



ASIAN SOCIETY FOR
NEUROANESTHESIA
AND CRITICAL CARE

A SYNAPSE OF MINDS

a virtual congress

23-25 FEBRUARY 2023

E-PROGRAMME GUIDE



7th Congress of Asian Society for
Neuroanesthesia and Critical Care
(ASNACC)



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ACKNOWLEDGEMENTS

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WELCOME MESSAGE



Dear Partners in Healthcare,

I would like to extend my warmest greetings and wishes of good health and safety for you and your family during these difficult times. As we emerge from the global pandemic, we strive to move forward, full of anticipation for what is to come. The 7th Congress of ASNACC that was due in 2021 was postponed repeatedly, and we are excited to finally push through in February 23 to 25, 2023. This will be a virtual event that will be held online.

The main theme of the Congress is “A Synapse of Minds.” The well-curated scientific programme will include topics focusing on various learning opportunities among neuroanesthesia, critical care, and neurosurgical specialties. To foster better collaboration, topics specific for allied medical professionals will also be included, to emphasize the importance of teamwork in good patient outcomes. Pre-congress workshops on topics such as Emergency Neurologic Life Support, EEG interpretation, cerebral oximetry, and brain ultrasonography will also be offered.

Being a virtual event, delegates can attend the congress from the comfort of their own homes. Despite being fully virtual, delegates will still have the full meeting experience, which includes attending live and recorded lectures, exchanging new ideas with like-minded colleagues, and bringing the neuroanesthesia and critical care community closer and stronger than before.

As we draw nearer to the event, updates will be posted on the website and through social media accounts. Registration to the event, updated scientific and social programmes, workshops, abstract submission registration, accommodation and other information will be available through the website. Your participation in this collaborative, multi-specialty congress is an excellent opportunity to highlight your company. We look forward to working with you in this project and welcoming you online in 2023.

Very truly yours,

Geraldine Raphaela B. Jose MD, FPSA

Chair, Organizing Committee 7th Congress of ASNACC

President, Society for Neuroanesthesia of the Philippines (SyNAPS)



ORGANISERS



ASNACC

ASIAN SOCIETY FOR NEUROANESTHESIA AND CRITICAL CARE

Asian Society for Neuroanesthesia and Critical Care (ASNACC)

The Asian Society for Neuroanesthesia and Critical Care (ASNACC) is a non-profit, scientific organization whose main thrust is the exchange of information in the fields of neurosciences, neuroanesthesia, and neurocritical care among its members in Asia. It was created following a proposal by Haekyu Kim from South Korea in 2004 during the 1st China-Japan-Korea Joint Symposium for Neuroanesthesia. The founding member countries include South Korea, Japan, China, India, Indonesia, and Singapore. The Philippines, Malaysia, Thailand, and Myanmar joined thereafter. The first Congress of ASNACC was held in Beijing, China in 2006, and has been a biennial event, the last being held in Nara, Japan in 2019.

The members comprise doctors from the fields of neuroanesthesiology and critical care. The goals of the Society include enhancing abilities in clinical practice in the field of neuroanesthesia and neurocritical care, enhancing research abilities in the field of neuroscience in Asia, and importantly to establish a forum for exchange of view among its members.



Philippine Society of Anesthesiologists, Inc. (PSA)

A Brief History

On February 24, 1951, the Philippine Society of Anesthesiologists, Inc. was founded with a small group of seven as charter members, namely: Quintin J. Gomez (Founder-President), Magpuri Bataclan, Leticia Salas-Curtin, Jose Denoga, Paz Y Fores, Mariano S. Geronimo and Julia Presbitero (Secretary-Treasurer). The Philippine Medical Association (PMA) gave its seal of approval in May 1952 by granting the charter of affiliation to the society. Under Dr. Gomez leadership, the society embarked on programs to address the shortage of anesthesiologists by conducting two six-month training courses for government physicians from different provincial hospitals.

Dr. Gomez relinquished the presidency to Dr. Braulio de Castro who became the second president of the PSA in 1964. During his term, the first national convention of the society took place at the University of Santo Tomas on December 9-11, 1965. The three regions in the Philippines were represented by leading anesthesia practitioners in the regions: Irineo Geslani (Luzon); Francisco Osmena (Visayas), and Amador Villanueva (Mindanao).

In 1967, with Dr. Benigno Sulit, Jr. as PSA President, a refresher course was incorporated for the first time in the scientific activities of the 3rd annual meeting. Since then, the refresher course precedes every annual meeting providing updates to anesthesia practitioners. A very significant accomplishment during his term was the creation of the Philippine Board of Anesthesiology (PBA).



ORGANISERS

It was primarily conceived to elevate and maintain the standards of practice of anesthesiology in the country. Created by the PSA in a board resolution on May 18, 1967, the Philippine Civil Service Commission recognized the PBA as the sole certifying body of anesthesiology specialists in the country on October 5, 1967.

Dr. Luisita de Castro became president in 1968 and with her excellent administrative skills, the PSA office was established at the Philippine Medical Association Building. During her term the first bi-monthly publication of the PSA Newsletter edited by Dr. Lourdes Africa was published. Dr. Africa later became the 8th president of the PSA in 1974 and during her term put the society on a sound financial standing. She also became the first editor of the Philippine Journal of Anesthesiology (first published in December 1973).

During the 4th annual meeting of the society, the first official chapter of the PSA was established – the Cebu chapter. More chapters were eventually established namely, the Mindanao-Sulu chapter in 1970; the Eastern Visayas chapter in 1972 and the Northern and Central Luzon chapter in 1973. In later years, for reasons of geography and limited resources, chapters were further subdivided. Despite problems posed by distance, local perception and roles of anesthesiologist members, sustained efforts of succeeding leaders of the PSA have encouraged and established programs to improve the quality of patient care, improve the image of the anesthesiologist and gain recognition from other physicians, the government and the public as well.

Excerpts from the article written by Dr. Lydia M. Egay entitled "The Development of Modern Anesthesiology in the Philippines" published in the Philippine Journal of Anesthesiology volume 13 number 2 November 2001



The Society for Neuroanesthesia of the Philippines (SyNAPS)

The Society for Neuroanesthesia of the Philippines (SyNAPS) is a society that is dedicated to the art and science of neuroanesthesia with a goal of providing a venue for learning current perioperative management techniques and exchange of research work in the field of neuroanesthesia in the Philippines. Its establishment in 2010 was spearheaded the by members of the Section of Neuroanesthesia of the University of the Philippines-Philippines General Hospital following the creation of the first formal fellowship program in neuroanesthesia at the same institution in 2006, both under the conceptualization of Dr. Merle de la Cruz-Odi. In the same year of its creation, it was approved as a subspeciality society under the Philippine Society of Anesthesiologists, Inc (PSA). In 2011, SyNAPS was recognized by ASNACC as one of its members.

In its march towards the future, the society has been making active strides towards ensuring continuing education for its members by hosting symposia during the PSA annual conventions. In 2017, the Philippines was chosen to host the 7th Congress of ASNACC in 2021. Due to the outbreak of COVID-19, the congress was rescheduled to 2023.



7TH ASNACC 2023 ORGANISING COMMITTEE

Organising Committee

- Overall Chairperson:** Dr Geraldine Raphaela Jose
Overall Adviser: Dr Merle de la Cruz-Odi
Liaison between SYNAPs and PSA: Dr Grace Anne Banson-Herbosa
Organizing Committee: Dr Karen Cindee Abalajon
Dr Mark Lowell Ang
Dr Eduardo Barrenechea II
Dr Maria Vanessa Cristi
Dr Geraldine Melendres

Scientific Programme Committee

- Adviser:** Dr Loreto Fellizar
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Members: Dr Karen Cindee Abalajon
Dr Mark Lowell Ang
Dr Maria Vanessa Cristi
Dr Abigail Claire Diokno-Gaffud
Dr Geraldine Melendres
Dr Maria Elena Raguindin

International Liaison and Publicity Committee

- Adviser:** Dr Geraldine Raphaela Jose
Chair: Dr Mary Ellen Chiong-Perez
Co-Chair: Dr Karen Cindee Abalajon
Members: Dr Mark Lowell Ang
Dr Maria Vanessa Cristi
Dr Kristine Rose Arim-Fernandez

Publication and Informatics Committee

- Adviser:** Dr Alexandra Nina Odi
Chair: Dr Geraldine Melendres
Co-Chair: Dr Katrina Ann Navasca-Bauzon
Members: Dr Eugene Lee Barinaga
Dr Maria Andriane Colina
Dr April Lily Gomez
Dr William Padilla
Dr Jethro Jade Palomar

Finance Committee

- Adviser:** Dr Eric Nagtalon
Chair: Dr Fernando Serra III
Co-Chair: Dr Eduardo Barrenechea II
Members: Dr John Emmanuel Reyes
Dr April Mae Sardane



PLENARY SPEAKERS

24 February 2023

0900 – 0930 **Value-based Critical Care Medicine: Evidence Reversal and Choosing Wisely Campaign**

Virendra Jain (India)

Moderators: Dr. Ceres Lucot-Laud (Philippines)

0945 – 1020 **Cerebral Autoregulation**

Dr Adrian Gelb (United States)

Moderators: Dr Grace Anne Banson-Herbosa (Philippines)

1035 – 1120 **The Interconnectivity of the Brain and Heart: Anesthetic Implications**

Dr Kenji Yoshitani (Japan)

Moderators: April Lily Gomez (Philippines)

25 February 2023

0930 – 1005 **Stroke Thrombectomy: The Value Proposition for Anesthesiologists**

Dr Deepak Sharma (United States of America)

Moderators: Dr. Anna Margarita Hilvano-Corsiga (Philippines)

1015 – 1050 **Future of Monitoring in Improving Neurological Outcome**

Dr Hironobu Hayashi (Japan)

Moderators: Dr Geraldine Raphaela Jose (Philippines)

MEET-THE-EXPERT

24 February 2023

0900 – 0930 **Meet-the-Expert by bioMerieux
Role of Rapid diagnostics in detection of Meningitis/Encephalitis**

Speaker: Dr. Harsh Sapra (India)



GENERAL INFORMATION

At 7th ASNACC 2023, we aim to ensure a smooth and comfortable congress experience for everyone.

Language

The official language of the Congress is English. No translation will be provided.

Virtual Platform

Our virtual platform is live and you may login with your registered email. Do ensure to whitelist noreply@swapcard.com to receive the login details for your account.

You can now start scheduling meetings with the ASNACC 2023 community and booking sessions that you would like to attend through the congress. Visit www.7thasnacc.com to find the latest programme and invited speakers.

Congress Secretariat

For post-congress enquiries and information, please contact the Congress Secretariat at info@7thasnacc.com





PROGRAMME | THURSDAY, 23 FEBRUARY 2022 - DAY 1

0830 - 0930	Opening Session A Moderator: Dr Eduardo Barrenechea II (Philippines)		
0830 - 0900	What does ASNACC mean to you? Dr Tong Kiat Kwek (Singapore)		
0900 - 0930	Welcome Address by Host Societies Dr Peñafrañca Cano, President, PSA Dr Merle dela Cruz-Odi, Immediate Past President, SYNAPS Dr. Geraldine Raphaela Jose, Chairman, Organizing Committee, 7th Congress of ASNACC, President, SYNAPS		
0930 - 0945	Break		
Time	Room 1	Time	Room 2
0945 - 1015	Session 1: Pediatric and Geriatric Neuroanesthesia Moderator: Dr Karen Adapon-Sajo (Philippines)	0945 - 1015	Session 4: Neuropharmacology Moderators: Dr Mark Lowell Ang (Philippines), Dr Merle de la Cruz-Odi (Philippines)
0945 - 1005	The Fragile Brains - The Very Young and the Very Old Dr Iluminada Camagay (Philippines)	0945 - 1005	Lung Protective Strategies in the ICU Assoc Prof Eddy Fan (Canada)
1005 - 1015	Open Forum	1005 - 1015	Open Forum
1015 - 1030	Break		
1030 - 1115	Meet-the-Expert by bioMérieux Moderator: Mr Richard Gonzalez, ASPAC Medical Affairs Lead Role of Rapid diagnostics in Detection of Meningitis/Encephalitis Dr Harsh Sapra (India) 		
1115 - 1130	Break		
1130 - 1245	Session 2: Maternal and Pediatric Neuroanesthesia Moderators: Dr Jonnel Li (Philippines), Kristine Rose Arim-Fernandez (Philippines)	1130 - 1245	Research Presentation (Basic) Moderator: Mark Gibson D. Ibale (Philippines)
1130 - 1200	Lecture 1: Maternal Physiological Adaptations of Pregnancy and Their Implications for Neuroanesthesia Dr Jin Joo (Korea)	1130 - 1200	Scalp Block in Treating Post Craniotomy Pain in Pediatric Patients: A Systematic Review Miss Sandy Theresia, Indonesia
1200 - 1230	Lecture 2: Traumatic Brain Injury in Pediatric Patients Dr Monica Vavilala (United States)	1200 - 1230	Effectiveness of Pre-Anesthetic Induction Checklist in Improving General Anesthesia Induction Set-Up in a Simulated Setting During the Covid-19 Pandemic Dr Karla Shayne Feliciano, Philippines
1230 - 1245	Open Forum	1230 - 1245	Open Forum
1245 - 1300	Break		
1300 - 1410	Session 3: Craniofacial Surgery Moderators: Dr Karl Matthew Sy Su (Philippines), Dr Christina Camille Cabera (Philippines)	1455 - 1540	Research Presentation (Basic) Moderator: Mark Gibson D. Ibale (Philippines)
1300 - 1320	Lecture 1: Craniofacial Surgery in the Philippines Dr Bernard Tansipek (Philippines)	1300 - 1315	Scalp Block in Treating Post Craniotomy Pain in Pediatric Patients: A Systematic Review Miss Sandy Theresia, Indonesia
1320 - 1340	Lecture 2: Craniofacial Surgery in the Philippines Dr Ronnie Baticulon (Philippines)	1315 - 1330	Effectiveness of Pre-Anesthetic Induction Checklist in Improving General Anesthesia Induction Set-Up in a Simulated Setting During the Covid-19 Pandemic Dr Karla Shayne Feliciano, Philippines
1340 - 1400	Lecture 3: Anesthetic Implications and Management in Craniofacial Surgery Dr Girija Rath (India)		
1400 - 1410	Open Forum		



PROGRAMME | FRIDAY, 24 FEBRUARY 2022 - DAY 2

0900 - 0930	Plenary: Value-Based Critical Care Medicine: Evidence Reversal and Choosing Wisely Campaign Dr Virendra Jain (India) Moderator: Dr Ceres Lucot-Laud (Philippines)		
0930 - 0945	Break		
0945 - 1020	Plenary: Cerebral Autoregulation Dr Adrian Gelb (United States) Moderator: Dr Grace Anne Banson-Herbosa (Philippines)		
1020 - 1035	Break		
1035 - 1110	Plenary: The Interconnectivity of the Brain and Heart: Anesthetic Implications Dr Kenji Yoshitani (Japan) Moderators: April Lily Gomez (Philippines)		
1110 - 1120	Open Forum		
1120 - 1135	Break		
Time	Room 1 - The Intimate Relationship Between the Cardiovascular System and the Brain	Time	Room 2 - Neuro Critical Care
1135 - 1225	Session 6: Cerebral Aneurysm Moderators: Dr Girija Rath (India), Dr Geraldine Melendres (Philippines)	1135 - 1225	Session 8: Critical Care of Patient with Cardiac Disease for Neurosurgery Moderators: Dr Jae Young Kwon (Korea), Dr Katrina Ann Navasca-Bauzon (Philippines)
1135 - 1155	Lecture 1: Adenosine-Induced Arrest in Clipping of Intracranial Aneurysm Dr John Patrick Bebawy (United States)	1135 - 1155	Lecture 1: Myocardial Ischemia as a Complication of Subarachnoid Hemorrhage: A Dilemma Dr Tumul Chowdhury (Canada)
1155 - 1215	Lecture 2: Intraoperative Communication During Aneurysm Surgery Dr Reynaldo Benedict Villamor (Philippines)	1155 - 1215	Lecture 2: Anesthesia Management of a Cardiomyopathic Patient for a Neurosurgical Procedure Dr Serafin Bernardo (Philippines)
1215 - 1225	Open Forum	1215 - 1225	Open Forum
1225 - 1240	Break		
1240 - 1330	Session 7: Cerebrovascular Disease States and Stroke Moderators: Dr Haekyu Kim (Korea), Dr Fernando Serra III (Philippines)	1240 - 1330	Session 9: Fluid Management in a Neurological Patient Moderator: Dr Thomas Lew Wing Kit (Singapore)
1240 - 1300	Lecture 1: Reperfusion Injury and Treatment Strategies Dr Toru Goyagi (Japan)	1240 - 1300	Lecture 1: Blood Transfusion Therapy in Neurosurgery Dr Chong Shang Yee (Singapore)
1300 - 1320	Lecture 2: Interventional Neuroradiology Dr Peter Rivera (Philippines)	1300 - 1320	Lecture 2: An Update on Fluid Therapy for Neurosurgical Patients Dr Stella Tomasino (Italy)
1320 - 1330	Open Forum	1320 - 1330	Open Forum
1330 - 1345	Break		
1345 - 1515	Research Presentation (Clinical) Moderator: Dr Hansley Milton T. Tan (Philippines)	1345 - 1415	Session 10: Respiratory Care and Ventilation Strategies in a Neurologic Moderators: Dr Serafin Bernardo (Philippines), Dr Kristine Flores-Villano (Philippines)
1345 - 1400	Near Infrared Spectroscopy Guided Perioperative Management And Incidence Of Perioperative Complications In Patients Presenting For Surgical Excision Of Cerebral Arteriovenous Malformation Dr Ajay Hirishi (India)	1345 - 1405	Lecture 2: Ventilation Management in Spine Patient Dr Sheri Ann Liqueete (Philippines)
1400 - 1415	Effect of Ketofol and Etomidate on Cerebral Hemodynamics (TCD) and Cerebral Oxygenation (NIRS) During Induction of Anesthesia Among Patients Undergoing Supratentorial Craniotomy: An Exploratory Study Dr Priyanka Gupta (India)	1405 - 1415	Open Forum
1415 - 1430	Association of Baseline C-reactive Protein Level and Stroke Severity with Functional Outcome at the End of 3 Years: A Prospective Cohort Study Dr Shweta Revannavar (India)		
1430 - 1445	Non-Invasive Multimodal Brain Monitoring in Patients with Cerebral Venous Thrombosis - Interim Analysis of an Exploratory Study Dr Prachi Sharma (India)		
1445 - 1500	Comparison Of the Effect of Mannitol (20%) And Hypertonic Saline (3%) On Advanced Hemodynamic Parameters in Geriatric Patients Undergoing Neurosurgical Procedures: A Randomized Controlled Trial Dr Ashwini Reddy (India)		
1500 - 1515	Effect of Sodium Nitroprusside (SNP) on Cerebral Blood Flow Velocity and Intracranial Pressure Using Transcranial Doppler Sonography and Optic Nerve Sheath Diameter Patients Undergoing Posterior-fossa Surgeries Dr Revikrishnan Sreekumar (India)		



PROGRAMME | SATURDAY, 25 FEBRUARY 2022 - DAY 3

0900 - 0935	Plenary: Stroke Thrombectomy: The Value Proposition for Aesthesiologists Dr Deepak Sharma (United States) Moderator: Dr Anna Margarita Hilvano-Corsiga (Philippines)		
0935 - 0945	Open Forum		
0945 - 1000	Break		
1000 - 1035	Plenary: Future of Monitoring in Improving Neurologic Outcome: Urinary Function monitoring Dr Hironobu Hayashi (Japan) Moderator: Dr Geraldine Raphaela Jose (Philippines)		
1035 - 1045	Open Forum		
1045 - 1100	Break		
Time	Room 1 - Traumatic Brain Injury	Time	Room 2 - Neurosurgical Patient Outcomes
1100 - 1210	Session 11: Optimization of the Other Organ Systems in a Traumatic Brain Injured Patient Moderators: Dr Kathleen Ann Kho Trinidad (Philippines), Dr Rafa Jireh Iglesias (Philippines)	1135 - 1225	Session 8: Critical Care of Patient with Cardiac Disease for Neurosurgery Moderators: Dr Jae Young Kwon (Korea), Dr Katrina Ann Navasca-Bauzon (Philippines)
1100 - 1120	Lecture 1: Respiratory Management in Acute Brain Injury Dr Jamie Uejima (United States)	1135 - 1155	Lecture 1: Myocardial Ischemia as a Complication of Subarachnoid Hemorrhage: A Dilemma Dr Tumul Chowdhury (Canada)
1120 - 1140	Lecture 2: Acute Cardiac Dysfunction and the Brain Prof Hemant Bhagat (India)	1155 - 1215	Lecture 2: Anesthesia Management of a Cardiomyopathic Patient for a Neurosurgical Procedure Dr Serafin Bernardo (Philippines)
1140 - 1200	Lecture 3: Hemtologic Management in Patients with Acute Brain Injury Dr Wong Yu Lin (Singapore)	1215 - 1225	Open Forum
1200 - 1210	Open Forum		
1210 - 1225	Break		
1225 - 1315	Plenary: Non-Anesthesia Related Lecture, Sleep and Delirium Dr Elizabeth Wilcox (Canada) Moderator: Dr Joy Albertine Mae Valenton (Philippines)		
1315 - 1330	Break		
1330 - 1430	Session 12: Traumatic Brain Injury Moderators: Dr Karen Cindee Abalajon (Philippines)	1330 - 1415	Case Presentation Moderator: Mark Gibson D. Ibale (Philippines)
1330 - 1350	Lecture 1: Perioperative Optimization and Management of the Traumatized Brain Dr Pichaya Waitayawinyu (Thailand)	1330 - 1345	Methylene Blue Reversal of Nimodipine-induced Vasoplegic Shock in Aneurysmal Subarachnoid Hemorrhage Dr Fatima Guro (Philippines)
1350 - 1410	Lecture 2: Decompressive Hemicraniectomy for Patients with Traumatic Brain Injury Dr Annabel Chua (Philippines)	1345 - 1400	The Utility of Transcranial Ultrasound in Post Decompressive Craniectomy Stroke Patients in Resource Limited Setting- A Feasibility Study Dr Mathangi Krishnakumar (India)
1410 - 1430	Open Forum	1400 - 1415	Anesthetic Considerations in Anti-NMDA-Receptor Encephalitis: A Case Report and Literature Review Dr Czarimir Shannon Sy (Philippines)
1430 - 1500	<p>Closing Ceremonies Master of Ceremonies: Dr Anna Margarita Hilvano-Corsiga</p> <p>Abstract Awards Ceremony Dr Maria Concepcion Cruz, Chairperson of Research Committee</p> <p>Acknowledgement of Sponsors Dr Antonio Alan Mangubat, Treasurer of SyNAPS</p> <p>Turn-Over Ceremony Dr Geraldine Raphaela Jose, President of SyNaps and Dr Phuping Akavipat, President of TSNA</p> <p>Invitation to the 8th Congress of ASNACC Dr Phuping Akavipat, President of TSNA, Host of the 8th Congress of ASNACC</p> <p>Closing Remarks Prof Masahiko Kawaguchi, President of ASNACC</p>		

Programme is updated as of 20 February 2023
The Organising Committee may, in its discretion, amend any part of the programme without prior notice



ABSTRACTS (ORAL PRESENTATION)

Abstract Topic: Clinical Research

Abstract No.	Abstract No.	Abstract Title
ASNACC1018	Assoc Prof Ashutosh Kaushal	Efficacy Of Ketamine as An Adjuvant to Bupivacaine for Scalp Block in Patients Undergoing Supratentorial Surgery: A Randomized Control Study
ASNACC1022	Dr Ajay Hrishi	Near Infrared Spectroscopy Guided Perioperative Management and Incidence of Perioperative Complications in Patients Presenting for Surgical Excision of Cerebral Arteriovenous Malformation
ASNACC1024	Dr Priyanka Gupta	Effect of Ketofol and Etomidate on Cerebral Hemodynamics (TCD) and Cerebral Oxygenation (NIRS) During Induction of Anesthesia Among Patients Undergoing Supratentorial Craniotomy: An Exploratory Study
ASNACC1036	Dr Shweta Revannavar	Association of Baseline C-reactive Protein Level and Stroke Severity with Functional Outcome at the End of 3 Years: A Prospective Cohort Study
ASNACC1039	Dr Prachi Sharma	Non-Invasive Multimodal Brain Monitoring in Patients with Cerebral Venous Thrombosis - Interim Analysis of an Exploratory Study
ASNACC1043	Dr Ashwini Reddy	Comparison Of the Effect of Mannitol (20%) And Hypertonic Saline (3%) On Advanced Hemodynamic Parameters in Geriatric Patients Undergoing Neurosurgical Procedures: A Randomized Controlled Trial
ASNACC1066	Dr Revikrishnan Sreekumar	Effect of Sodium Nitroprusside(SNP) on Cerebral Blood Flow Velocity and Intracranial Pressure Using Transcranial Doppler Sonography and Optic Nerve Sheath Diameter Patients Undergoing Posterior-fossa Surgeries

Abstract Topic: Basic Research

Abstract No.	Abstract No.	Abstract Title
ASNACC1010	Miss Sandy Theresia	Scalp Block in Treating Post Craniotomy Pain in Pediatric Patients: A Systematic Review
ASNACC1052	Dr Karla Shayne Feliciano	Effectiveness of Pre-anesthetic Induction Checklist in Improving General Anesthesia Induction Set-up in a Simulation Setting During the Covid-19 Pandemic

Abstract Topic: Interesting Cases

Abstract No.	Abstract No.	Abstract Title
ASNACC1015	Dr Fatima Guro	Methylene Blue reversal of Nimodipine-induced Vasoplegic Shock in Aneurysmal Subarachnoid Hemorrhage
ASNACC1045	Dr Mathangi Krishnakumar	The Utility of Transcranial Ultrasound in Post Decompressive Craniectomy Stroke Patients in Resource Limited Setting - A Feasibility Study
ASNACC1064	Dr Czarimirr Shannon Sy	Anesthetic Considerations in Anti-NMDA-Receptor Encephalitis: A Case Report and Literature Review



ABSTRACT TOPIC: CLINICAL RESEARCH

ASNACC1018

Efficacy Of Ketamine as An Adjuvant to Bupivacaine for Scalp Block in Patients Undergoing Supratentorial Surgery: A Randomized Control Study

¹Ashutosh Kaushal, ¹Vaishali Waindeskar, ²Priyankagupta, ²Praveen Talawar, ³Sharmishtha Pathak

¹Anaesthesiology, All India Institute of Medical Sciences, Bhopal, India

²Anaesthesiology, All India Institute of Medical Sciences, Rishikesh, India

³Neuroanaesthesiology, All India Institute of Medical Sciences, New Delhi, India

Objectives:

Skull pin insertion during neurosurgery produces strong noxious stimulation which may cause sudden haemodynamic changes and precipitation of intracranial hypertension despite an adequate depth of anaesthesia. Aim of this study was to see the efficacy of ketamine as an adjuvant to bupivacaine in scalp block to minimize head pinning response and post craniotomy pain in patients undergoing supratentorial surgery.

Methods:

Patients meeting inclusion criteria were randomly allocated into two equal groups. Group B patients were given scalp block using 12 ml 0.5 % bupivacaine with 3ml saline. Group K patients were be given scalp block using 12 ml 0.5 % bupivacaine with 3 ml 2mg/kg ketamine.

Primary outcomes were hemodynamic parameters recorded at baseline, 1 min and 5 min after induction of anaesthesia, during, 1 min and 5 min after the scalp block, during, 1 min and 5 min after the head pinning, during, 1 min, 5 min and then every 30 minutes after the incision till skin closure, and during, 1 min and 5 min after skin closure. Patients' severity of pain were assessed just after extubation, followed by 1, 2, 4, 8, 16, and 24 hours post-extubation with the help of NRS score. Secondary outcomes were total Analgesic consumption in intraoperative and postoperative period till 24 hours.

Results:

Total 60 patients were recruited. During skin closure, intra-operative heart rate and total opioid consumption was significantly less in ketamine group. ($p < .001$)

Conclusions:

Adding ketamine as adjuvant with bupivacaine for scalp block produces superior hemodynamic stability, pain control and lesser requirement of analgesics perioperatively.

ASNACC1022

Near Infrared Spectroscopy Guided Perioperative Management and Incidence of Perioperative Complications in Patients Presenting for Surgical Excision of Cerebral Arteriovenous Malformation

¹Ajay Prasad Hrishi, ²Jithumol Thankom Thomas, ²Manikandan Sethuraman

¹Neuroanesthesia And Critical Care, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India

²Other, Sree Chitra Tirunal Institute For Medical Sciences And Technology, India

Objectives:

Cerebral arteriovenous malformations (AVM) present a low resistance circulation which renders the perinidal tissues susceptible to ischemia. However, there can be increased flow to the surrounding perinidal tissues postexcision, resulting in hyperemic complications. We hypothesized that NIRS-guided perioperative management can reduce the incidence of perioperative complications and improve the outcome in patients presenting for surgical excision of cerebral AVMs.

Methods:

This was a prospective observational study involving 25 patients undergoing supratentorial AVM resection surgeries. rSO₂ and hemodynamic monitoring were done intraoperatively and postoperatively for 24 hours. A drift in rSO₂ >12% and perioperative events were recorded and analyzed. For analysis, patients were categorized into two groups, Group A - patients without complications and Group B - patients who had complications postoperatively. An outcome analysis was done at 3 months with the Glasgow outcome scale.

Results:

Sixteen patients (64%) were included in group A, and nine patients (36%) developed postoperative complications and were included in group B. Fifty two percent of the AVMs were SM grade II, 28% were SM grade I, and 20% were SM grade III. Post excision, there was a significant increase in the mean ipsilateral rSO₂ from the baseline in group B, as compared to group A ($p = 0.005$). Postoperatively, patients in group B had a significant negative mean rSO₂ drift as compared to group A ($p = 0.007$). The post-excision mean ipsilateral rSO₂ ratio in group B patients was significantly higher than patients in group A (1.32 ± 0.01 vs. 1.01 ± 0.06 ; $p = 0.04$). The Glasgow outcome score (GOS) at 3 months revealed a GOS of 5 in 88%, GOS of 4 in 8% and GOS of 3 in 4 % of the population with zero case fatality rate.

Conclusions:

In our study, we observed that a post-AVM excision ipsilateral rSO₂ drift >12% with a mean ipsilateral rSO₂ ratio >1.3 was associated with an increased incidence of complications. Therefore, patients with an ipsilateral rSO₂ drift > 12% from the baseline should be treated with caution and close observation in the post-resection period. While in the postoperative period, an ipsilateral rSO₂ drift >14.5% from the baseline warrants immediate evaluation and appropriate management as it is associated with a 100% incidence of postoperative complications. Optimal blood pressure management guided by targeting an ipsilateral rSO₂ drift < 12% in the perioperative period resulted in a good 90-dayGOS in our study population.



ASNACC1024

Effect Of Ketofol and Etomidate on Cerebral Hemodynamics (TCD) And Cerebral Oxygenation (NIRS) During Induction of Anesthesia Among Patients Undergoing Supratentorial Craniotomy: An Exploratory Study

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Objectives:

To compare the effects of ketofol and etomidate on bilateral middle cerebral artery blood flow velocity and bilateral regional cerebral oxygenation

Methods:

A total of 50 patients, ASA grade I-II, aged 18-65 years of age posted for supratentorial craniotomy for tumor excision were included. Patients were randomized into two groups, group A patients were induced with etomidate and group B patients were induced with ketofol. Bilateral (affected and non-affected) middle cerebral artery blood flow velocity (mFV) by transcranial doppler and bilateral cerebral oxygen saturation (rSO₂) by near infrared spectroscopy were measured at T₀ (baseline), T₁, T₂, T₃, T₄ & T₅ (at 1 min, 3 min, 5 min, 10 min & 30 min after anesthesia induction)

Results:

As compared to ketofol group, etomidate group had greater fall in mFV following induction (T₁, p<0.001), however they had greater increase in mFV following laryngoscopy (T₂, T₃, T₄, T₅ p<0.001). The fall in mFV was significantly higher in affected sides in both the groups (p<0.001). Mean arterial pressure and Heart rate was significantly higher in etomidate group following laryngoscopy (T₂, T₃, T₄, T₅ p<0.001). rSO₂ values were significantly higher in ketofol group at time points T₄ and T₅ (p=0.001). rSO₂ values were higher in nonaffected side in both the groups (p=0.001).

Conclusions:

Ketofol, by virtue of exhibiting a lesser degree of fluctuation than etomidate in the measured parameters, may be designated as the more stable induction agent. Adverse changes of cerebral hemodynamics were more pronounced in the hemisphere with tumor.

ASNACC1036

Association Of Baseline C-Reactive Protein Level and Stroke Severity with Functional Outcome at The End Of 3 Years: A Prospective Cohort Study

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Objectives:

The present study aimed at evaluating the correlation between CRP and stroke severity at admission to the functional outcome (mRS) score at the end of three years.

Methods:

This was a prospective cohort study including 100 patients presenting within 72 hours of clinical symptoms diagnosed with acute ischemic stroke over 2 years. The CRP level was done on the day of admission and stroke severity was determined using NIH (National Institute of Health) stroke scale. The outcome in terms of mRS (modified Rankin scale) grade was assessed at 3 years of stroke onset. Quantitative variables such as stroke severity were tabulated in percentage while quantitative variable such as CRP was tabulated using mean and median levels. The association between the two was calculated using ANOVA test. At the end of three years, the overall mortality was 26%. There was a significant positive correlation between baseline CRP and mRS score at the end of 3 years. CRP showed a AUC of 0.739(0.625-0.854) in predicting mortality.

Results:

The mean age of the study population was 60.7+13.4 years. The study population consisted of 73% males. The population had 74% of mild, 14% moderate and 12% of severe stroke. Overall, 73% of the patients had systemic hypertension. The baseline CRP level was higher in patients with severe stroke (50+40.6 mg/dl) compared to patients with mild stroke (10+19 mg/dl). The association between CRP levels and stroke severity was seen to be statistically significant with a p-value of 0.005. At the end of three years, the overall mortality was 26%. There was a significant positive correlation between baseline CRP and mRS score at the end of 3 years. CRP showed a AUC of 0.739(0.625-0.854) in predicting mortality.

Conclusions:

CRP can be considered a prognostic marker in acute ischemic stroke.



ASNACC1039

Non-Invasive Multimodal Brain Monitoring in Patients with Cerebral Venous Thrombosis- Interim Analysis of An Exploratory Study

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Objectives:

1. To establish a correlation between admission regional cerebral oxygen saturation (rSO₂), cerebral blood flow velocity (CBFV), pulsatility index (PI), bispectral index (BIS), & optic nerve sheath diameter (ONSD) and neurological outcome in patients with moderate to severe cerebral venous thrombosis (CVT).
2. To study the difference of at-admission MBM parameters and CVT-GS score in patients of moderate-severe CVT with good versus poor outcome.

Methods:

Patients above 18 years of age with a diagnosis of CVT are evaluated by CVT-GS score and categorised into mild, moderate and severe CVT. Data is collected within 24 hours of admission (prior to surgery/heparinisation). For MBM parameters- average of three measurements are being recorded. MBM parameters being studied (Bilateral): Cerebral Hemodynamics (MCA)- Peak Systolic Velocity (Vs), End Diastolic Velocity (Vd), Mean Flow Velocity (Vm), and PI, Non-Invasive ICP estimate- Ocular ultrasound (ONSD) & PI, Electrical Activity- BIS, Regional Cerebral Oxygen Saturation- Near infrared spectroscopy (NIRS). Outcome is assessed at 1 month post discharge using modified Rankin scale (mRS)

Results:

Until now, data of 21 patients (females -11, males -10) have been analysed. Their median age was 42 years. Eleven had an mRS of ≥ 4 (in-hospital mortality – 6). Dehydration was the most common risk factor in our study population and superior sagittal sinus was the most common site of thrombosis.

The clinical tool, CVT-GS had the strongest correlation with the mRS score at one-month postdischarge (mRS vs. CVT-GS ($r=0.656$, $p= 0.001$)). Both CVT-GS score ($p= 0.009$) and BIS values ($p= 0.04$) were significantly different between patients with good and poor mRS in our study, while ONSD changes trended towards significance ($p= 0.07$).

Conclusions:

The interim analysis suggests that the clinical tool, CVT-GS has the strongest linear association with outcome. Larger sample size could inform if these monitors supplement clinical grading tool in prognosticating CVT patients.

ASNACC1043

Comparison Of the Effect of Mannitol (20%) And Hypertonic Saline (3%) On Advanced Hemodynamic Parameters in Geriatric Patients Undergoing Neurosurgical Procedures: A Randomized Controlled Trial

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Objectives:

The effect of osmotherapeutic agents like mannitol and hypertonic saline on the systemic physiology of the geriatric population differs from that seen in the younger population. Given the dearth of literature in this context, we conducted this study aimed to compare the effect of mannitol and hypertonic saline on left ventricular output by measuring left ventricle outflow tract velocity-time integral (LVOT-VTI) using transoesophageal echocardiography (TEE) in geriatric neurosurgical patients.

Methods:

A prospective randomized double-blind study was conducted wherein 30 patients aged above 65 years undergoing craniotomy were randomized to receive equiosmolar solutions of 5ml/kg of 3% hypertonic saline (group HS, n=15) or 5ml/kg of 20% mannitol (group M, n=15). Using TEE, we recorded LVOT-VTI at baseline and at every 15 mins post-infusion of the drug till 90 mins and derived stroke volume and cardiac output. Goal-directed fluid therapy targeting LVOT-VTI variation 20% fall from baseline, fluid and vasopressor administered, along with the duration of hospital stay and neurological outcomes at discharge and 3 months.

Results:

The mean LVOT-VTI showed a significant decrease at 30, 45, and 60 mins in group M ($p=0.046$, $p=0.001$ and 0.021 , respectively), as compared to group HS. We also found a corresponding significant fall in cardiac output (3797.23 ± 877.34 v/s 4644.89 ± 1208 , p -value= 0.036) and systolic blood pressure (124.07 ± 13.13 v/s 133.21 ± 7.32 , $p=0.048$), at 45 mins in group M whereas hemodynamics were better maintained in group HS. Urine output was significantly higher in group M. Other parameters including brain relaxation scores and neurological outcomes were comparable between both groups.

Conclusions:

The use of hypertonic saline in geriatric neurosurgical patients is associated with significantly better systemic hemodynamics (LVOT-VTI, CO, SBP) while providing equivalent brain relaxation as mannitol with no impact on overall neurological outcome.



ASNACC1066

Effect Of Sodium Nitroprusside (SNP) On Cerebral Blood Flow Velocity and Intracranial Pressure Using Transcranial Doppler Sonography and Optic Nerve Sheath Diameter Patients Undergoing Posterior-Fossa Surgeries

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Objectives:

Sodium nitroprusside can increase intracranial pressure and hence was not preferred as an antihypertensive in neurosurgical patients. SNP found to have no direct effect on cerebral vasculature during cardiopulmonary bypass and preserves cerebral autoregulation.

Methods:

After IEC clearance 20 ASA I and II patients undergoing elective posterior fossa surgeries were recruited. Prior to surgery Transcranial doppler (TCD) of middle cerebral artery (MCA) was performed and baseline Peak systolic velocity (PSV), End Diastolic Velocity (EDV), Mean flow velocity (MFV), Pulsatility index (PI), Resistivity index (RI), Transient Hyperaemic Response Ratio (THRR) were recorded. Baseline Optic Nerve sheath diameter (ONSD) was also measured in all subjects. Subsequent recordings were done prior to start of SNP infusion for post-operative blood pressure control (T1) and after reduction of systolic blood pressure within 20% of baseline (T2) and after 12 hours of initiation of SNP infusion or point of termination of infusion (T3). The data was analysed using descriptive statistics for categorical variables and the mean & S.D were used for continuous variables. For repeated measurements of TCD values and ONSD, repeated measures ANOVA with Bonferroni correction was applied. P value of < 0.05 is considered as statistically significant.

Results:

Baseline ONSD values were < 5.5mm and THRR were >1.1 in all patients. The PSV showed significant reduction from T1 to T2 ($p < 0.01$) The MFV (p value – 0.06) and EDV were also reduced from T1 to T2 but were not significant. There was no significant change in PI, Intracranial pressure, RI and ONSD following SNP infusion. Cerebral vascular resistance index (CVRI) and transient hyperaemic response ratio after SNP injection showed no significant difference.

Conclusions:

In presence of intact cerebral autoregulation, SNP does not increase the cerebral blood flow and thereby does not lead to increase in intracranial pressure in patients undergoing posterior fossa surgeries.



ABSTRACT TOPIC: BASIC RESEARCH

ASNACC1010

Scalp Block in Treating Post Craniotomy Pain in Pediatric Patients: A Systematic Review

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Objectives:

Moderate-to-severe pain is common in pediatric patients following craniotomy. The multimodal approach in post craniotomy pain management in children uses a variety of analgesic medications and techniques, such as scalp block. We reviewed the literature to evaluate the scalp block in treating post craniotomy pain in pediatric patients.

Methods:

A systematic review was conducted according to the PRISMA guidelines using PubMed/MEDLINE, Embase, Scopus, and Cochrane Library. The search strategy included randomized control trials and prospective and retrospective observational studies published before 2022 that evaluated scalp block in treating post craniotomy pain in pediatric patients.

Results:

A total of four studies reported using scalp block in treating post craniotomy pain in pediatric patients: one RCT, one case-control, and two prospective observational. The RCT tested the efficacy of preoperative scalp block vs. no treatment. There were no differences in pain scores between the 2 study groups at 6, 12, and 24 postoperative hours; they also reported better hemodynamic control in patients assigned to the scalp block. The case-control showed that patients who received scalp block had lower pain at 30 min and 8 hours after extubation, less need for rescue analgesics, and earlier recovery to oral feeding. The observational studies reported regional analgesia as a component of multimodal analgesia protocols. In the single center experience, pre-incisional selective scalp block in 4% of the patients. The multicenter study that presented data from 9-centers reported regional anesthesia with ropivacaine or bupivacaine administered as either surgical incision line infiltration or selective scalp block was used in 37% of cases.

Conclusions:

Scalp block could minimize early post craniotomy pain. However, various variables, such as timing and strategies for providing the most effective and safest scalp block, must be investigated in appropriately conducted randomized trials.

ASNACC1052

Effectiveness Of Pre-Anesthetic Induction Checklist in Improving General Anesthesia Induction Set-Up in A Simulated Setting During the Covid-19 Pandemic

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Objectives:

A Pre-Anesthesia Induction Checklist was formulated and tested to measure its effectiveness in terms of duration and completeness of a GA induction set-up in a simulated setting during the pandemic.

Methods:

The study was designed as a pragmatic trial, quality improvement, and quasi-experimental conducted in the hospital's main OR in a simulated setting. The participants included sixteen anesthesiology residents who were randomized into two groups, without checklist and with checklist. A sample size of eight stations were prepared to achieve 80% power at 5% two-tailed significance level. Residents were given eight identical set of sample cases that were considered the basis for the simulation. The residents' preparation was timed was graded based on the checklist. Missed steps/items were recorded. The two scores and time duration of the no checklist group and the checklist group were analyzed using repeated measures ANOVA and the most commonly missed step/item was presented as count and proportion.

Results:

Results show that there is sufficient evidence to conclude that the mean total duration of preparation and mean completeness score between with checklist and without checklist groups are significantly different, both having a p-value of 20% are the following: Succinylcholine, LMAs, identification of patients, vaporizer check, sodasorb, check, breathing circuit check, videolaryngoscope, and suction.

Conclusions:

The Pre-Anesthetic Induction Checklist significantly reduced the number of missed steps and the duration of preparation time of a simulated pre-anesthesia induction period.



ABSTRACT TOPIC: INTERESTING CASES

ASNACC1015

Methylene Blue Reversal of Nimodipine-Induced Vasoplegic Shock in Aneurysmal Subarachnoid Hemorrhage

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Objectives:

To report the first case of vasoplegic shock from the use of Nimodipine for aSAH in Southeast Asia, and its successful reversal with two doses of intravenous Methylene Blue.

Methods:

A 76-year-old Filipina who complained of having the worst headache of her life was managed as a case of aSAH (HH1, MFS1) with endovascular coiling. Nimodipine was started early as standard of care for the prevention of vasospasm. Profound hypotension developed throughout her stay at the Neurointensive Care Unit, necessitating the use of high dose vasopressors along with fluid repletion. During the shock state, she developed disorientation, paraphasia, and oliguria. Sepsis was considered a primary differential hence an empiric antimicrobial and Hydrocortisone was initiated; however, culture results and other tests came out negative. There was good cardiac function without evidence of tamponade on POCUS. Lactate was slightly elevated while ScVO₂ and CO₂ gap were both within normal limits. In the absence of other plausible causes, refractory vasoplegic shock resulting from Nimodipine was the diagnosis made by exclusion and was treated with intravenous MB as a form of rescue therapy.

Results:

Methylene Blue 200 mg was infused intravenously resulting in an instantaneous decrease in vasopressor requirement, where Vasopressin was immediately discontinued and Norepinephrine decreased by 75%. Patient reported nausea and there was a blue-green discoloration of her urine, which spontaneously resolved. Another 100 mg was infused after 12 hours, followed by the discontinuation of Norepinephrine. She was discharged from the NICU and sent home improved.

Conclusions:

Methylene Blue inhibits guanylate cyclase, preventing cGMP-induced vasodilation. Vasoplegic shock from drug use should be considered in patients treated with Nimodipine once other etiologies are effectively ruled out. The potential benefit of Nimodipine for aSAH should not undermine its potential for life-threatening adverse effect but further studies are recommended.

ASNACC1045

The Utility of Transcranial Ultrasound in Post Decompressive Craniectomy Stroke Patients in Resource Limited Setting- A Feasibility Study

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Objectives:

Decompressive craniectomy (DC) has become the definitive surgical procedure to manage medically intractable rise in intracranial pressure due to stroke and traumatic brain injury. Decompressive craniectomy has many known complications. The overall complication rates range up to 53.9%. Complications like cerebral contusion expansion, subdural or epidural hematoma contralateral to the craniectomy defect, hydrocephalus occurred early. Computed tomography (CT) scan is recommended in the first 24-48 hours after surgery to look for these complication. Routine CT scan adds significantly to the cost in a resource limited setting.

The objective of this study is to see the utility of transcranial ultrasound in identifying complications post decompressive craniectomy in patients with stroke.

Methods:

Patients with ischemic stroke who underwent decompressive craniectomy for raised intracranial pressure were recruited in to the study. Ultrasound of brain was done on the side of decompressive craniectomy everyday for the first 72 hours. Any changes were informed to the treating neurosurgeon and CT brain was ordered. The findings were compared.

Results:

10 patients were recruited for the study. The overall complication rate was 30%. The median time for CT was 20 minutes vs 3 minutes for brain ultrasound. Ultrasound brain helped identify a new bleed in two patients and midline shift in one patient. The sensitivity was 85.7% and specificity was 100%. There was good agreement between both the modalities (kappa coefficient 0.783).

Conclusions:

Transcranial ultrasonography may represent a valuable tool for selecting patients who could benefit from urgent CT scan rather than routine CT scans at regular interval in post decompressive craniectomy patients.



ASNACC1064

Anesthetic Considerations in Anti-NMDA-Receptor Encephalitis: A Case Report and Literature Review

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Objectives:

Anti-N-methyl-D-aspartate receptor encephalitis (anti-NMDA) is an under-reported autoimmune disorder characterized by seizures, dyskinesia, and aphasia. Incidental findings of ovarian tumors have been reported as a common cause of severe anti-NMDA encephalitis. Surgical removal of these tumors forms part of the management of anti-NMDA encephalitis, which often results in reduced risk of relapse and complete recovery. In the Philippines, only nine indexed publications have been published about autoimmune encephalitis, most of which are descriptive reports on the epidemiology, clinical manifestations and outcomes of the disease. This case report illustrates the anesthetic management for anti-NMDA receptor encephalitis and reviews the literature relevant to the anesthetic provider.

Methods:

A previously well 21-year-old woman was admitted after presenting with sudden onset left-sided weakness, throbbing headache, disorientation, and recurring seizures. Her progressive neurologic symptoms required a battery of diagnostic procedures, which ultimately led to a diagnosis of anti-NMDA encephalitis. An MRI scan also revealed an ovarian mass attached to the right side of the uterus. Laparoscopic salphino-oophorocystectomy was successfully performed under a combination of total intravenous anesthesia (TIVA) and transversus abdominis plane block.

Results:

The patient was discharged 61 days after the procedure and is currently undergoing rehabilitation. Furthermore, we reviewed and analyzed the literature to describe the anesthetic considerations in such cases.

Conclusions:

Anti-NMDA encephalitis present a myriad of neurologic signs and symptoms that may be difficult to diagnose. Early resection of its associated tumor, which are predominantly abdominal, require an anesthetic plan with many perioperative considerations. TIVA combined with a peripheral nerve block is just one of the many safe and effective anesthetic options for patients with an antiNMDA disorder.



ABSTRACT (POSTER PRESENTATION)

Abstract Topic: Clinical Research

Abstract No.	Abstract No.	Abstract Title
ASNACC1005	Dr Sirima Phoowanakulchai	Persistent Incisional Pain One Year After Craniotomy; A Retrospective Observational Study
ASNACC1009	Mr Thanitthi Thiparporn	Perioperative Major Adverse Events; Cardiac Arrest, Death, Stroke in Neurosurgery: A Retrospective Study in Tertiary Care University Hospital
ASNACC1011	Dr Suman Sokhal	Changes In Clinical Practice of Anesthesiologist Due to Covid-19: An Online Survey
ASNACC1017	Dr Sakshi Kadian	Comparison Of Analgesic Efficacy of Ketamine Versus Magnesium Sulphate as An Adjuvant to Bupivacaine in Supratentorial Craniotomies- A Prospective Randomised Double-Blinded Pilot Study
ASNACC1023	Prof Jin Yong Jung	Comparison Between the Coronal Diameters of The Cervical Spinal Canal and Spinal Cord Measured Using Computed Tomography and Magnetic Resonance Imaging in Korean Patients
ASNACC1053	Dr Krista Angela Muralla	Maximum Surgical Blood Ordering Schedule in Bicol Medical Center: A Descriptive Cross-Sectional Single-Center Observational Study
ASNACC1056	Dr Anupama A S	Comparison of Opioid Vs Opioid Sparing Anaesthesia in Patients Undergoing Supratentorial Surgery - A Prospective Observational Comparative Cohort Study
ASNACC1067	Dr Carol Joy Dion	Potential Use of APACHE II Score as A Basis for Future Pre-Emptive Intubation Among Covid-19 Patients in A Tertiary Level Hospital in The Philippines



Abstract Topic: Interesting Cases

Abstract No.	Abstract No.	Abstract Title
ASNACC1019	Dr Swathi M	Oxcarbamazepine Induced SIADH in A Trigeminal Neuralgia Patient
ASNACC1020	Dr Alec Brandon Dungo	Resuscitation Refocused: A Case of Post-Cardiac Arrest Perioperative Neuroprotection in A Gynecologic Patient with Malignant Pleural Effusion
ASNACC1026	Dr Czarina Aiko Enriquez	A Case Report on A Covid Positive Patient Diagnosed with Eisenmenger Syndrome for Burrhole Craniectomy for Evacuation of Subdural Abscess
ASNACC1030	Dr Richelle Escano	Anesthetic Management of A 7-Year-Old Patient With Severe Aortic Stenosis Undergoing Craniotomy, Excision Of Ruptured Mycotic Aneurysm: A Case Report
ASNACC1032	Dr Johanna Chloe Jazmines	Case Report on The Anesthetic Management of a Diagnosed Chronic Myeloid Leukemia Patient on Tyrosine Kinase Inhibitor Therapy With "Moyamoya" Vasculopathy for Cerebral Revascularization Surgery
ASNACC1034	Dr Na Guinto	Anesthetic Challenges in A Child for Repair of Craniofacial Cleft and Frontal Encephalocele: A Case Report
ASNACC1037	Dr Krystel Mae Amparado	Upward Herniation in Awake Craniotomy: A Case Report
ASNACC1040	Dr Mythreyi Muthukrishnan	Delayed Vasospasm Post Internal Carotid Artery Aneurysm Intervention: Diagnosis and Treatment - A Case Report
ASNACC1041	Dr Rizky Loviana Roza	A Comprehensive Multidisciplinary Perioperative Management in Parturient with HELLP Syndrome and Intracerebral Hemorrhage in The Emergency Setting: A Rare Case Report
ASNACC1044	Dr Marina Trajkovska	Cerebral Edema as A Life-Threatening Complication of a Hip Surgery Revision
ASNACC1046	Dr Shweta Naik	Surgical Plethysmographic Index as A Surrogate in The Diagnosis of Trigemino-cardiac Reflex: A Case Report
ASNACC1047	Dr Yohanes Bangun	Airway Management in Acute Cervical Spine Injury Patient With Hemodynamic Disturbance: A Case Report
ASNACC1054	Dr Krista Angela Muralla	Paraplegia After Intracavitary Brachytherapy Under Spinal Anesthesia: A Case Report
ASNACC1057	Dr Candice Louise Cheng	Radial Artery Sheath Entrapment Post Transradial Catheterization for Cerebral Angiography and Coil Embolization of Ruptured Anterior Communicating Artery Aneurysm
ASNACC1068	Associate Prof Ilknur Suidiye Yorulmaz	Decreased Propofol Requirement During Total Intravenous Anesthesia in A Patient With Chronic Pruritus And Subclinical Hyperthyroidism: A Case Report
ASNACC1069	Associate Prof Ilknur Suidiye Yorulmaz	Application Of Videolaryngoscopy and Anesthesia Management During The Process In The Patient Who Swallows The Prosthetic And Impacted Ozapagus For 3 Days
ASNACC1071	Dr Katrina Trixia Diaz	Pregnancy Outcome Following A 12-Hour Neurosurgery Under Total Intravenous Anesthesia: A Case Report and Mini-Review of The Literature



ABSTRACT TOPIC: CLINICAL RESEARCH

ASNACC1005

Persistent Incisional Pain One Year After Craniotomy; A Retrospective Observational Study

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²Anaesthesiology, Nara Medical University, Japan

Objectives:

Persistent incisional pain one year after craniotomy has been poorly documented; thus, the distribution of pain after one year of elective craniotomy and its associated factors were explored.

Methods:

This retrospective study used a part of data collected prospectively for assessing postoperative functional disability (PMID: 35396651). Eligible for this study were patients who had undergone elective craniotomy, who were over 55-year-old at the recruitment for our initial investigation, and who had complete data regarding pain numeric rating scale one year after craniotomy. Patients who had undergone craniotomy previously were excluded from the analysis. The primary outcome in this study was a pain numeric rating scale assessed at a postoperative anesthetic clinic three months and one year after craniotomy. Multivariable negative binomial regression analysis was performed to yield risk ratio for pain numeric rating scale one year later with 12 covariates determined in advance: age, sex, preoperative bodily pain, preoperative mental health, site of craniotomy (supratentorial or infratentorial), preoperative scalp nerve block, surgical factors (blood loss volume and surgical duration), postoperative medications (dexmedetomidine, acetaminophen, non-steroidal anti-inflammatory drugs), and pain numeric rating scale score at the postoperative anesthetic clinic.

Results:

The data of 102 patients with a median age of 68 years were analysed. The mean (95% Confidence interval) pain numeric rating scale at three measurement points were 2.8 (2.3 – 3.3), 1.2 (0.8 – 1.6), and 0.6 (0.3 0- 0.8), respectively. Multivariable analysis revealed that preoperative less bodily pain (risk ratio, 0.93; 95% confidence interval, 0.88–0.98) and pain numeric rating scale score at the postoperative anesthetic clinic (risk ratio, 1.32; 95% confidence interval, 1.14 – 1.52) increased the risk of persistent pain at one year after surgery.

Conclusions:

After one year, the pain score after elective craniotomy was minor, but preoperative bodily pain and postoperative pain scores were significantly associated.

ASNACC1009

Perioperative Major Adverse Events; Cardiac Arrest, Death, Stroke in Neurosurgery: A Retrospective Study in Tertiary Care University Hospital

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Objectives:

Cardiac arrest, death, and stroke are extremely rare but devastating postoperative complications. In general surgery, the studies report a wide range of these occurrences. In neurosurgery, there was little information. As a result, we intend to investigate the incidence of major adverse events within 24 hours of the operation, as well as anesthesia-related contributing factors.

Methods:

Retrospective observational study at Siriraj Hospital, Mahidol University, Thailand. The data was collected between January 2014 and December 2020. Three peer anesthesiologists in collaboration with a neurosurgeon reviewed and analyzed data on 24-hour postoperative complications, cardiac arrest, death, and stroke.

Results:

12,418 patients underwent neurosurgical procedures. 184 patients experienced anesthesia-related complications (1.48%). 14 major adverse events were reported in the study (11.2:10,000). There are 6 deaths (4.8:10,000), 4 cardiac arrests (3.2:10,000), and 4 strokes (3.2:10,000). Anesthesia related factor were not significant in death and stroke but massive bleeding with insufficient fluid resuscitation was the common cause of cardiac arrest. Major adverse events are primarily caused by patient-related factors such as medical condition, emergency, extreme age, and severe brain damage.

Conclusions:

Major adverse events such as death, cardiac arrest, and stroke within 24 hours were very rare complication but catastrophic. Intracranial problems were the most common cause of major complications in brain surgery patients. An anesthesiologist, on the other hand, can be cautious and minimize the add-on factor especially in patient with comorbid diseases, the extreme age groups, or emergency cases.



ASNACC1011

Changes In Clinical Practice of Anesthesiologist Due To COVID-19: An Online Survey

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Objectives:

Background and Aims: Anesthesiologists dealt with every facet of patients having coronavirus disease (COVID-19). Thus, their clinical practices might have been significantly and irreversibly affected, and many anesthesiologists may have returned to their erstwhile workplaces with new work habits compared to pre-COVID times. This survey was planned in order to find whether the current clinical practices of anesthesiologists have changed compared to those of pre-COVID times. The secondary aim of the survey was to find if such changes were related with the duration of working in COVID areas.

Methods:

We distributed an online self-administered questionnaire amongst anesthesiologists across India. The questionnaire had seven sections. The clinical sections consisted of questions related to airway management, use of ultrasonography, specific monitoring/equipment and prevention of infection and contamination respectively.

Results:

We received 80 analyzable responses to the questionnaire. The mean age of the respondents was 33.5 years with almost equal gender distribution. Nearly half (53.75%) of the participants were providing anesthesia and intensive care for general surgeries, 30% for neurosurgical cases and 13.75% for oncological surgeries. We found a highly significant ($p < 0.001$) difference between pre-COVID and present practices in all four sections of anaesthesia practice, with the most drastic change in Infection Control practices. There was 14.7% increase in use of videolaryngoscope, bougie and stylet for airway management, but fiberoptic bronchoscope use decreased, 17.60% increase in use of ultrasonography, 50% increase in use of specific monitoring/equipment like high flow nasal cannula and 82.8% increase in infection and contamination prevention practices post-COVID.

However, there was no correlation between the practice changes and the duration of working in COVID-19 pandemic ($p > 0.05$).

Conclusions:

There is a significant change in clinical practice of anesthesiologists after COVID-19, especially with respect to infection control; however, these practice changes are not associated with duration of working in COVID-19 pandemic.

ASNACC1017

Comparison of Analgesic Efficacy of Ketamine Versus Magnesium Sulphate as An Adjuvant to Bupivacaine in Supratentorial Craniotomies - A Prospective Randomised Double-Blinded Pilot Study

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Objectives:

To compare the heart rate variation among the three groups at baseline vs at skull pin insertion, to compare the intraoperative opioid requirement and time of demand of the first analgesic postoperatively.

Methods:

The patients posted for elective supratentorial craniotomies with Glasgow Coma Scale 13-15 and ASA grade 1-3 were included. Thirty patients were randomised, ten each in Group K, Group M, and group C. Group K received scalp block with 12 ml 0.5 % bupivacaine, 2mg/kg ketamine and the rest normal saline (NS) to make a total of 18ml. Group M patients received scalp block using 12 ml 0.5 % bupivacaine with 250 mg of 10%Mgso4 and 3.5 ml of NS. Group C patients received 12 ml of 0.5% bupivacaine with 6 ml NS.

Results:

The heart rate variation (skull pin insertion vs baseline) was significantly lower for ketamine ($p = 0.000$) and magnesium sulphate ($p = 0.027$) as compared to the control group ($p = 0.115$). The total intraoperative opioid requirement was significantly lower for ketamine (185.00 ± 41.16 microgram) and magnesium sulphate group (257.50 ± 52.77 microgram) than the control group (306.50 ± 34.96 microgram) with a p-value of 0.000. However, the duration of anaesthesia was insignificant among the three groups. The time of demand of the first analgesic postoperatively was significantly prolonged for ketamine (8.40 ± 2.95 hour) and magnesium sulphate (4.40 ± 1.26 hour) than the control group (2.70 ± 1.70 hour) with a p-value of 0.000.

Conclusions:

The heart rate control was better with ketamine and magnesium sulphate than bupivacaine alone. Ketamine and magnesium sulphate significantly reduced the opioid requirement and prolonged the first analgesic's requirement time postoperatively.



ASNACC1023

Comparison Between the Coronal Diameters of The Cervical Spinal Canal and Spinal Cord Measured Using Computed Tomography and Magnetic Resonance Imaging in Korean Patients

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Objectives:

Cervical epidural block could cause spinal cord injury if the epidural needle is over-inserted and punctures the spinal cord. However, if the proportion of the spinal cord in the epidural space can be determined under C-arm fluoroscopy, a safe entry point for the epidural needle can be established.

Methods:

We retrospectively evaluated the imaging data of 100 patients (50 men and 50 women) who underwent both cervical computed tomography (CT) and cervical magnetic resonance imaging (MRI) at our hospital. We measured the diameters of the spinal canal and spinal cord from the 3rd cervical vertebra to the 1st thoracic vertebra (T1) at each level by using the patients' cervical CT and MR images. The spinal cord and spinal canal diameters were measured in the transverse plane of cervical MR and CT images, respectively.

Results:

The spinal cord to spinal canal diameter ratio was the highest at the 4th and 5th cervical vertebrae (0.64 ± 0.07) and the lowest at T1 (0.55 ± 0.06 , 99% confidence interval: 0.535 – 0.565).

Conclusions:

Our findings suggest that the cord to canal transverse diameter ratio could be used as a reference to reduce direct spinal cord injuries during cervical epidural block under C-arm fluoroscopy.

ASNACC1053

Maximum Surgical Blood Ordering Schedule in Bicol Medical Center: A Descriptive Cross-Sectional Single-Center Observational Study

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Objectives:

Unnecessary preoperative blood ordering for elective surgical procedures is inefficient and can lead to blood wastage. An institution-specific maximum surgical blood ordering schedule (MSBOS) can guide the appropriate ordering of blood-typing and screening, and cross-matching of blood products as necessary for particular elective surgical procedures. MSBOS not only improves efficiency in the usage of stored blood products and reagents but also creates a more cost-efficient system of blood usage per institution. This study aims to create an MSBOS of common elective adult surgical procedures in Bicol Medical Center.

Methods:

This is a one-year descriptive cross-sectional single-center observational study at Bicol Medical Center, which included patients aged > 18 years old who underwent elective general surgery procedures. After obtaining the patient's age and sex, type of surgery, allowable and estimated blood loss, and the number of units cross-matched and transfused, indices were calculated, and an MSBOS was created.

Results:

Results of this study showed that the utilization rate of ordered blood units for 124 surgical cases was only 33%. C/T ratio >2.5 was noted in modified radical mastectomy (MRM) and cholecystectomy with intraoperative cholangiography (IOC), common bile duct exploration (CBDE), T-tube choledochostomy, indicating inappropriate blood ordering. After calculating MSBOS, 1 unit of blood is suggested to be requested preoperatively for MRM and total thyroidectomy. For excision of giant fibroadenoma, open cholecystectomy, superficial parotidectomy, and cholecystectomy IOC, CBDE, T-tube choledochostomy, a type and screen would be sufficient. For hernioplasty, fistulotomy, and laparoscopic cholecystectomy, no type and screen is needed.

Conclusions:

Preoperative blood ordering practices in our institution is wasteful for certain procedures. This study can help address the problem by implementing the derived MSBOS, but this is reserved for a follow-up study.



ASNACC1056

Comparison of Opioid Vs Opioid Sparing Anaesthesia in Patients Undergoing Supratentorial Surgery - A Prospective Observational Comparative Cohort Study

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Objectives:

Primary objective: Observe and estimate emergence time

Secondary objectives: Observe and estimate perioperative hemodynamic stability, postoperative recovery, patient and surgeon satisfaction, duration of hospital stay

Methods:

After IHEC clearance, 52 patients belonging to ASA class I & II (26 in each group), scheduled for elective neurosurgeries were enrolled in this study. Based on anaesthesiologist's preference, pts received either opioid based (fentanyl group- received scalp block with bupivacaine 0.5%, fentanyl bolus 2mcg/kg over 10 mins before intubation and then infusion 1 mcg/kg/ hr until 30 mins before skin closure) or opioid sparing (dexmedetomidine group- received scalp block with bupivacaine 0.5% , dexmedetomidine 0.5mcg/kg/hr infusion over 10 mins followed by 0.5mcg/kg/hr maintenance until 30mins before skin closure) along with standard GA. Anesthesia was maintained with O₂ + air (40%+60%) with isoflurane to maintain BIS value between 40 to 60. Statistical analysis was performed using STATA 11.2. Students t test was used to find difference between groups for quantitative data and is expressed as mean and standard deviation. Whereas chi square test was used to compare demographic variables and is expressed as frequency and percentage. P value < 0.05 is consider as statistically significant.

Results:

In dexmedetomidine group as compared to fentanyl group, HR at 10 mins after bolus, laryngoscopy & intubation, skull pinning, 1 hr post dura opening, 2nd hr post dura opening, 5mins after extubation, 30 mins after extubation, 1 hour after extubation were p=0.006, p=0.003, p< 0.001)

Conclusions:

We concluded that dexmedetomidine is better than fentanyl in neurosurgical patients in maintaining perioperative hemodynamic stability, early recovery, postop pain control.

ASNACC1067

Potential Use of APACHE II Score as A Basis for Future Pre-Emptive Intubation Among COVID-19 Patients in A Tertiary Level Hospital in The Philippines

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Objectives:

This study aimed to investigate the potential use of APACHE II Score as a basis for future pre-emptive intubation among COVID-19 patients in Saint Louis University Hospital of the Sacred Heart (SLUHSH). Specifically to determine its predictive power (i.e., sensitivity and specificity) and propose a cut off point for pre-emptive intubation and mortality.

Results:

Of 236 patients, majority presented with abnormal respiratory rate, partial pressure of oxygen, alveolar-arterial gradient, and blood pH level. Patients provided with non-invasive ventilatory support and high-flow nasal cannula were able to survive. In contrast, most of intubated patients eventually died. The computed AUROC curve for respiratory treatment and disposition were recorded at 0.9928 and 0.9916, respectively which indicates high accuracy in the use of APACHE II scoring system to discriminate respiratory treatment and disposition. A cutoff point of 20 may be proposed as it resulted to the greatest percentage of correctly classified patients, with 95.7% sensitivity and 97.7% specificity.

Conclusions:

The study validates the results of related studies that APACHE II score was highlighted as a valuable indicator in evaluating COVID-19 patients, especially as basis for pre-emptive intubation. APACHE II score of 20 and above are recommended for pre-emptive intubation. Evaluation of COVID-19 patients with reference to the APACHE II score would help in the determination of the proper respiratory treatment to increase their likelihood of survival.



ABSTRACT TOPIC: INTERESTING CASES

ASNACC1019

Oxcarbamazepine Induced SIADH in A Trigeminal Neuralgia Patient

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Objectives:

Carbamazepine and oxcarbamazepine are the first line treatment options for analgesia in trigeminal neuralgia. Syndrome of Inappropriate Antidiuretic hormone secretion [SIADH] is the most common cause of euvolemic hyponatremia. There are various causes of SIADH ranging from drugs to malignancies. Here is a case report of oxcarbamazepine induced SIADH in a female of aged 24 years diagnosed with right Cerebellopontine [CP] angle lesion and associated trigeminal neuralgia posted for excision of lesion.

Methods:

A 24 year old women scheduled for right CP angle lesion excision under general anaesthesia. She was on tab oxcarbamazepine 300 mg twice daily since 5 months for analgesia. Blood results were normal except for serum sodium of 128mEq/L [milliequivalents per litre], serum osmolality of 260mosm/kg.

On the day of surgery, standard anaesthesia protocols followed and injection fentanyl, propofol and vecuronium was used for induction and maintenance with sevoflurane. Intraoperatively, normal saline was used as the maintenance fluid of choice and given at 80ml/hour. Baseline Post-induction Arterial blood gas analysis showed sodium of 129 mEq/L and serum osmolality of 260mosm/L. The probable diagnosis of SIADH was made and after ruling the causes of SIADH, it may be due to Oxcarbamazepine. Sodium deficit was calculated and 3% hypertonic saline given as infusion at the rate of 6.5ml/hour to correct sodium. Arterial blood gas analysis showed pH of 7.384, sodium of 135.7mEq/L and potassium of 3.46 mEq/L. Urine osmolality was 403.06 and urine specific gravity was 1.015.

Results:

Postoperatively, on the next day, serum sodium was corrected and was 138mEq/L and follow up of the patient was done.

Conclusions:

Diagnosing drug induced SIADH and early recognition and management is important for the better neurological outcomes in the patient. Serum electrolytes should be investigated thoroughly in patients on oxcarbamazepine and perioperative management of such patients should be done accordingly.

ASNACC1020

Resuscitation Refocused: A Case of Post-Cardiac Arrest Perioperative Neuroprotection in A Gynecologic Patient with Malignant Pleural Effusion

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Conclusions:

With the advances in equipment used in anesthetic monitoring and the careful attention to details of an anesthetic provider, Intraoperative Cardiac Arrest (IOCA) is now easily detected resulting in a more prompt intervention by the anesthesiologist. This is a case of a 35-year-old female diagnosed with ovarian malignancy who underwent chest tube thoracostomy and an elective gynecologic surgery under regional anesthesia, with an unremarkable intraoperative course who suddenly went into cardiac arrest. History of bilateral pleural effusion predisposed the patient to alterations in pulmonary physiology. Intraoperative re-accumulation of pleural effusion was observed leading to hypoxemia and significant metabolic derangements contributing to the IOCA. Return of spontaneous circulation (ROSC) was achieved after performing Advanced Cardiac Life Support (ACLS). Brain injury post-cardiac arrest is the main cause of death and long-term disability in resuscitated patients, hence, neuroprotective strategies and pharmacologic intervention for brain resuscitation were utilized for this case with the goal of protecting neuronal integrity. Post-IOCA, the following goals were set: avoidance of hypotension (MAP 0.5 mL/kg/hour), avoidance of hypoxia, and active prevention of fever (< 37.6 °C) for more than 72 hours. To address the poor prognosis associated with the occurrence of non-convulsive seizures in hypoxic brains during a cardiac arrest or in the early phase post-ROSC, pharmacologic agents like Midazolam and Propofol were likewise administered to help lessen oxidative stress and reduce further neurologic injury. Seventy-two hours post-IOCA, the patient was stable and was eventually discharged with a good functional and neurologic outcome. The primary goal during IOCA is ROSC, however, functionality and quality of life of each patient, including their neurologic status, should not be disregarded. Neuroprotective strategies and pharmacologic intervention employed during and after IOCA is associated with better functional outcome.



ASNACC1026

A Case Report on A Covid Positive Patient Diagnosed with Eisenmenger Syndrome for Burrhole Craniectomy for Evacuation of Subdural Abscess

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Conclusions:

Eisenmenger syndrome is a rare congenital heart disorder wherein there is a two-directional shunt occurring between the systemic and pulmonary circulation. This increases the risk of infection such as cerebral abscess due to the loss of pulmonary phagocytosis. This report presents a case of a 23 year old female with Eisenmenger syndrome and COVID pneumonia who underwent Burrhole craniectomy for evacuation of subdural abscess.

The main goal in the anesthetic management of Eisenmenger's syndrome is to prevent hypotensive episodes by maintaining cardiac output and peripheral vascular resistance. In this case, the patient was induced with Remifentanyl infusion TCI 2 ng/ml, Ketamine 1 mg/kg and Rocuronium 1.2 mg/kg to minimize hemodynamic changes during intubation. Scalp block with 20 ml of Bupivacaine 0.25% + Lidocaine 1% + Epinephrine 1: 200, 000 was also done to lessen anesthetic requirement and minimize response to painful stimuli. Low concentration of Sevoflurane at 0.8-1% volume and Remifentanyl TCI 2 ng/ml were used for maintenance to ensure balanced anesthesia while preventing significant cardiovascular effects such as hypotension.

Rapid sequence intubation was done with the use of video laryngoscope to minimize aerosol generation. Pneumonia can result to decrease in lung compliance which can present as increased peak and plateau pressures. Hence, paralysis was maintained with rocuronium infusion, tidal volume was set at 6 ml/kg and low peak airway pressure were ensured to prevent further decrease in pulmonary in blood flow.

The main anesthetic goal for a patient undergoing Burrhole craniectomy involves maintaining normal cerebral perfusion pressure. This can be achieved by ensuring that blood pressure, temperature, end tidal carbon dioxide and blood glucose are all within normal limits. These goals were consistent with our goals for our patient presenting with Eisenmenger syndrome and COVID pneumonia.

ASNACC1030

Anesthetic Management of a 7-year-old Patient with Severe Aortic Stenosis Undergoing Craniotomy, Excision of Ruptured Mycotic Aneurysm: A Case Report

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Conclusions:

This case report discusses the conduct of anesthesia for a 7-year-old female, GCS 9 E2V3M4, undergoing craniotomy excision of mycotic aneurysm secondary to infective endocarditis from severe aortic stenosis.

The patient was admitted for severe headache. She is a known case of uncorrected congenital heart disease: severe valvar aortic stenosis. CT angiogram revealed a Narrow-necked saccular aneurysm in the right middle cerebral artery with signs of rupture hence referral for surgery. Induction was done using midazolam 0.1mg/kg, fentanyl 1mcg/kg, rocuronium 0.6mg/kg, and remifentanyl infusion was started at 0.1 mcg/kg/min prior to intubation. Second peripheral line, arterial BP monitoring and femoral catheter was placed post intubation. Anesthesia was maintained with sevoflurane mapping.

During skin preparation, increase in blood pressure and concomitant bradycardia was noted. Pupils were anisocoric. Increased intracranial pressure from progressing hemorrhage was considered. To address this, mannitol and dexamethasone were given, remifentanyl was increased, hyperventilation was done to maintain etcO₂ between 30 – 35mmhg, and the patient was placed in semi-fowlers position. Once stabilized, surgery commenced. Episodes of hypotension were addressed with norepinephrine. Point of care testing was done at the end, showing normal acid base with adequate oxygenation.

The sensorium improved to GCS 15, however left sided weakness was observed which eventually improved through therapy. Two months after, the patient had undergone cardiac surgery to correct the aortic stenosis.

The intraoperative goals are to avoid hypertension during stimulating activities which may cause re rupture of aneurysm and increased intracranial pressure. At the same time, maintenance of sinus rhythm, preload, cardiac contractility, and systemic vascular resistance is must. Intraoperative hemodynamic monitoring and control is vital in ensuring adequate cerebral perfusion and avoidance of myocardial ischemia.



ASNACC1032

Case Report on the Anesthetic Management of a Diagnosed Chronic Myeloid Leukemia Patient on Tyrosine Kinase Inhibitor Therapy with "Moyamoya" Vasculopathy for Cerebral Revascularization Surgery

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Conclusions:

Though the exact mechanism and natural history of treatment are unknown, the mainstay Tyrosine Kinase Inhibitor therapy for prevention of progression of Chronic Myeloid Leukemia in its chronic phase has been associated with progressive peripheral arterial occlusive disease, adverse cardiovascular events, endocrine-metabolic alterations, and more recently, cases of intracranial vascular stenosis.

We report a 31-yo male diagnosed via bone marrow aspiration in 2009 as having Chronic Myelogenous Leukemia and sequentially treated with tyrosine kinase inhibitors – Imatinib initially, then Nilotinib with disease progression in 2019, then recently shifted to Bosutinib upon onset of headaches in January 2022. In February 2022, patient had moderate stroke (NIHSS-11 – slurred speech, right lower extremity weakness, and facial asymmetry). Cerebral angiogram revealed the pathognomonic cerebral angiographic findings of "moyamoya vasculopathy" (Stage IIIB). Considering the proximity of the TKI therapy to the angiographic findings and neurologic manifestations, Moyamoya Syndrome was the logical impression. The patient subsequently underwent an elective revascularization surgery under Target Controlled Infusions of Propofol and Remifentanyl after Hematology and Cardiovascular clearances were attained. Initially planned as direct superficial temporal artery – middle cerebral artery bypass, the procedure became an indirect encephaloduroarteriosynangiosis surgery due to an apparent 'unacceptable donor-recipient' condition on the intended more neurologically symptomatic side.

Though this report aims to emphasize the anesthetic intricacies of perioperative anesthetic management of patients with Moyamoya vasculopathy for cerebral revascularization, a very relevant outcome question had been left unanswered – would the continued TKI therapy for CML interfere with the success of indirect revascularization techniques, considering the arteriothrombogenic effect of TKIs reinforced by their anti-angiogenic effects?

ASNACC1034

Anesthetic Challenges in A Child for Repair of Craniofacial Cleft and Frontal Encephalocele: A Case Report

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Conclusions:

Craniofacial defects and encephaloceles are rare, disfiguring malformations that affect development and quality of life. Surgical correction presents a challenge to the anesthesiologist due to difficult ventilation, difficult intubation and precautions on increased intracranial pressure. Adequate and thorough planning, preparation, and anticipation of these challenges are vital to achieve good outcome.

We are presented with a six year-old female, diagnosed with Tessier type 4 and 10 craniofacial cleft and frontal encephalocele. Difficult airway management was anticipated due to the presence of hypoplastic mandible, bilateral cleft lip, skull based defect, high arch palate, and a narrow oropharyngeal space. Intraoperatively, the patient was cooperative and was able to preoxygenate herself by doing slow deep breaths while holding the GA mask. Awake LMA insertion was performed after adequate topicalization using lidocaine spray. LMA supreme size 2.5 was then inserted. After ventilation, the LMA was removed and intubation was done under video laryngoscope using pediatric D-blade.

The LMA was chosen for ventilation since a GA mask would provide an inadequate seal due to the severe facial deformity. The use of the GA mask would also lead to possible entrapment of air into the epidural space of the cranial vault leading to increased intracranial pressure. The LMA allowed us to provide positive pressure ventilation and also secured a patent airway before the induction of general anesthesia, this also allowed us to have adequate preoxygenation in anticipation of a difficult intubation.

Due to the presence of encephalocele, precautions to prevent increase in intracranial pressure was carried out. This includes balanced anesthesia with Remifentanyl and Sevoflurane, maintenance of normocapnia, euolemia, and close monitoring of blood glucose and temperature. The presence of oculo-cardiac reflex was watched out for. Anticipation of these complications was done and prevention by ensuring adequate depth of anesthesia was essential to prevent these complications.



ASNACC1037

Upward Herniation in Awake Craniotomy: A Case Report

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Objectives:

The aim of this study is to describe the complications of an awake craniotomy encountered such as intraoperative pain, subdural hematoma and upward herniation. Currently there are few studies documenting challenges encountered during awake craniotomy.

Methods:

Awake craniotomy has been gaining popularity for the last decade. It allowed maximum tumor resection while avoiding neurological morbidity. However, this technique presents several challenges to both the neurosurgeon and anesthesiologist. In this case we present a 33-year-old male who was diagnosed with low grade glioma in the left parieto-occipital which required surgical resection. Anatomically, the tumor involved the language area. It was decided to perform an awake craniotomy excision of tumor to allow intraoperative cortical mapping to preserve language functions. Intraoperative, a subdural hematoma was noted and severe pain occurred. Eventually, leading to an upward herniation of the brain parenchyma. The crisis was addressed promptly with maneuvers to decrease intracranial pressure. Awake craniotomy was abandoned and the procedure converted to general anesthesia without the benefit of intraoperative cortical mapping.

Conclusions:

Awake craniotomy has become common in neurosurgical centers. As with any surgical procedure, awake craniotomy presents its own set of complications. These complications can be debilitating for the patient. Management of these complications require, prompt crisis management, continuous team communication and experienced anesthesia and surgical teams.

ASNACC1040

Delayed Vasospasm Post Internal Carotid Artery Aneurysm Intervention: Diagnosis and Treatment - A Case Report

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Methods:

A 62 year old female patient presented to the neurocritical care unit, with history of fall in GCS and new onset neurological deficits, 16 days post onset of an aneurysmal SAH. The SAH was secondary to bilateral ICA aneurysms, for which she underwent right sided flow diverter placement uneventfully. Differential diagnoses considered were cerebral vasospasm, recurrent/fresh haemorrhage, cerebral edema, hydrocephalus, septic encephalopathy and non-convulsive seizures. MRI demonstrated the presence of acute infarcts and TCCD showed MFV > 120cm/s in the right MCA. DSA confirmed the presence of vasospasm and intra-arterial nimodipine bolus administered. EEG done to rule out other differentials and augment the diagnosis of vasospasm. Patient subsequently monitored with TCCD twice a day (bilateral MCA flows correlated with MAP measured via intra-arterial access). Patient maintained on oral nimodipine 360mg/day, intravenous noradrenaline infusion 0.01mg/min, and intravenous milrinone 1mcg/kg/min. MAP targets ensured between 90-95mm of Hg to prevent DCI, as well as rupture of left ICA aneurysm. She continued to improve neurologically over the course of the next 4 days and infusions eventually weaned off. Euvolemia maintained throughout the course of stay in the ICU. Patient shifted out on oral nimodipine post resolution of vasospasm 3 days later. At shift out, patient was calm (intermittently agitated earlier), oriented and communicating (aphasic on admission), with significant improvement of motor power (4/5) in the left upper and lower limbs (hemiparesis priorly - 2/5).



ASNACC1041

A Comprehensive Multidisciplinary Perioperative Management in Parturient with HELLP Syndrome and Intracerebral Hemorrhage in The Emergency Setting: A Rare Case Report

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Objectives:

For anesthesiologists, obstetrical management of intracerebral hemorrhage caused by preeclampsia in pregnancy remains challenging. Pregnancy-associated ICH is reported to be present in 14–50% of cases of preeclampsia and eclampsia. 1 Rapid, comprehensive, and holistic multidisciplinary management through perioperative in the emergency setting is required to achieve a better outcome.

Methods:

A 36-year-old parturient at 28-week gestation complaining of severe headaches and left hemiparesis extremities 3 hours before came to the hospital. She was drowsy with initial blood pressure was 222/114 mmHg, and her heart rate was 68 beats/min. She was diagnosed with HELLP syndrome, confirmed by severe hypertension, elevated liver enzyme, and thrombocytopenia 93.000/uL. Ultrasound examination confirmed IUFD, and CT scan showed intracerebral haemorrhage at corona radiata, ganglia basalis, right thalamus, and right temporal lobe with perifocal edema and subfalcine herniation. This condition caused the obstetrician, neurosurgeon, and anesthesiologist to simultaneously perform two surgeries (caesarean section and decompressive craniotomy). The procedures were done under general anesthesia. The duration was 5 hours with blood loss 650 cc. The patient was extubated in the ICU.

Conclusions:

Cerebral haemorrhage is a rare complication of preeclampsia and HELLP syndrome. A comprehensive multidisciplinary perioperative management between the anesthesiologist, obstetrician, neurologist, and neurosurgeon is required in the decision-making process to improve patient safety and better outcomes, especially in the emergency setting.

ASNACC1044

Cerebral Edema as A Life Threatening Complication Of A Hip Surgery Revision

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Objectives:

The setting of a timely diagnosis and treatment of this condition is very important to prevent complications that may occur including herniation and subsequent death.

Methods:

Various conservative methods were used including but not limited to, volume controlled mechanical ventilation, medicine such as, mannitol, lasix, dexason etc.

Results:

After an intensive treatment that lasted 105 days, the patient, was successfully treated in our ICU and then transferred to the department of orthopedics and traumatology, after which he was given clear bill of health and was discharged from the hospital.

Conclusions:

Through this case we can see that early and timely diagnosis and treatment are most important for the positive outcome in these patients.



ASNACC1046

Surgical Plethysmographic Index as A Surrogate in The Diagnosis of Trigemino-cardiac Reflex: A Case Report

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Objectives:

Surgical plethysmographic index (SPI) uses photoplethysmographic amplitude and heart rate interval derived from pulse oximetry measurements to give a dimensionless number. It is used commonly to monitor nociceptive stimuli and effect of antinociceptive drugs during surgery. We report a case where SPI was used to detect and manage trigemino-cardiac reflex (TCR).

Methods:

A sixteen year old female patient for left STA MCA bypass for underlying Moya Moya disease under general anaesthesia had uneventful induction of anaesthesia, positioning and vascular anastomosis. At dural closure, there was an episode of sudden fall in heart rate, raise in blood pressure with a concomitant raise in SPI. With a differential diagnosis of TCR the surgeon was asked to stop surgery and intravenous fentanyl 1mcg/kg was given which resulted in normalization of vital parameters with uneventful surgery. The patient was extubated at the end of surgery.

Results:

Hypertension with sudden bradycardia during the intraoperative phase has varied reasons like ongoing blood loss, venous air embolism among others, which cause overlap with brainstem cardio inhibitory reflexes. The diagnosis of TCR is made depending on the stage of surgery, the anatomical structures handled and at times as a diagnosis out of exclusion which is treated by removal of stimuli, use of atropine and other vasoactive agents.

While TCR by central arc manifests as sudden onset bradycardia and hypotension which mostly occurs due to handling of structures associated with cardioinhibitory fibres, TCR by peripheral arc is associated with bradycardia and hypertension. In our patient we noticed a background elevated SPI during the hemodynamic instability which facilitated the diagnosis. Following intravenous fentanyl all parameters returned to normal thus confirming the diagnosis.

Conclusions:

SPI is a useful index in identifying peripheral TCR in the intraoperative period.

ASNACC1047

Airway Management in Acute Cervical Spine Injury Patient with Hemodynamic Disturbance: A Case Report

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Objectives:

A cervical spine injury is one of the rarest traumas. However, it can have a significant impact. This incident increases the rate of morbidity, disability, and mortality. Proper airway management is critical for saving lives and preventing secondary injury. Patients with cervical injuries are very likely to obtain airway security measures by intubating and using a ventilator. Understanding the airway maneuver, neck stabilization, intubation technique, and spinal positioning is critical in the airway management process in these patients.

Methods:

A 46-year-old man had to be carried by ambulance after jumping from a height of six meters with his head hitting the shallow sea surface. The patient was conscious and able to communicate but was unable to move all four extremities and had hypotension and bradycardia. In the emergency room (ER), the patient received initial treatment with oxygen, a long spine board, neck stabilization, fluid management, norepinephrine, sulfas atropine and a magnetic resonance imaging (MRI) brain and cervical spine scan. The MRI of the brain looks normal, but the cervical MRI shows a 4th cervical fracture with emphasis on the spinal canal. After several hours in the ER, the patient lost consciousness and was not breathing. We decided to perform intubation using rapid sequence intubation and a manual inline stabilization position. We successfully intubated this patient in one trial.

Results:

After successfully intubating the patient, we were transferred to the intensive care unit (ICU) for stabilization and preparation for surgery.

Conclusions:

Airway management is critical in patients with cervical spine injuries. This injury can cause damage to the phrenic nerve, which affects the diaphragm muscle and will cause respiratory failure. In addition, stabilization of the neck, following airway maneuvers, and intubation techniques can be used to prevent secondary injury and save this patient.



ASNACC1054

Paraplegia After Intracavitary Brachytherapy Under Spinal Anesthesia: A Case Report

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Objectives:

Spinal cord injury (SCI) secondary to spinal anesthesia is a rare complication, but one that carries a significant burden on the patient. Major SCI complications following spinal anesthesia are often due to a vertebral canal hematoma formation, infection, or adhesive arachnoiditis. However, we report an interesting case of a female who underwent brachytherapy under spinal anesthesia who presented later with paraplegia as a result of previously undiagnosed cervical spine compression.

Methods:

A 50-year-old female with stage IIIB cervical cancer presented for her second brachytherapy session under spinal anesthesia. Spinal anesthesia induction was unremarkable and patient's motor function was noted to return prior to discharge. In the following days, the patient noted gradual weakness of both of her lower extremities with pelvic numbness. She experienced no bowel or bladder symptoms. The patient is evaluated in the emergency room and was referred to the anesthesia department for suspected anesthetic-related spinal cord injury.

Results:

MRI examination eventually revealed a cervical metastasis with spondylolysis and anterolisthesis, resulting to spinal cord transection at the same level. Judging from the clinical symptoms and radiographic findings, the patient's progressive paraplegia was most likely induced by spondylolysis of the neck by pre-existing metastatic lesions aggravated by flexion of the neck during lateral positioning of the patient undergoing spinal anesthesia.

Conclusions:

In conclusion, paraplegia after spinal anesthesia is a devastating complication that may result in permanent disability. This is the first reported case describing that neck flexion during spinal anesthesia positioning may be a triggering factor for cervical spine injury. Anesthesiologists and surgeons should not only be guided by the patient's clinical manifestations but also by the rate of development of symptoms and degree of neurologic deficits.

ASNACC1057

Radial Artery Sheath Entrapment Post Transradial Catheterization for Cerebral Angiography and Coil Embolization of Ruptured Anterior Communicating Artery Aneurysm

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Objectives:

This paper presents a case of Radial sheath entrapment, a relatively rare complication with an incidence of less than 1% of all patients following transradial catheterization.

Methods:

ES, 24-year-old, female, with subarachnoid hemorrhage secondary to ruptured anterior communicating artery aneurysm (1.2x1.4x1.9mm) underwent transradial cerebral angiography and endovascular coiling under general anaesthesia for 1 hour 37 minutes. Endovascular coiling was unremarkable and successful. However, after the procedure, radial artery sheath was entrapped due to possible vasospasm. Different techniques to reverse the spasm, such as injecting intraarterial Isosorbide dinitrate 600mcg and verapamil 2.5mg, warming the affected area, inducing ischemia by inflating the BP cuff above 200mmHg for 5minutes, and local infiltration with Isosorbide dinitrate 200mcg with 1mL Lidocaine 2% subcutaneously along the course of the spastic radial artery, were done but were unsuccessful. Patient was referred to vascular surgeon for removal of access sheath under general anesthesia with axillary nerve block. Visualization of the radial artery using ultrasound and fluoroscopy showed that the artery remained spastic and collapsed around the sheath. Initially, balloon stenting proximal to the radial sheath was attempted but removal was unsuccessful.

Results:

The surgeon proceeded with radial artery exploration and artery was dilated with saline via radial sheath while slowly pulling out the sheath.

Conclusions:

Transradial approach in catheterization has shown to be superior than transfemoral approach in terms of decreased occurrence of bleeding from the insertion site. However, transradial arterial catheterization has its own risks which includes refractory radial artery spasm resulting to catheter/sheath entrapment which occurs in less than 1% of cases. Forceful removal can result in endarterectomy or avulsion of the radial artery, hence, different techniques are done to preserve the artery. In extreme cases, radial artery exploration can be done and has resulted in successful removal of the sheath, like in our patient.



ASNACC1068

Decreased Propofol Requirement During Total Intravenous Anesthesia in A Patient with Chronic Pruritus and Subclinical Hyperthyroidism: A Case Report

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Objectives:

Some case reports and studies are pointed that GABA receptor sensitivity increased in patients with chronic itching. Also the need for propofol during general anesthesia, which acts on GABA receptors, decreased to doses equivalent to average sedation doses. We observed that administering drugs acting on these receptors at optimum doses (using EEG-based monitoring) is important for patient safety especially in patients with chronic itching.

Methods:

Case: 58 year old, 80 kg weight, subclinic hyperthyroid (TSH: 0,02), with diabetes type-II, male patient suffering from chronic stress-induced non-histaminergic pruritus for more than 6 weeks, who underwent elective orthopedic surgery under total intravenous general anesthesia (propofol and remifentanyl) with bispectral index monitoring (values between 40-60).

Results:

It has been determined that total propofol consumption was 83 micrograms/kg/min (600 mg propofol totally). The operation lasted 90 minute and completed without any complications or awareness, patient were hemodynamically stable among the operation. The patient did not use any systemic antihistaminergic drug before operation.

Conclusions:

Chronic itching in the brain (over 6 weeks) can alter functional brain connections in the anterior cingulate cortex, posterior cingulate cortex, prefrontal cortex brain areas. Evidence indicates that thyroid hormones have effects on the inhibitory GABAergic system. Studies showed that patients with hypothyroidism had significantly lower GABA levels in the median prefrontal cortex. In our case, the need for propofol was expected to be increased due to the increased metabolic rate of subclinical hyperthyroidism due to the current thyroid hormone levels, but on the contrary, it was observed that it decreased. We think that this observation is due to the dominant effect of the increase in GABA sensitivity caused by chronic pruritus.

ASNACC1069

Application Of Videolaryngoscopy and Anesthesia Management During The Process In The Patient Who Swallows The Prosthetic And Impacted Ozapagus For 3 Days

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Objectives:

In our case, the removal of a prosthetic tooth with the help of videolaryngoscopy, which was admitted to the hospital due to respiratory distress, was desaturated during the procedure and could not be removed endoscopically due to the risk of perforation, is presented.

Methods:

Case: A 64-year-old, male, diagnosed with hypertension and COPD, conscious, cooperative, oriented, applied to a hospital in an external center with complaints of runny nose, respiratory distress and inability to swallow for 3 days. The patient was evaluated as having upper respiratory tract infection and gastritis, and decongestant and gastric protective treatments were started. A chest X-ray was performed after his complaints did not regress, and a metal prosthetic tooth image was detected at the esophagus entrance. Under basic hemodynamic and respiratory monitoring in the endoscopy unit in our center, the intervention was performed by providing sedation with a total of 120mg propofol and 2mg midazolam in boluses of 20mg. We were informed about the desaturation of the patient during the procedure. The patient was intubated by direct laryngoscopy by administering 2mg/kg propofol under emergency conditions in the endoscopy unit.

Results:

During direct laryngoscopy, it was observed that the prosthetic tooth was impacted at the esophageal entrance just below the larynx. The prosthesis was removed using magill forceps with videolaryngoscope. The patient was transferred to the intensive care unit that vital signs were stable, intubated and without any complication.

Conclusions:

The removal of the foreign body esophagus with a Foley catheter, rigid and flexible esophagoscopy, pushing the foreign body into the stomach, removal of the foreign body with Magill forceps. We suggest that removal of upper esophageal foreign bodies with the help of videolaryngoscopy can be used as an alternative to existing endoscopic methods, as well as to rapidly secure the narrowed airway.



ASNACC1071

Pregnancy Outcome Following A 12-Hour Neurosurgery Under Total Intravenous Anesthesia: A Case Report and Mini-Review of The Literature

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Objectives:

While neuroanesthesia for pregnant women is well described in the literature, little is known about the extent to which the fetus can withstand the effects of surgical stress and anesthesia, particularly when intravenous anesthetics may be more beneficial for the mother. We hope that this case report can add to our continuous efforts of understanding anesthesia during pregnancy. We also perform a mini-review on the possible impact of general anesthesia, particularly IV anesthetics on the fetus.

Methods:

We report a case of a 34-year-old gravida G6P4(4014) patient who is pregnant at 32 weeks, admitted for emergency craniotomy for intracranial hemorrhage due to a ruptured aneurysm. The patient was maintained under total intravenous anesthesia using propofol and remifentanyl. Aside from standard ASA monitoring, fetal heart tone monitoring was also done. Because of the difficulty of the case and the extensive brain swelling, the duration of the surgery lasted a good 12 hours before the surgeon decided to suspend the procedure. The patient's vital signs remained stable all throughout the procedure but she remained intubated after surgery because of severe brain edema and poor GCS. The fetus only experienced a transient bradycardia at the immediate post-operative period, but a recurrence of bradycardia on the third post-operative day called for an emergency cesarean section. She gave birth to a live baby boy (APGAR score of 2, 7, 8 weighing 2290 grams), who we are currently monitoring on follow-up for any neurodevelopmental impairment.

Conclusions:

While the third trimester of pregnancy is regarded as a safe period for surgery, there is limited information regarding the effects of anesthesia on the development of the fetus because of ethical and technical restrictions. Anesthesiologists need to be flexible in specific circumstances but also keep in mind the possibility of anesthetic neurotoxicity on the fetus.





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