane between spinal transverse processes and erector spinae muscle) and safety (there are no discrete nerves or major vessels in the vicinity of the needle trajectory). Both of these factors facilitate its use across a wide spectrum of practitioners and patients. A growing body of RCT evidence supports its superior analgesic efficacy over systemic analgesia alone in postoperative thoracic and abdominal pain, and a smaller number of studies also indicate efficacy comparable to paravertebral blockade.

This characterization of the ESP block as a “paravertebral-by-proxy” is, however, responsible for much of the controversy. The penetration of local anesthetic into the paravertebral space from the fascial plane of injection to block spinal nerves is disputed by detractors of the ESP block, who cite conflicting findings from cadaveric studies, as well as the fact that cutaneous sensory loss over the torso is not always demonstrable. Nevertheless, imaging studies in live human subjects have shown that spread into the paravertebral and epidural spread can and does occur. The key to understanding the ESP block is to appreciate that only a fraction of local anesthetic reaches these compartments, and that this is often sufficient to provide meaningful analgesia, although not necessarily dense cutaneous sensory blockade. This differential block by low concentrations of local anesthetic is well-supported by laboratory and animal studies.

The ESP block provides a valuable alternative for practitioners seeking to incorporate regional anesthesia into patient care, and is therefore a Very Important Practical (VIP) technique that is here to stay.

SELECTIVE TRUNK BLOCK (SeTB): A “ONE SIZE FITS ALL” TECHNIQUE FOR UPPER EXTREMITY SURGERY

Karmakar Manoj Kumar

The Chinese University of Hong Kong, Hong Kong

None of the classical brachial plexus block (BPB) techniques in use today can reliably produce surgical anesthesia of the entire upper extremity i.e. from shoulder to the hand. Therefore, a combination (hybrid technique) of BPB techniques, such as interscalene and supraclavicular BPB, axillary and interscalene (AXIS) BPB or anterior suprascapular nerve block and lateral sagittal infraclavicular BPB, have been described. While hybrid BPB techniques are effective they are often accomplished with relatively large volumes of local anesthetic with the attendant risk for local anesthetic systemic toxicity. Besides interscalene BPB also produces ipsilateral hemi-diaphragmatic (phrenic nerve) palsy in almost all patients receiving the block. Therefore, a regional anesthetic technique that can produce surgical anesthesia of the entire ipsilateral upper extremity with relatively small volumes of local anesthetic and be phrenic nerve sparing is desirable. During this presentation the speaker will introduce the technique of ultrasound-guided “selective trunk block” (SeTB) that produces surgical anesthesia of the entire ipsilateral upper extremity, except for the area in the arm innervated by the intercostobrachial nerve (T2 dermatome). Success of the technique depends on the ability to accurately identify the individual “trunks” of the brachial plexus (superior, middle and inferior) and selective injection of these neural elements.

SeTB may offer advantages over the hybrid BPB techniques. First, it is accomplished using relatively smaller volumes of local anesthetic (25 ml) than that typically used for a hybrid BPB (30-50 ml). The speaker is confident further reduction in local anesthetic volume can be achieved with SeTB and future dose finding studies are warranted. Second, while ipsilateral phrenic nerve palsy is a well-known side effect of interscalene BPB, SeTB may be phrenic nerve sparing like a superior trunk block because the injection is performed at a distance (more caudal) from the phrenic nerve. Third, since SeTB anesthetizes the entire upper extremity we have also found it useful as the sole anesthetic for managing patients presenting for intramedullary nailing of pathological fracture of the humerus, and internal fixation of combined fractures of the proximal humerus and elbow or hand. The speaker believes SeTB is a simple alternative to the many hybrid BPB techniques currently described and has the potential to become the “one size fits all” or “all-purpose” technique for upper extremity surgery.

NEUROANESTHESIA DURING THE COVID19 PANDEMIC

Deepak Sharma

University of Washington, Seattle, USA

The pandemic of COVID19 has had a significant impact on just Neuroanesthesiology but all of anesthesia, medicine and society. The Society for Neuroscience in Anesthesiology and Critical Care (SNACC) had commissioned two task forces to provide clinical recommendations for specific Neuroanesthesia scenarios (most notable of these being anesthesia for emergent stroke thrombectomy, urgent neurosurgical procedures, transsphenoidal hypophysectomy and awake craniotomy). The general principles are the same as any other procedure or surgery and include (1) patient screening (preoperative testing when possible) (2) minimizing the number of clinical care providers to the essential numbers (3) airborne precautions for all staff including personal protective equipment (4) utilizing negative pressure environment when possible, for aerosol generating procedures (5) using surgical face masks for patients. Patients requiring mechanical thrombectomy during the pandemic should not be routinely intubated unless indicated by their neurological/general medical condition or concern for safety. The overarching goal should be to avoid emergent conversion from monitored anesthesia care (MAC) to general anesthesia with ongoing thrombectomy. Alternative surgical approach (craniotomy) should be considered for patients requiring transsphenoidal surgery to avoid viral shedding from nasal mucosa. Awake craniotomy should ideally not be offered unless the patient has been tested negative for COVID19. Electroconvulsive therapy for severe depression may be needed during the pandemic. It should be preceded by appropriate testing. If the procedure has to proceed with unknown COVID19 status, it should be performed in a negative-pressure location and aggressive positive pressure ventilation should be avoided. Antisialagogues and antitussive agents may be considered to reduce secretions and aerosolization. In general, any changes in institutional care protocols and workflow should be carefully implemented following interdisciplinary discussions and education. It is also critical that special attention be paid to monitoring quality of care as any changes are introduced to clinical care protocols.

The pandemic has also adversely impacted Neuroanesthesia training and education with a reduction in clinical exposure to elective neurosurgical procedures. Didactic education was impacted early on although virtual, web-based platform allowed enhanced teaching later on. Trainees reported increased anxiety, depression, stress and burn-out. Neuroanesthesia research during the COVID19 pandemic has been adversely impacted given reduction in funding, limited access to human subjects, the need to redeploy clinician scientists for clinical duties, lost jobs for research support staff etc. SNACC has provided a roadmap for conducting research during the pandemic and beyond. Overall, the pandemic of COVID19 has significantly impacted Neuroanesthesia clinical practice, education as well as research. In addition, physician anesthesiologists have faced significant stress and burn-out. SNACC consensus statements provide framework that may be useful for Neuroanesthesia practice and research globally.

ERAS FOR NEUROSURGERY

Chong Chin Ted

Tan Tock Seng Hospital, Singapore

Enhanced recovery initiatives after major abdominal surgery have contributed to improvements in postoperative patient outcomes. A similar comprehensive protocol can be formulated for patient undergoing elective craniotomy for supratentorial tumor resection. A review of the literature supporting modalities to improve functional recovery and decreased length of stay is described. The main anchors of enhanced recovery for neurosurgical operations would include minimally invasive surgical techniques, awake craniotomy, and opioid-free or opioid-minimal anaesthesia.

NEUROANAESTHESIA FELLOWSHIP TRAINING: THE PATH FORWARD

Audrey Tan

St. George's University Hospitals NHS Foundation Trust, London, United Kingdom

Over the past decade, the growth in the neurosciences have grown exponentially. With advancing complexities and expansion of neurosurgery and interventional neuroradiology procedures comes the recognition and requirement of neuroanaesthesia as a sub-specialty in anaesthesia. The delicate anatomy and complex physiology together with the challenging pathologies of our central nervous system dictates the need of extensive knowledge of the brain and spinal cord. There has been a worldwide shortage of neuroanaesthetist as the demand of neurosurgery increases faster than the number of neuroanaesthetist trained. Hence, neuroanaesthesia fellowships are more necessary and needed than before.

This outlines the structure of neuroanaesthesia training in the United Kingdom compared to the rest of the world and includes what the process of application is for non-UK trainee doctors.

THE EVOLUTION OF ULTRASOUND IN ANAESTHESIA PRACTICE

Colin Royse

University of Melbourne, Melbourne, Australia

The first use of ultrasound in anaesthesia was transoesophageal echocardiography for cardiac surgery. It was all about "the heart" and using TOE rather than surface ultrasound. In non-cardiac anaesthesia, the initial use was for regional anaesthesia and vascular access, for which it rapidly gained widespread use.

More recently, the evolution has been towards diagnostic ultrasound - but at a basic level. This can be described as point of care ultrasound or POCUS. When ultrasound is integrated into clinical evaluation, the diagnosis will change around 50% of the time, and management will change 30 to 50%. There are few studies, however, looking at whether changes in management lead to improved outcome.

A further evolution has occurred in the technology, such that we now have multiple handheld devices that are of adequate quality for point-of-care ultrasound. This brings in the era of "personal ultrasound" where device can always be available to the clinician in their pocket, handbag, or briefcase. We now have the technology, the expertise, the education, and there is no longer a reason not to use it.

Several studies will be presented looking at outcome from an ultrasound intervention. There is a strong signal for improved outcome for fractured neck of femur, but less so for patients who are critically ill undergoing non-cardiac emergency surgery. One of the issues will always be that the disease severity may overwhelm any potential intervention that we can instigate. Some patients will die irrespective of our best efforts, and in these patients although ultrasound might help guide our management, it is unrealistic to expect ultrasound to improve outcome. However, in other groups where detection of a critical illness can lead to meaningful intervention which could affect outcome might produce a beneficial result for an ultrasound intervention. Ultimately, we need to integrate ultrasound into every part of our practice and every day in order to achieve full evolution of ultrasound in anaesthesiology.

INTRAOPERATIVE TRANSESOPHAGEAL ECHOCARDIOGRAPHY FOR TRICUSPID VALVE SURGERY

Tae-Yop Kim

Konkuk University Medical Center, Konkuk University School of Medicine, Seoul, South Korea

Tricuspid valve (TV) surgery is indicated according to the underlying TV pathology concomitant pathology in the right ventricle (RV) and pulmonary artery (PA). The focus of transesophageal echocardiography (TEE) during the TV procedure is not much different from that of pre-procedural evaluation. Two- and 3-dimensional (2D and 3D) TEE is one of the most important imaging modalities in our practice. Grading the severity of tricuspid regurgitation (TR) is one of the important parts of this evaluation.

Another concern includes dynamic changes in the contractility of the RV, RV filling status, and pulmonary vascular resistance, upon applying general anesthesia and positive-pressure ventilation.

3D-TEE can provide a much more comprehensive delineation of TV apparatus. Only one single 3D *en face* image, seen from the RA perspective, enables comprehensive evaluation of TV leaflet pathology in the TR.

A newer topographic classification of the TV apparatus consisting of 5-segment nomenclature (from 11 o'clock to 7 o'clock position of TV) has been introduced to guide interventional (percutaneous) TV procedures.

As most regurgitation opening of TV, vena contracta (VC), is not round-shaped, determination of VC size of TR jet can be either underestimated or overestimated.

3D-TEE is also superior to 2D-TEE in evaluating TV annular size. It does not require the effort of making multiple 2D images in various image planes in 2D imaging.

Peak velocity of TR flow and the Bernoulli equation are used to estimate RV systolic pressure and associated PHT. Live 3D-TEE imaging can facilitate an easier placement of PA catheter even in patients with the enlarged RA.

In establishing a surgical plan of TV surgery, it is essential to evaluate underlying RV performance.

Echocardiographic assessment of pleural effusion is also essential during hypoxemia.

POINT OF CARE ULTRASOUND (POCUS) IN CRITICAL CARE MEDICINE

Jolin Wong

Singapore General Hospital, Singapore

Point of care ultrasound is of tremendous utility in Critical Care Medicine. This talk discusses the diagnostic and therapeutic uses of point of care ultrasound in the various organ systems in a critically ill patient. It highlights the commonly used ultrasound protocols in the assessment of each organ system and demonstrates the utility of ultrasound inside and outside of the intensive care unit.

QUALITY AND SAFETY IN NEUROANESTHESIA: THE WAY FORWARD

Deepak Sharma

University of Washington, Seattle, USA

Quality in healthcare is defined by the Agency for Healthcare Research and Quality (AHRQ) as doing the right thing for the right patient at the right time to get the best possible outcome. Institute of Medicine (IOM) defines quality using a structural model that incorporates safety, effectiveness, patient-centeredness, timeliness, equitable, and efficient care. In order to effectively advance quality and safety, it is critical to first define quality measures with inputs from all stakeholder groups (patients, surgeons as anesthesiologists). Quality measurement is important to (1) avoid / minimize harm / complications (2) identify opportunities to advance patient care (3) accreditation, standardization & regulation (4) comparative assessment by payers / patients (5) provide feedback to physicians for performance improvement, and to (6) avoid waste / contain cost.

In the United States, the American Society of Anesthesiologists has established the Anesthesia Quality Institute (AQI) to facilitate practice-based quality management through education and quality data feedback. The AQI is also the home to National Anesthesia Clinical Outcomes Registry (NACOR), which is the largest anesthesia registry in the United States. It allows performance measurement, identification of outliers, and identification of possible improvement interventions. Multicenter Perioperative Outcomes Group (MPOG) is a non-profit academic consortium of 48 hospitals which develops policies, procedures, technical infrastructure, software for research & quality improvement. Both AQI and MPOG have rolled out quality measures. However, these are not specific to Neuroanesthesia. There is a need to develop evidence-based quality measures specific to Neuroanesthesia. These will need to be a combination of process and outcome measures. Potential candidate measures include timeliness of care for stroke thrombectomy and emergent neurosurgery (traumatic brain injury), adherence to evidence-based hemodynamic management for various neurosurgical conditions (e.g. traumatic brain injury, acute ischemic stroke, aneurysmal subarachnoid hemorrhage), safe and effective management of post craniotomy pain, glycemic control in neurosurgical patients and perioperative safety of external ventricular drainage devices. Neurosurgery and Neurointensive care groups have developed their initial quality measures. In order to ensure quality during continuum of care, it is imperative that Neuroanesthesia measures be synchronized with these measures. A multidisciplinary, synergistic approach to quality measures is likely to lead to system level / global improvement, help avoid confusion for administrators, allow easier implementation, and enhance outcomes as well as patient experience.

PK/PD OPTIMISED THERAPY

Jeffrey Lipman

The University of Queensland, Brisbane, Australia

Pharmacokinetics is the concentration-time relationship of a drug. It is basically how the body handles a drug. **Pharmacodynamics** relates to the concentration-effect of a drug and is basically what the drug does to or within the body.

In effect when addressing PK/PD of antibiotics the “PK” is serum levels of the drug and the “PD” relates to MIC of organisms.

Pharmacokinetics

Patients in ICU have different pharmacokinetics to “normal” people.^{1,2}

Drug discovery and subsequent release for marketing involves phase 1, 2 and 3 studies which usually don't involve ICU patients.

Critically ill patients have different haemodynamics, often have low serum proteins and increased volume of distributions of hydrophilic antibiotics. These differences necessitate the need to give loading doses of many of the antibiotics. Clearances of these agents are independent of loading doses.²

There is a group of patients within the ICU who are admitted with an inflammatory response but “normal” renal function and have high Creatinine Clearances (Augmented Renal Clearance - ARC - CrCl >130mls/min).³ It is the younger patients with some inflammatory insult (eg head injury, or sepsis) and little or no organ dysfunction that classically would present with a warm vasodilated circulatory response. These patients would have a high cardiac output, increased renal blood flow, and hence increased GFR and high CrCl. High CrCl mean high drug clearances and underdosing. A multi-centered study across 4 continents revealed 65% of patients admitted to multidisciplinary ICUs with a “normal” serum creatinine manifest ARC.

In view of the PK differences in ICU patients we often will use much higher than “normal” doses ie off label doses of many of the antibiotics.⁴

Pharmacodynamics

Whilst we can accurately measure serum concentrations of drugs (and we routinely use therapeutic beta-lactam monitoring - ie TDM)⁵ the measurement of MIC is less accurate such that within the same lab, with the same technical support there can be a 2-4 fold difference in the measured MIC.⁶

The PD target of an antihypertensive drug is easy to achieve (Blood pressure control), that of many of the antibiotics is still debatable.⁷ However noting the MIC inaccuracies, and widespread increasing resistance profiles (ie rising MICs) we advise aggressive targets for PK/PD. These will be discussed in this talk.

STEROID USE IN COVID INFECTION

Petrick Periyasamy

Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Most randomized controlled trials and some meta-analyses have provided evidence for an increased chance of survival with various doses of steroids. Most of these studies showed steroids was not associated with an increased risk of bacterial infection or of delayed viral clearance. (D. Annane et al. Journal of Intensive Medicine, 2021).

However, up till today the questions remains what is the best steroids and what is the best time to start them and how long one should give them.

One study showed low dose methylprednisolone is no different from glucocorticoid pulses in terms of hospital mortality (Fernández-Cruz a et al. Antimicrobials Agents Chemotherapy, 2020).

Some have showed that low dose methylprednisolone demonstrated better results compared to low dose dexamethasone. (Ranjbar et al. BMC Infectious Diseases, 2021) (Justine J. KO Et Al, medRxiv 2021).

One study suggested methylprednisolone optimal plasma concentration are best achieved after an initial bolus dose followed by a continuous infusion to maintain high levels of response throughout the treatment period. (Gianfranco Umberto Meduri et al. Intensive Care Med (2020).

One study have shown that a hybrid model of high dose methylprednisolone plus high dose prednisolone led to a better clinical outcome and lower inflammatory markers than low dose dexamethasone (Pinzo'n MA, et al. PLoS ONE, 2021) However others has warned that high dose methylprednisolone increased mortality exclusively in elderly patients. (Enric Monreal et al. European Journal of Clinical Microbiology & Infectious Diseases, 2020).

As this is still a hot topic, one welcomes well designed and adequately powered randomised controlled trials to answer some of this lingering questions.

MY DAWN

Carolyn Yim Chue Wai

University Malaya Medical Centre, Kuala Lumpur, Malaysia

The Coronavirus Pandemic has forced us into a new Era in how we treat our patients. This is the same when treating Covid Patients who are also pregnant. Acquisition of basic skills needs to be emphasized by all involved in patient care. Treating patients involves a diverse group of team members. Meticulous planning is paramount to the safe conduct of the case. Flow charts ensure standardization which can prevent misadventures.

An array of cases has so far been treated by the team.

PERSISTENT PAIN AFTER CAESAREAN DELIVERY: MUCH ADO ABOUT NOTHING?

Nazuha Mohd Najid

Hospital Sultan Abdul Halim, Sungai Petani, Kedah, Malaysia

Caesarean delivery (CD) is one of the most performed major operative procedure in the 21st century and the numbers continue to rise. CD is associated with moderate to severe pain which influence postoperative recovery and play a role in the development of persistent pain. Many studies have been conducted to provide insight on the risk factors and this will provide the clue in preventing and managing persistent pain after CD.

The prevalence of persistence pain however is relatively low largely owing to the protective mechanism of oxytocin and the extensive use of neuraxial anaesthesia in CD. Persistent pain has been linked to the severity of acute postoperative pain and opioid exposure. Modifying surgical techniques, adopting neuraxial anesthesia technique whenever feasible and standardized opioid-sparing analgesia protocol may help limit the development of persistent and chronic pain. Women at risk for severe post-caesarean pain should be considered with additional treatment modalities such as intravenous ketamine, neuraxial clonidine, and oral gabapentin. Breakthrough pain can be treated with transversus abdominis plane block (TAP) or quadratus lumborum block (QLB). In the future, more studies to identify preoperatively who may be at risk for pain are likely to propose patient based post-caesarean analgesia.

LABOUR ANALGESIA 2021 REDUX

Alex Sia Tiong Heng

KK Women's and Children's Hospital, Singapore

Labour pain is one of the most painful experiences for a woman. Uncontrolled labour pain is not innocuous and a neuraxial block is the gold standard for providing labour analgesia. Patient controlled epidural analgesia is the recommended technique for maintaining analgesia during labour. Having a basal maintenance dose for PCEA is desirable; and in this context, continual (programmed) boluses provide superior analgesia, with a drug-sparing effect when compared with a continuous infusion. A basic tenet of providing patient-centred care is having seamless analgesia with minimum interventions. Breakthrough pain is troublesome and may undermine maternal satisfaction; in this talk we will see how we might leverage technology to predict and manage this phenomenon. Epidural analgesia is a challenging procedure to master; we also will explore recent developments in supervised machine learning that may contribute to the facilitation of skill acquisition.

POCUS IN TRAUMA

Ahmad Afifi Mohd Arshad

Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

Point-of-Care Ultrasound in trauma has been the mainstay of the Advanced Trauma Life Support (ATLS) in the 'C' section of the 'ABCDE'. Focused Assessment with Sonography in Trauma (FAST) has evolved since the past 20 years from the extensive applications by surgical and emergency trauma team, into an extended FAST (EFAST) that involved insonation of the chest to assess for compression (pneumothorax), leaking (hemothorax) or tamponade.

POCUS skill in FAST or EFAST would be convenient to anaesthesiologists perioperatively, in confronting critical trauma cases requiring rapid diagnosis of an urgent situation such as hypotension, occult bleeding or hypoxaemia. The brief discussion would also elaborate on its use for other perioperative indications within the framework of I-AIM (Indication, Acquisition, Interpretation and Management) to seamlessly integrate POCUS in anaesthesia practice.

REGIONAL ANAESTHESIA IN TRAUMA

Mohd Fakhzan Hassan

Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

Trauma is a significant health problem and a leading cause of death in all age groups. Pain in trauma is frequently severe, however is often undertreated. Opioids are widely used to treat pain in injured patients but have a broad range of undesirable effects in patient.

Regional analgesia delivered excellent site-specific pain relief that is free from major side effects, reduces opioid requirement in trauma patients, and is safe and easy to perform. Elderly have shown the benefits by reducing morbidity and mortality with regional analgesia techniques include those with fractured ribs, femur and hip fractures. The use of regional anaesthesia in patients were divided into upper limbs, lower limbs and truncal area.

In this few years new type of regional anaesthesia gain in the popularity like the Peri-capsular Nerve Group Block (PENG) and also the Erector Spinae Block (ESP). The benefits of regional analgesia are likely most influential when it is initiated as early as possible, and the performance of nerve blocks both in the emergency room and in the field has been shown to provide quality pain relief with an excellent safety profile.

Last but not least for the past one year, the Hospital Kuala Lumpur Regional Team collaborated with the Emergency Department Team to provide the regional anaesthesia to the trauma patient in the emergency setting. This implementation was to deliver the pain free service to the trauma patient as early as possible. At the same time this facilitate the management of the fracture or dislocation that require close manual reduction safely and painlessly.

TRAUMA TEAM

Andrew Gunn

Gleneagles Hospital Medini, Nusajaya, Johor, Malaysia

Trauma team forms an integral part of the trauma system. It aims to minimize the time spent in the emergency department in assessing and resuscitating severely injured patients prior to definitive therapy with the aim of reducing morbidity and mortality associated with delays in treatment.

The composition of the team is variable according to the resources of each hospital but fundamentally is composed of a multi-disciplinary team whose role and responsibility is pre-defined and designed in such a way that the tasks are precisely allocated. Activation of the team is also on a pre-defined set of criteria based on mechanism of injury and physiological status of the patient. The team acts in a horizontally organized fashion with each task performed simultaneously by individual team members. This calls for good communication skills, an understanding of common objectives, well choreographed movements in the resuscitation bay and using a common “language” of trauma based on the advanced trauma life support (ATLS) training.

Some issues related to the organization of an efficient trauma team pertaining to setting up, training and audit will also be discussed.

HEMOSTATIC TRANSFUSION

Kevin Ng Wei Shan

University of Malaya, Kuala Lumpur, Malaysia

Death due to trauma remains amongst the most common causes of death worldwide. Massive trauma followed by haemorrhage and shock is amongst the reasons for the high associated mortality, and any doctor dealing with trauma would have been indoctrinated with the deadly triad of trauma, namely acidosis, hypothermia and coagulopathy. The understanding of the pathophysiology of coagulopathy in trauma has now advanced beyond consumptive and dilutional, with the term trauma induced coagulopathy (TIC) now being used to describe this complex interplay of factors that is beyond simple coagulation factor depletion and dilution. Advances in this understanding has moved our management from the traditional disseminated intravascular coagulopathy (DIC) regimes to the current matched transfusions and targeted transfusions guided by point of care viscoelastic testing devices. With these improvements in our care, the future looks promising in the battle to save more lives when performing trauma anaesthesia.

OPTIMAL POSTOPERATIVE PAIN MANAGEMENT FOR LIVING LIVER DONORS

Justin Sangwook Ko

Sungkyunkwan University School of Medicine, Samsung Medical Center, Seoul, South Korea

Living liver donors are healthy individuals who undergo major surgery without any direct therapeutic benefit from the procedure. Severe postoperative pain can cause substantial physical and psychological distress in donors and impair functional recovery. Therefore, effective postoperative pain control should be an integral part of donor management.

At our institution, we have sequentially evaluated several modalities of postoperative pain control in living liver donors including epidural analgesia, intrathecal morphine (ITM) with intravenous patient-controlled analgesia (PCA), intravenous PCA alone, continuous wound infusion of ropivacaine, bilateral single-injection erector spinae plane block (ESPB), bilateral continuous ESPB with catheter techniques, and most recently, bilateral quadratus lumborum block type 2. A single 400 µg dose of ITM is currently used as the standard protocol because it is relatively easy to administer while providing effective analgesia for up to 30 hours after surgery. However, limitations include frequent postoperative nausea and vomiting, pruritus, and importantly, the potential for delayed respiratory depression. Therefore, our transplantation anesthesia team is seeking to identify an alternative to ITM that would be as effective but produce fewer adverse effects.

IMPACT OF ANAESTHETIC TECHNIQUE UPON OUTCOME IN ONCOLOGICAL SURGERY

Deborah Khoo

National University Hospital, Singapore

Myriads of options are available to the anaesthetists of today, but which combination is best for our patients, in both the short and long term? There is increasing evidence that the type of anaesthesia delivered can potentially have an impact on the downstream oncological outcomes for patients undergoing primary cancer resection. However, multiple variables exist - should we use a total intravenous anaesthesia or volatile technique? Does the use of regional anaesthesia play a part? What about analgesics and other adjuncts? Does the type of cancer matter? Are there standards of care that we should aim for? This lecture aims to explore these issues, as well as highlight areas of potential further research.

THE FIELD ANESTHESIA: THE JOURNEY OF MALAYSIA ARMED FORCES ANAESTHETIST

Mohamad Azlan Ariffin

Hospital Angkatan Tentera Tuanku Mizan, Kuala Lumpur, Malaysia

Field anaesthesia is practising anaesthesia in austere environment where the facilities are limited, scarce resources and lack of trained personals. This will give a challenge to anaesthetist to balance the safety and the risk of anaesthesia. To experience field anaesthesia, one has to work in combat battlefield or in Human Assistance and Disaster Relief (HADR). Malaysia Armed Forces under the Royal Medical Corps has actively involved locally and internationally for field anaesthesia through our deployable level 2 or level 3 field hospital. Readiness of the medical military team to be deploy 24/7 has made us the ideal team to be deploy forward. The lecture will share the experiences through the milestones of our field anaesthesia mission from Bosnia and until the latest in Malaysia Field Hospital Cox Bazar. The challenges faced and the improvement that we evolve to serve better.

ANAESTHESIA FOR PAEDIATRIC BRONCHOSCOPY / AIRWAY SURGERY

Intan Zarina Fakir Mohamed

Hospital Tunku Azizah, Kuala Lumpur, Malaysia

Paediatric bronchoscopy is an important procedure that allows the visualization of the trachea and bronchi as well as treatment of a variety of airway disorders for diagnostic and therapeutic interventions. The successful execution of these procedures relies on a skilled surgeon, an experienced anaesthesiologist, an attentive support staff and good communication and coordination among all team members. It is a challenging procedure since it is a shared airway in which adequate oxygenation and ventilation is mandatory. It need special equipment and sound knowledge of the anatomy, physiology and pathology of the airway and if possible it should be performed in a tertiary referral centre.

The preparation and planning are important in terms of patient, equipment and man power. Patient with significant airway anomalies associated with high risk complications. The reason for bronchoscopy usually dictates both the technique of anaesthesia and the type of bronchoscope used.

Various anaesthetic and airway management techniques can be used for airway management in this patient. Induction of anaesthesia by inhalation or intravenously while maintaining spontaneous breathing are common depending on patient comorbidities, Airway topicalization with lignocaine helps to reduce the anaesthetic requirement during the procedure. Maintenance of anaesthesia by inhalation or TIVA had advantages and disadvantages.

Constant communication with surgeon on how the airway will be maintained and what to do when the patient desaturated is important. Complications are hypoxaemia, hypercarbia, pneumothorax, laryngeal oedema and trauma to the airway. Airway oedema should be managed appropriately with anti inflammatory, nebulized adrenaline or post op ventilation in PICU or NICU if needed.

ANAESTHESIA AND THE DEVELOPING BRAIN: THE UPDATES?

Sivaraj Chandran

Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia

Two decades ago, clinical trials in rodents showed that the possibility of anaesthetic drugs could harm the developing brain. This has led to serious concern regarding administration of anaesthetic drugs in babies, infants and children. U.S Food and Drug Administration (FDA) in 2016 has issued a black box warning on the label of general anaesthetics and sedation drugs when used repeatedly or for prolonged general anaesthesia during surgeries or procedures in children younger than 3 years or in pregnant women during their third trimester may affect the development of children's brain. This FDA warning has drawn much criticism from the health care workers as it was based on inconclusive studies with no proper linked evidence on the human population. Anaesthesia and sedation drugs may be necessary for babies, children who require surgery or other painful and stressful procedures, especially when they face life-threatening conditions requiring surgery that should not be delayed. As anesthesia professionals, what are our responsibilities to the parents in discussing the risks of general anesthesia? This presentation will address the pre-clinical evidence, observational studies, and the most recent research efforts in the MASK, PANDA and GAS study that supports the safety of anaesthesia on the developing brain of the children.

MONITORING CEREBRAL PERFUSION DURING PEDIATRIC CARDIAC SURGERY

Jin-Tae Kim

Seoul National University Hospital, Seoul, South Korea

Adequate cerebral blood flow is critical for patient's outcome because it determines oxygen delivery to the brain. It is determined by mean arterial blood pressure, cardiac output, cerebral perfusion pressure, intracranial pressure, PaCO₂, and PaO₂. During pediatric cardiac surgery, when rSO₂ is decreasing, we should check the head and neck position, cannula position, mean arterial blood pressure, systemic saturation, PaCO₂, hemoglobin, cardiac function, cerebral oxygen consumption, temperature and intracranial pressure. In addition, it is definitely helpful if we can evaluate the cerebral blood flow.

Transfontanelle ultrasound (TFU) can be easily used in small children undergoing surgery other than neurosurgery. TFU can be applied intraoperatively using a conventional cardiac ultrasound machine equipped with a sector probe. Using TFU, blood flow velocity can be measured during pediatric cardiac surgery as a point-of-care modality. Internal carotid artery, anterior cerebral artery, pericallosal artery, basilar artery, sometimes middle cerebral artery can be identified and its blood flow velocity can be measured using pulsed wave Doppler.

The reference values during pediatric cardiac surgery are available in the literature.¹ Its clinical application is diverse. In infants having cardiac surgery, the respiratory variation of the internal carotid artery blood flow peak velocity as measured using TFU predicts an increase in stroke volume in response to an intravenous fluid bolus.² TFU can evaluate blood flow pattern before and after modified Blalock-Taussig shunt.^{3,4} It also can be used for control of cardiopulmonary bypass flow rate during selective antegrade cerebral perfusion during arch reconstruction.⁵ TFU is a useful tool for monitoring of cerebral perfusion in the pediatric population. TFU can improve the quality of cerebral perfusion monitoring and possibly improve patient's outcome.

ONE LUNG VENTILATION - CHOOSING THE BEST AIRWAY DEVICE FOR YOUR PATIENT

Jusmidar Abdul Jamil

Penang General Hospital, George Town, Pulau Pinang, Malaysia

Lung isolation techniques have been extensively used to allow one-lung ventilation (OLV). These techniques are useful in protecting lung from contamination or providing good surgical access for thoracic and upper GI surgeries. This lecture will highlight various techniques available for initiating and maintaining OLV including double lumen tubes and endobronchial blockers. Each device has the advantages and disadvantages which need to be considered. Choosing the suitable devices with appropriate sizes will ensure the safety of the patient during insertion, positioning, intraoperative manipulation and postoperative management. Knowledge pertaining the airway device and the skill for insertion are the most important criteria. This lecture will give an overview of the common practices and steps in achieving one lung ventilation in patients undergoing thoracic surgery.

MANAGING HYPOXIA DURING ONE LUNG VENTILATION (OLV)

Marzida Mansor

University of Malaya, Kuala Lumpur, Malaysia

Hypoxemia during OLV may be managed using the strategies of prevention and treatment. Prevention of hypoxaemia may be achieved by ventilation of the patient's lungs with 100% oxygen with time for denitrogenation before OLV.

When profound hypoxaemia develops during OLV, it is necessary to treat the problem by increasing the inspired oxygen to 100% and, on some occasions, ventilating both lungs. Surgery may have to be discontinued whilst the problem is managed. The patient's lungs should be ventilated manually and checks should be performed.

Hypoxaemia in OLV may develop due to interrupted gas delivery to patient caused by problem with oxygen supply to the anaesthetic machine or disconnection of breathing system. High airway pressure during OLV can lead to hypoxaemia and must be treated. It can be caused by malposition of double-lumen tube causing incomplete lung ventilation and malposition of endobronchial blocker leading to airway obstruction which requires rechecking of the position of DLT/BB. Other causes of high airway pressure include airway blockages by secretions, sputum and blood, bronchospasm, air trapping with dynamic hyperinflation, pneumothorax of the ventilated lung or due to inadequate muscle relaxation.

Physiological hypoxaemia in OLV can be treated with Insufflation of oxygen to the non-ventilated lung to improve oxygenation of shunted blood, continuous positive airway pressure (with oxygen) to the nonventilated lung to attenuate hypoxaemia of shunted blood, application of positive end-expiratory pressure to the dependent lung to improve functional residual capacity and hence oxygenation and optimization of haemoglobin and cardiac output to improve oxygen delivery.

PROBLEM BASED LEARNING 3 - Patient Blood Management

UNUSUAL CASES IN ANAEMIA

Kevin Ng Wei Shan

University of Malaya, Kuala Lumpur, Malaysia

Perioperative anaemia is present in approximately 60% of all cases presenting for major surgery. It carries with it significant effect on perioperative morbidity and is easily correctable with the vigilance of the attending physicians. In this session we will be discussing some interesting cases that have crossed my path in clinical practice as well as dive a little deeper into the other causes of perioperative anaemia.

CHRONIC PAIN MANAGEMENT - WHAT'S NEW

Marzida Mansor

University of Malaya, Kuala Lumpur, Malaysia

Chronic pain is defined as pain that persists for three months or more, or beyond normal tissue healing time. It is being increasingly recognized that chronic pain should no longer be considered a symptom but a 'disease in its own right'. It is an important and specific healthcare problem, which affects at least 10% of the world's population.

The new ICD 11 category for "Chronic Pain" comprises the most common clinically relevant disorders. These disorders were divided into 7 groups: Chronic primary pain, Chronic cancer pain, Chronic posttraumatic and postsurgical pain, Chronic neuropathic pain, Chronic headache and orofacial pain, Chronic visceral pain and Chronic musculoskeletal pain such as rheumatoid arthritis and osteoarthritis.

Chronic primary pain is pain in one or more anatomic regions that persists or recurs for longer than three months and is associated with significant emotional distress or significant functional disability (interference with activities of daily life and participation in social roles) and that cannot be better explained by another chronic pain condition. This is a new phenomenological definition, created because the aetiology is unknown for many forms of chronic pain.

Common conditions such as back pain that is neither identified as musculoskeletal or neuropathic pain, chronic widespread pain, fibromyalgia, and irritable bowel syndrome will be found in this section and biological findings contributing to the pain problem may or may not be present.

The standard treatment plan of chronic pain is a multidisciplinary approach, which includes pharmacology, physical therapies as well as psychological therapies and surgical interventions. Often, this multidisciplinary treatment modality is inadequate for many patients because chronic pain can be difficult to treat and can be resistant even to opioid drugs. Recently in the US, overuse or abuse of prescription opioids has turned to an 'opioid crisis' that led to hesitation of clinicians to prescribe opioid for chronic pain and the search for non-opioid-based pain management.

THE ROLE OF REGIONAL ANAESTHESIA IN PERSONALISED POST-OPERATIVE PAIN MANAGEMENT

Beh Zhi Yuen

OSC Orthopaedic Specialist Centre, Subang Jaya, Selangor, Malaysia

Pain management plays a fundamental role in enhanced recovery after surgery pathways. The concept of multimodal analgesia in providing a balanced and effective approach to perioperative pain management is widely accepted and practiced, with regional anaesthesia playing a pivotal role. Regional techniques can be utilized to achieve the goals of enhanced recovery, whether it be opioid sparing, lower incidence of ileus or early mobilization. There are numerous guidelines recommending various regional techniques for site specific surgeries. Which is the most appropriate regional technique to choose, and what skills and infrastructure are required for its implementation? A multidisciplinary team-based approach for defining the goals is essential, based on each patient's needs, and incorporating patient, surgical, and social factors. This presentation provides a framework for a personalized approach to postoperative pain management with an emphasis on regional anaesthesia techniques. By using several examples of painful surgical procedures such as major abdominal surgery and major orthopaedic surgeries (total knee replacement and shoulder rotator cuff repair), the speaker shows how a personalized approach with appropriate regional technique brings the best outcome for patients.

PAIN MANAGEMENT DURING COVID-19 PANDEMIC

Shigeki Yamaguchi

Dokkyo Medical University, School of Medicine, Mibu, Japan

The COVID-19 pandemic has been a great challenge in managing chronic pain in the world. The physical and emotional condition of individuals with pain sensitization syndromes who are experiencing the COVID-19 pandemic may worsen. Therefore, to treat and care of patients with chronic pain during the Covid-19 pandemic, we must consider, estimate and serve multidisciplinary pain management, which is recognized as the optimal paradigm for managing chronic pain.

For multidisciplinary pain management, it is necessary to think about many things together with patients and their family, such as self-management, complementary methods, education, medical approach, cognitive therapy, body work and others. In case of medical approach for multidisciplinary pain management, there are many therapies and cares, such as physical therapy, occupational therapy, nursing care, optimal aids, biofeedback therapy, psychiatric and psychotherapy, interventional therapy, pharmacotherapy and others. Especially, everybody knows that interventional and pharmacotherapy should be also important for the initial medical approach.

Therefore, our society, Japanese society of pain clinicians, decided to make and publish some guidelines for multidisciplinary pain management. We have already published many guidelines, such as guideline to medical care for pain clinic, guidelines for the pharmacologic management of neuropathic pain, guideline for prescribing opioid analgesics for chronic non-cancer pain, guideline for the interventional treatment of cancer pain, and guideline for the interventional pain treatment. And also, recently, our pain related consortium including many societies and associations, have published clinical practice guideline for chronic pain.

In this seminar, I am going to introduce those guidelines to show how to manage chronic pain currently during the COVID-19 pandemic in Japan.

CONSENT TO MEDICAL TREATMENT IN PATIENTS WHO ARE MINORS

Mohamed Hassan Mohamed Ariff

Institut Jantung Negara, Kuala Lumpur, Malaysia

The International Convention on the Right of a Child defines “child” as: “Every human being below the age of eighteen years unless, under the law applicable to the child, majority is attained earlier.” Most countries have differing systems pertaining to adult and child patients. In Malaysia, doctors are governed by legislation and guidelines when giving advice and taking consent for medical treatment. The MMC Guideline on Consent first came out in 2011 and have undergone amendments. This guideline governs all medical practitioners. Physicians in private practice are also governed by Private Healthcare Facilities and Services Act 1998 And Regulations 2006 which has provisions for consent taking (Regulation 47).

S2 of the Age of Majority Act 1971 provides that:

“Subject to section 4, the minority of all males and females shall cease and determine within Malaysia at the age of eighteen years and every such male and female attaining that age shall be of the age majority.”

S4 allows a person who is 16 years and above to give consent for marriage (subject to conditions), give consent for sexual relationship and also be treated as an adult when giving evidence in court. These can be seen in

- 1) Law Reform (Marriage and Divorce) Act 1976 section 10
- 2) Penal Code section 375
- 3) Evidence of Child Witness Act 2007 section 13

In some circumstances consent from a minor can pose some dilemmas.

- 1) Mature Minor
- 2) Refusal by Parents
- 3) Disagreement between parents
- 4) Minor Parent
- 5) When consent may not be required
- 6) Children in Clinical Trials

PERSPECTIVES OF ANESTHESIOLOGY PRACTICE IN MALAYSIA: WHAT LIES AHEAD?

Gunalan Palari

Subang Jaya Medical Centre, Subang Jaya, Selangor, Malaysia

Talk will highlight current scenarios and perspectives affecting anesthesiology services in Malaysia that may have an impact for the future services need in Malaysia.

UPDATES ON RESUSCITATION 2020

Sabariah Faizah Jamaluddin

Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia

Every 5 years since 2000 the International Liaison Committee on Resuscitation (ILCOR) publishes the science and treatment recommendations on Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care (ECC) based on recent research and evidence. The recommendations are then reviewed by the various resuscitation councils to come up with the guidelines that they think suitable for them.

For the 2020 guidelines, most recommendations remain unchanged from 2015. The majority of the recommendations are re-affirmed and strengthened by latest evidence. Very few recommendations are new. Early high quality CPR in out of hospital cardiac arrest (OHCA) and in-hospital cardiac arrest (IHCA) and early defibrillation with good post arrest care remains the cornerstone of effective resuscitation. Recovery and rehabilitation completes the chain of survival for the cardiac arrest victims.

In this COVID era, proper precautions and PPE are essential when managing patients with OCHA and IHCA.

CPR MODIFICATIONS FOR THE COVID-19 PATIENTS

Wan Fadzlina Wan Muhd Shukeri

Hospital Universiti Sains Malaysia, Kota Bharu, Kelantan, Malaysia

Cardiopulmonary resuscitation (CPR) for the COVID-19 patients poses new challenges from existing guidelines, mainly because it is widely regarded as an aerosol generating procedure. Should the need of CPR in a COVID-19 patient arises, safety of the rescuers and the team members is the priority. Therefore, this session will begin with a revision of the required personal protective equipment when performing the procedure in this specific group of patients. This will be followed by a discussion on the guidance for the pre-, intra-, and post-resuscitation measures for the COVID-19 patients. Subsequently, a review of the management of out-of-hospital and in-hospital cardiac arrests for the COVID-19 patients will be presented. Proning in COVID-19 is a widely practiced approach and as such a brief overview of CPR in patients who are in prone position at the time of arrest will be included too. Finally, oxygenation and ventilation strategies for the COVID-19 patients will be discussed.

RESUSCITATION AND EMERGENCIES OF THE PARTURIENTS

Thohiroh Abdul Razak

Hospital Tunku Azizah, Kuala Lumpur, Malaysia

WHO in 2017 reported 295,000 mothers died worldwide, whereby 95% occurred in low or low middle income countries. The most common causes of maternal death identified in UK were cardiac disease (23%), epilepsy & stroke (13%), blood clots (15%), mental health (13%), sepsis (11%), bleeding (9%), preclampsia (2%), cancers (3%) and others (4%). In Malaysia, based on CEMD Report (2012-2014) our MMR were higher compared to UK, though reducing in trend, from 44/100K to 22.3/100K in 2014. The common causes were quite similar: associated medical condition (20.6%), postpartum haemorrhage (17.4%), hypertensive diseases (12.5%), pulmonary embolism (11.6%), amniotic fluid embolism (8%), anaesthesia (0.4%) and postnatally was more than 5%>. Though worldwide the MMR is reducing however efforts need to be undertaken to improve the health status of pregnant mothers. It is a human tragedy when a woman dies giving a life.

Obstetric collapse is an acute event causing cardio-respiratory arrest, and brain ischaemia leading to reduced or absent conscious level and potentially lethal if resuscitation is not started promptly. This can happen at anytime, any stage until 6 weeks postnatally. Common causes are haemorrhage, heart failure, amniotic fluid embolism, aspiration pneumonia, Venous thrombo-embolism, pulmonary embolism and etc.

Critical principle in managing obstetric collapse involves understanding that TWO lives are involved ie mother and fetus. Best outcome will only be achieved through successful resuscitation. Deep understanding of changes in maternal physiology, anatomy and how these changes affect resuscitation. Both mother and fetus can deteriorate very fast. Left uterine displacement is mandatory in resuscitating mothers after 20/52 of gestation.

2020 Guidelines for Cardiac Arrest in Pregnancy Algorithm stresses on early experts involvement, high quality CPR, early intubation and early preparation for perimortem caesarean delivery (PMCD) if no ROSC in 5 minutes. Both mother and baby have promising outcome after PMCD.

MEET THE EXAMINERS

MEET THE EXAMINERS

**Omar Sulaiman¹, Wan Nazaruddin Wan Hassan², Raha Abdul Rahman³,
Melor @ Mohd Yusof Mohd Mansor⁴**

¹Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia

²Universiti Sains Malaysia, Kota Bharu, Kelantan, Malaysia

³Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

⁴Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

Perioperative fluid therapy is one of the major factors that influences postoperative outcome after major surgery. Undetected (i.e., subclinical) hypovolemia and hypervolemia are associated with increased perioperative complications and prolonged hospital stay. Fluid therapy remains one of the most controversial aspects of perioperative care. There is continuing debate with regard to the quantity and the type of fluid resuscitation during elective major surgery. Recent evidence suggests that judicious perioperative fluid therapy improves outcomes after major elective surgery. Goal-directed fluid therapy (GDFT), is based on optimization of preload to achieve a certain goal in stroke volume, cardiac index, or oxygen delivery, assessed by an optimized cardiac stroke volume, has been proposed as the “gold standard” for perioperative fluid therapy. GDFT has been shown to reduce perioperative complications and shorten length of hospital stay. In fact, GDFT is considered an essential element of enhanced recovery after surgery (ERAS) protocols. A zero-balance fluid regimen, which has often been termed the “restrictive” fluid strategy, aims to minimize postoperative weight gain by maintaining intravascular normovolemia. This is accomplished with replacement of measured fluid losses without a replacement of loss to third spacing, and maintenance of appropriate hemodynamic variables with use of vasopressors. As conclusion, patient care in perioperative pathways should aim for a euvolemic state. Intraoperative fluid management should aim for zero-balance with appropriate patient populations receiving further hemodynamic guidance with goal-directed fluid therapy.

MONITORING THE BRAIN DURING ANAESTHESIA - A PRACTICAL APPROACH

Adrian W Gelb

University of California, San Francisco, USA

Our brains are our most precious organs. Yet, ironically, it receives very little monitoring during anesthesia. Instead, we depend on cardiovascular functions to indirectly inform about the brain. There is certainly some appeal although totally unrealistic that brain or any organ, function can be adequately encompassed in a single number. The commercially available indices are all provide “population averages” and we clinicians then make the assumption that all of our patients are “average”. A quality device should provide one with, preferably on the home screen, all the information that will help one make an informed clinical decision, without having to dig deep into complex menus. An ability to do rudimentary EEG interpretation, as we do with the EKG, plus other derived indices add substantially to only using the index. These derived parameters include spectral edge frequency (SEF) and density spectral array (DSA).

This lecture will explain important information about the indices in clinical practice, how to interpret and use the raw EEG and the derived parameters in clinical practice.

MSA AWARD / MSA YIA AWARD

- FP 01 ID 006 THE USE OF BISPECTRAL INDEX (BIS) MONITORING IN ELDERLY UNDERGOING SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS
Ng Ka Ting
- FP 02 ID 012 DEVELOPMENT AND VALIDATION OF ESTIMATES OF GLOMERULAR FILTRATION RATE EQUATION FROM PLASMA CREATININE IN THE MALAYSIAN SETTING
Azrina Md Ralib
- FP 03 ID 038 THE DIAGNOSTIC ACCURACY OF SERUM PROCALCITONIN AS SEPSIS BIOMARKER AMONG IMMUNOCOMPROMISED PATIENTS
Wan Rahiza Wan Mat
- FP 04 ID 056 AMYLMETACRESOL AND DICHLOROBENZYL ALCOHOL (AMC/DCBA) WITH LIGNOCAINE LOZENGES REDUCES THE INCIDENCE OF POSTOPERATIVE SORE THROAT (POST) FOLLOWING USE OF A SUPRAGLOTTIC AIRWAY DEVICE (SAD)
Sebastian Sundaraj
- FP 05 ID 061 ESTIMATES OF GLOMERULAR FILTRATION RATE: COMPARISON OF DIFFERENT CREATININE BASED EQUATIONS
Farah Nadia Mohd Hanafiah
- FP 06 ID 62 THE PREVALENCE, RISK FACTORS AND OUTCOMES OF FRAILITY IN ELDERLY CRITICALLY ILL PATIENTS
Nur Khairunnisa Abdul Aziz
- FP 07 ID 66 COMPARISON OF VISIBILITY AND SUCCESSFUL BLOCK BETWEEN ECHOPLEX+ AND STIMUPLEX® ULTRALINE 360° ECHOGENIC NEEDLES DURING ULTRASOUND-GUIDED SUPRACLAVICULAR BRACHIAL PLEXUS BLOCK FOR UPPER LIMB SURGERY
Suki Ismet
- FP 08 ID 087 COMPARING THE ASSOCIATION OF DIFFERENT FRAILITY SCREENING TOOLS WITH POSTOPERATIVE DELIRIUM
Cheong Jun Leong
- FP 09 ID 095 EVALUATION OF SUBLINGUAL ULTRASOUND ASSESSMENT AND OTHER CLINICAL PREDICTORS OF DIFFICULT INTUBATION AMONG OBESE PATIENTS
Low Joe An
- FP 10 ID 097 JELLY-BASED LUMBAR SPINE PHANTOM MODEL AS A SONOANATOMY TEACHING TOOL RELEVANT TO CENTRAL NEURAXIAL BLOCK
Chiew Yee Soon

LIST OF BEST E-POSTER PRESENTATIONS

- FP 01 ID 007 **EFFECT OF PRONE VERSUS SUPINE VENTILATION IN INTUBATED COVID-19 PATIENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS**
Ng Ka Ting
- FP 02 ID 011 **EVALUATION OF FLEXIBLE TIP BOUGIE IN SIMULATED DIFFICULT INTUBATION ON MANIKIN USING VIDEO LARYNGOSCOPE: COMPARISON WITH PORTEX SINGLE-USE AND FROVA INTUBATING INTRODUCERS**
Kuan Tong Yin
- FP 03 ID 014 **SERIAL EVALUATION OF SEQUENTIAL ORGAN FAILURE ASSESSMENT SCORE IN PREDICTING 1-YEAR MORTALITY IN CRITICALLY ILL PATIENTS**
Azrina Md Ralib
- FP 04 ID 022 **PERIOPERATIVE ANALGESIC MODALITY AND EFFECTIVENESS IN PAEDIATRIC PATIENTS WHO HAVE UNDERGONE COMMON MAJOR UROLOGY SURGERY - A TWO YEARS RETROSPECTIVE STUDY**
Yeoh Chih Nie
- FP 05 ID 035 **EFFECTS OF CALL DUTY ON COGNITIVE AND PSYCHOMOTOR FUNCTION AMONG ANAESTHESIA TRAINEE IN A TERTIARY TEACHING HOSPITAL**
Raha Abdul Rahman
- FP 06 ID 039 **VALIDATION OF MALAY LANGUAGE TRANSLATED QUESTIONNAIRE ON ADULT INTENSIVE CARE UNIT NURSES' PERCEPTION AND INVOLVEMENT IN END-OF-LIFE CARE**
Wan Rahiza Wan Mat
- FP 07 ID 081 **ASSOCIATION BETWEEN INTRAOPERATIVE REMIFENTANIL DOSAGE AND POSTOPERATIVE HYPERALGESIA IN SCOLIOSIS SURGERY: A RETROSPECTIVE STUDY**
Norashekeen Razak
- FP 08 ID 092 **PRE-OXYGENATION IN OBESE PATIENTS: FACEMASK VERSUS FACEMASK WITH NASAL PRONG**
Nadia Md Nor
- FP 09 ID 099 **A CASE SERIES OF PAEDIATRIC LIVING DONOR LIVER TRANSPLANT IN UNIVERSITY OF MALAYA MEDICAL CENTRE (UMMC): INDICATIONS, PERIOPERATIVE MANAGEMENT AND OUR LEARNING POINTS**
Iwadh Rashid
- FP 10 ID 111 **EFFECTIVENESS OF PAIN INTERVENTION THERAPY IN REDUCING OPIOIDS AND GABAPENTINOIDS USAGE FOR CHRONIC SPINAL PAIN PATIENTS**
Syafawati Shamsudin

LIST OF CASE REPORT PRESENTATIONS

- FP 01 ID 003 **ANAESTHETIC APPROACH OF PREGNANT WOMEN WITH LARGE CEREBRAL AND GIANT CEREBRAL ANEURYSMS PRESENTED FOR ELECTIVE CAESAREAN DELIVERY**
Rahimah Abdul Rahim
- FP 02 ID 004 **TRANSNASAL SPHENOPALATINE GANGLION BLOCK FOR POSTDURAL PUNCTURE HEADACHE - A SUCCESSFUL AVOIDANCE OF EPIDURAL BLOOD PATCH**
Rusnaini Mustapha Kamar
- FP 03 ID 018 **BROKEN EPIDURAL CATHETER, WHAT TO DO NEXT? A CASE REPORT**
Lee Ee Leen
- FP 04 ID 083 **THE GREY LADY**
Wong Sze Meng
- FP 05 ID 106 **ANAESTHETIC CONSIDERATION FOR INTRACARDIAL LEIOMYOMATOSIS (ICLM)**
Khaw Soon Keong

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- PP 01 ID 002 AN EVALUATION OF POST-OPERATIVE PAIN CONTROL IN HEPATECTOMY PATIENTS OF UNIVERSITY MALAYA MEDICAL CENTRE (UMMC)
Choo Mei Ann
- PP 02 ID 005 THE USE OF CEREBRAL OXIMETRY IN SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS
Ng Ka Ting
- PP 03 ID 008 PREDICTING HAEMOGLOBIN LEVEL WITHIN 6 HOURS AND AFTER 24 HOURS AFTER A CAESAREAN SECTION: ARE THERE SUCH FORMULAS TO CALCULATE THEM?
Nazhan Afeef bin Mohd Ariff@Ghazali
- PP 04 ID 009 DOES EPIDURAL DURING LABOR LEAD TO CHRONIC LOW BACKPAIN? A MALAYSIAN RETROSPECTIVE COHORT STUDY
Muhamad Rafiqi Hehsan
- PP 05 ID 010 EVALUATION OF CARDIAC OPERATIVE RISK AND OUTCOME USING EUROPEAN SYSTEM FOR CARDIAC OPERATIVE RISK EVALUATION II (EUROSCORE II) IN CORONARY ARTERY BYPASS GRAFT SURGERY.
Mohammad Nizam Mokhtar
- PP 06 ID 013 SINGLE DOSE INTRAVENOUS IRON ISOMALTOSIDE IN COMBINATION WITH ORAL IRON VS ORAL IRON MONOTHERAPY IN PATIENTS WITH ANEMIA AFTER POSTPARTUM HEMORRHAGE: A SINGLE BLINDED,RANDOMISED CONTROLLED,PILOT TRIAL
Swarnalatha Nair
- PP 07 ID 015 EFFECTIVENESS OF MAGNESIUM SULPHATE 30 MG/KG IN OBTUNDING FENTANYL-INDUCED COUGH DURING GENERAL ANAESTHESIA INDUCTION: A DOUBLE-BLIND RANDOMISED CLINICAL TRIAL
Muhammad Maaya
- PP 08 ID 017 CASE REPORT: AWAKE CARDIOPULMONARY BYPASS UNDER NEURAXIAL ANAESTHESIA FOR ELECTIVE POSTERIOR MEDIASTINAL MASS EXCISION
Nurul Afiqah Mohd Yusoff
- PP 09 ID 019 SMALL BOWEL ANASTOMOSIS UNDER SPINAL ANAESTHESIA: A CASE REPORT
Ng Bing Jue
- PP 10 ID 020 LAPAROSCOPIC PROCEDURE UNDER SPINAL ANAESTHESIA: TWO CASE REPORTS
Ng Bing Jue
- PP 11 ID 021 COMPARING POSTOPERATIVE SORE THROAT (POST) FOLLOWING INTUBATION USING MACINTOSH LARYNGOSCOPE VERSUS C-MAC® VIDEO LARYNGOSCOPE
Yeoh Chih Nie
- PP 12 ID 023 ANAESTHETIC DOCUMENTATION: ARE WE RECORDING IT RIGHT? ANALYSING COMPLETENESS OF RECORDING OF PRE-ANAESTHETIC DOCUMENTATION IN A TEACHING HOSPITAL
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Nor Hanani binti Mohd Noah
- PP 14 ID 025 SPINAL ANAESTHESIA FOR OBESE PATIENT UNDERGOING LAPAROSCOPIC SURGERY: TWO CASE REPORTS
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Wong Shee Ven

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Hor Chin Kok
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Syarifah Noor Nazihah binti Sayed Masri
- PP 18 ID 030 **ULTRASONOGRAPHIC METHOD AS CONFIRMATORY TEST FOR FEEDING TUBE PLACEMENT IN MECHANICALLY VENTILATED PATIENTS**
Saw Yee Horng
- PP 19 ID 031 **ULTRASOUND-GUIDED CONTINUOUS ERECTOR SPINAE PLANE BLOCK (ESPB) FOR IN OPEN NEPHRECTOMY PAIN CONTROL**
Angelina Lim
- PP 20 ID 032 **ANAESTHETIC CONSIDERATIONS FOR CAESARIAN SECTION OF A CLINICALLY MARFANOID PARTURIENT WITH DISSECTING AORTIC ANEURYSM (STANDFORD A) AND SEVERE AORTIC REGURGITATION - A CASE REPORT**
Thanesh Kumar a/l Sinasamy
- PP 21 ID 033 **THE CRITICALLY ILL PATIENT WITH EISENMENGER SYNDROME: A CASE REPORT**
Lim Min Xian
- PP 22 ID 036 **AN OBSERVATIONAL STUDY ON THE DEMAND AND UTILISATION OF CRITICAL CARE BEDS IN A TERTIARY TEACHING HOSPITAL**
Raha Abdul Rahman
- PP 23 ID 037 **FACTORS AFFECTING DE-ESCALATION PRACTICES OF ANTIMICROBIAL USE IN CRITICAL CARE**
Wan Rahiza Wan Mat
- PP 24 ID 040 **BILATERAL MASTECTOMY: DISPUTE OF PCA MORPHINE VS BILATERAL ERECTOR SPINAE PLANE CATHETERS- EXPLORING BEST ANALGESIC MANAGEMENT FOR BREAST CANCER SURGERY**
Durgalakshmi Naidu Ragupathy Naidu
- PP 25 ID 042 **SUCCESSFUL SUPRAINGUINAL FASCIA ILLIACA BLOCK FOR SURGICAL ANAESTHESIA OF HIP SURGERY**
Shahir Asraf bin Abdul Rahim
- PP 26 ID 043 **PULMONARY ARTERIOVENOUS MALFORMATION IN REMOTE ANAESTHESIA**
Nuraisyah binti Mohd Ismail
- PP 27 ID 044 **EMBOLIZATION OF LINGUAL ARTERIOVENOUS MALFORMATION**
Michelle Ding Sook Xin
- PP 28 ID 045 **THE ROLE OF NONINVASIVE VENTILATION IN POST CORONARY ARTERY BYPASS GRAFTING SURGERY**
Usha Rani a/p Ramasami
- PP 29 ID 046 **DOES INTRAVENOUS ONDANSETRON REDUCES THE INCIDENCE OF POST-SPINAL SHIVERING IN OBSTETRIC POPULATION? A DOUBLE BLIND, PROSPECTIVE RANDOMISED, CONTROL STUDY**
Teoh Tsyx Xiang
- PP 30 ID 047 **CASE REPORT: DELAYED RESPIRATORY DEPRESSION FOLLOWING INTRATHECAL OPIOD IN A PARTURIENT WITH SHORT STATURE**
Anastasia Joyce Lim Yit Zhen
- PP 31 ID 048 **CONTINUOUS SPINAL ANAESTHESIA IN AN ELDERLY UNDERGOING OPEN GASTROJEJUNOSTOMY AND COLOSTOMY - A CASE REPORT**
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