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## From the Editor's Desk

Dear IAPA Members,

It is with great pleasure that I present another edition of the newsletter for the Indian Association of Paediatric Anaesthesiologists. This issue marks a decade since the newsletter was first launched under the editorial leadership of Dr. Elsa Varghese. Published twice a year, it aims to amplify the voices of IAPA members through a harmonious blend of expressions.

This edition, the first since Dr. Subrahmanyam and Dr. Murthy took the helm, reflects their vision for IAPA. We begin with an insightful article by Dr. Anuradha and Dr. Ridhi on the increasingly recognized issue of chronic pain in children. In this newsletter, we have included the 'Game changers' from the IAPA 2025 conference in Pune. Under the mentorship of Dr. Nandini, Dr. Dixita shares her thoughts on how digital access to medical literature is transforming the field. A picture is worth a thousand words, and Dr. Mridul beautifully captures the transformative journey of her paediatric anaesthesia training. Committed anaesthesiologists strive to seek practical solutions to complex challenges. Dr. Hardik and Dr. Vedhika reveal how they overcame difficult airways with 'hybrid' solutions. Dr. Srija and Dr. Sunidhara recount their experience of successfully managing a life-threatening arrhythmia during a liver transplant. In today's flood of information, good work risks being overlooked. Dr. Sujata helps by curating five thought-provoking articles. And finally, don't miss the chance to tackle Dr. Gayatri's crossword with its cryptic clues.

Going forward, if you have a flair for writing and wish to contribute here, feel free to reach out to any of us - Dr. Ekta, Dr. Ranju, Dr. Anisha, Dr. Sunidhara, Dr. Gayatri, or me. We also welcome timely submissions of all activity reports conducted under the aegis of IAPA. And we are excited to publish your piece.

Dr. Vibhavari Naik  
Editor - in - Chief  
IAPA Newsletter, Hyderabad





Dr. M. Subrahmanyam  
President

## CONTINUATION OF A LEGACY OF SUCCESS TO CREATE A PROMISING FUTURE



Dr. M. Sree Rama Chandra Murthy  
Vice-President

Dear IAPA Family

Warm greetings!!

We are honoured to be a part of IAPA Executive Committee in the position of the President and the Vice President. We were both privileged to have served as the Honorary Secretary from 2015 – 2019 and 2019 – 2023 respectively and were pioneers to introduce the IAPA fellowship programs and branches at state level, that continues to grow.

We appreciate the commendable efforts of the outgoing President and Vice President, Dr. Neerja Bhardwaj and Dr. Nandini Dave, during their tenure. We, as the President and the Vice President, will earnestly strive to confront the challenges in our effort to ensure the progress of IAPA to the next possible level and to accomplish the unfinished tasks taken up. As such, we look forward to the unconditional support and cooperation of the IAPA family, in all our proposed future endeavours.

At the outset, we aim to enhance the skills in the administration of paediatric anaesthesia by the practitioners and thereby decrease the number of mortality and morbidity rates, as per the vision of the Government of India. This vision can be realized with the increased participation of the state branches in the conduct of regular CMEs and workshops. In the given context, we propose to increase the number of state branches to promote the initiative across India.

We propose to increase the number of the institutes for paediatric anaesthesia fellowship programme and we wish to continue the legacy of our predecessors, while strengthening and continuing the academic activities. We also propose to create a database for the paediatric cases, to be used as a guideline for all future academic activities.

We look forward to increase the membership and extend our IAPA family, with an access to the only international paediatric journal (Paediatric Anaesthesia) and facilitate the members to update with the latest trends in paediatric anaesthesia. The guidelines committee section will provide the latest updates on different topics written by experienced paediatric anaesthesia faculty on the IAPA website education section.

We look forward to an eventful term and hope to enhance the scope and functioning of IAPA, and strive to raise it to a new level in the years to come.

Thanks & Regards

Pg. no

### INSIDE THIS ISSUE

- |  |  |
|--|--|
| 1. <b>From the Editor's desk</b> Dr. Vibhavari Naik  | 11. <b>Liver Transplant as a Metabolic Rescue in a Toddler with Propionic Acidaemia – A Case Report</b> Dr. Srija Aemireddy, Dr. Sunidhara Reddy, Dr. Ravichandra Raya |
| 2. <b>Continuation a Legacy of Success to Create a Promising future</b> Dr. M. Subrahmanyam, Dr. M.S.R.C. Murthy                                 | 14. <b>Journal Scan: Recent Advances and Insights in Paediatric Anaesthesia</b> Dr. Sujata Rawlani   |
| 3. <b>Chronic Pain in Children: A Growing Concern</b> Dr. Anuradha Ganigara, Dr. Ridhi Rao   | 16. <b>Perioperative Paediatric Temperature Management Workshop Report</b> Dr. Kavita Rani Sharma  |
| 5. <b>The Impact of Digital Access to Medical Literature - Perspective of a Paediatric Anaesthesiologist</b> Dr. Nandini Dave, Dr. Dixita Shetty | 17. <b>4<sup>th</sup> Exclusive Pediatric Airway Seed Workshop Report</b> Dr. Kavita Rani Sharma   |
| 7. <b>Training: The "OG" Game Changer of Paediatric Anaesthesia</b> Dr. Mridul Dua   | 18. <b>Crossword</b> Dr. Gayatri Sasikumar   |
| 9. <b>Combining Tools, Enhancing Outcomes: A Different Approach to Paediatric Hybrid Intubation</b> Dr. Harick B. Shah, Dr. Vedhika Shanker      | 19. <b>IAPA Committees</b>   |



Dr. Anuradha Ganigara  
Bengaluru

## CHRONIC PAIN IN CHILDREN: A GROWING CONCERN



Dr. Ridhi Rao  
Bengaluru

Chronic pain in children is a complex and often misunderstood condition that affects millions of young people worldwide and can have a profound impact on a child's quality of life. This brief report on chronic pain in children is meant as an introductory article to raise awareness about this often ignored and poorly managed disease condition in children.

Chronic pain is defined as any pain that lasts beyond the period of healing and thus lacks the acute warning and protective function of nociception. From a temporal perspective, it is often defined as pain that lasts or recurs for longer than three months of duration.<sup>1</sup>

The International Association for the Study of Pain (IASP) has classified chronic pain into seven categories, including

- 1) chronic primary pain;
- 2) chronic cancer-related pain;
- 3) chronic postsurgical and post traumatic pain;
- 4) chronic neuropathic pain;
- 5) chronic secondary headache and orofacial pain;
- 6) chronic secondary visceral pain; and
- 7) chronic secondary musculoskeletal pain.

These pain diagnoses have their own codes and have been implemented in the 11th version of International Classification of Diseases that was released by WHO in June 2018.<sup>2</sup> According to studies, approximately 11-38% of children experience chronic or recurrent pain, with 5-10% experiencing moderate to severe disability.<sup>3</sup>

Understanding the below pathophysiological mechanisms for chronic pain is crucial for developing targeted treatment approaches.<sup>4</sup>

- 1) Peripheral Sensitization of nociceptive system in the periphery, characterised by an increased responsiveness and reduced threshold of nociceptive neurons to stimulation of their receptive fields.
- 2) Central sensitization of the CNS- Increased responsiveness of nociceptors in the central nervous system to either normal or sub-threshold afferent input resulting in hypersensitivity, allodynia and hyperalgesia.
- 3) Shift in the brain regions engaged in processing the sensory component of pain toward regions that encode emotional and motivational subjective states.

Chronic pain affects school attendance, difficulty in coping with reduced physical activity as well as decreased energy levels. It also affects sleep schedules, may result in mood changes with the child having difficulty in maintaining social relationships adding to feelings of sadness and frustration which further feed the pain cycle. Childhood pain increases risk of anxiety disorders, depression and noted to raise the risk of unemployment, lower household incomes and opioid abuse. These consequences can have long-term effects on a child's physical, emotional, and social development. Chronic pain in childhood is thought to perpetuate and account for 17% of adult chronic pain patients with 80% indicating that the pain in childhood continued and persisted until adulthood.<sup>5</sup>

Managing chronic pain is often difficult and needs a multidisciplinary approach. A detailed history of pain focusing on various characteristics of it need to be elicited to understand the underlying pain mechanisms. Judicious laboratory and radiologic studies are useful if a specific, yet undiagnosed diagnosis is suspected.



The treatment modalities for chronic pain can be referred to as the 3P (Physical therapy, Psychological therapy and Pharmacological therapy) or the 3M (Mind, Movement and Medications) approach deeply emphasizing the underlying biopsychosocial mechanisms of pain.<sup>6</sup>

Pharmacological treatment modalities would include use of topical agents like lidocaine, menthol, NSAIDs, clonidine, magnesium and vitamin C along with other agents like tricyclic antidepressants, ketamine, selective serotonin reuptake inhibitors, gabapentinoids and if needed opioids occasionally.

Transcutaneous electrical nerve stimulation (TENS), desensitization, use of heat/cold, aerobic exercises, activity pacing, muscle relaxation and massage along with strength and core conditioning with progressive stress loading have been recommended as part of the physical aspects of pain management.

Various strategies like pain education, distraction, deep breathing, relaxation, guided imagery, hypnosis and cognitive behavioural therapy have been actively advocated as part of psychological measures for effective chronic pain management.

Management along biopsychosocial principles aiming for synergy between pharmacological, physical/physiological, and psychological treatments is the gold standard for management of chronic pain. With proper care and support, children with chronic pain can lead active and fulfilling lives.

**References:**

- 1) Rodriguez-Restrepo, Andrea; AuBuchon, Jacob D.. Chronic pain in pediatric patients: epidemiology, pathophysiology, and mitigation strategies. *Current Opinion in Anaesthesiology* 37(3):p 245-250, June 2024. | DOI: 10.1097/ACO.0000000000001372
- 2) Nicholas M, Vlaeyen JWS, Rief W, Barke A, Aziz Q, Benoliel R, Cohen M, Evers S, Giamberardino MA, Goebel A, Korwisi B, Perrot S, Svensson P, Wang SJ, Treede RD; IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: chronic primary pain. *Pain*. 2019 Jan;160(1):28-37. doi: 10.1097/j.pain.0000000000001390. PMID: 30586068.
- 3) McCarthy, Kevin & Rastogi, Sachin. (2017). Complex pain in children and young people: part I - assessment. *BJA Education*. 17. 10.1093/bjaed/mkx018.
- 4) Liossi C and Howard RF. Pediatric Chronic Pain: Biopsychosocial Assessment and Formulation. *Pediatrics*. 2016;138(5):e20160331
- 5) Guidelines on the management of chronic pain in children. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO.
- 6) Collins AB. Chronic Pain in Children: Interdisciplinary Management. *Pediatr Clin North Am*. 2023 Jun;70(3):575-588. doi: 10.1016/j.pcl.2023.01.010. Epub 2023 Mar 21. PMID: 37121643



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5



Dr. Nandini Dave  
Mumbai

## The Impact of Digital Access to Medical Literature - Perspective of a Paediatric Anaesthesiologist



Dr. Dixita Shetty  
Mumbai

The advent of anaesthesia was a groundbreaking milestone revolutionizing surgical care. Since then, it has undergone remarkable advancements, evolving from early use of ether to modern era of sevoflurane. Medications like sugammadex, dexmedetomidine and innovations like supraglottic airway devices and flexible bronchoscopy, high-flow nasal cannula, and the integration of ultrasonography in point-of-care ultrasound, regional anaesthesia, and complex neuraxial procedures have been transformative.

The standardization of ASA monitoring guidelines underscores a global commitment to patient safety, addressing past challenges in the availability of essential monitoring tools. Furthermore, proliferation of workshops and simulation-based training methodologies have significantly enhanced our clinical acumen, refining both technical skills and decision-making during critical situations.

However, in this transitional era of millennials and Gen Z, the most profound game-changer has been the ubiquitous accessibility of THE INTERNET!!!

Pre-digital era obstacles: Accessing medical literature presented significant challenges. Researchers faced laborious manual searches within library archives, pouring over physical textbooks and journals.

Transformative impact of online databases like PubMed, Google scholar, Cochrane library etc. has revolutionized medical research, offering instantaneous access to a vast repository of knowledge with a single click.

Digital access has been a boon to paediatric anaesthesiology, as a specialized field, given the myriad syndromes exhibiting unique characteristics, each potentially influencing anaesthetic management.

### Key features:

- Free access to millions of peer-reviewed articles;
- Advanced search filters for specific conditions, drugs and techniques;
- Real-time updates on new research and guidelines;
- Integration with institutional libraries for full-text access.

### Case Reports and their impact:

- Rapid knowledge sharing on rare paediatric anaesthesia cases, related complications and novel approaches to management;
- Access to real-world experiences beyond textbooks.

### Impacts of easy Digital access in time of crisis:

➤ When encountered with some rarest syndromes during pre-anaesthesia checks allows us to quickly review their anaesthetic implications, helps streamline the pre-surgical workup, better communication with families by providing a realistic prognosis regarding anaesthesia and surgical risks. I am happy to share some real-life experiences during my fellowship tenure:

- i) ZTTK syndrome diagnosed with Tetralogy of Fallot posted for Intracardiac repair –literature revealed the risk of malignant hyperthermia, and the case was done under total intravenous anaesthesia on cardiopulmonary bypass with bispectral index monitoring;

- ii) Waardenburg syndrome diagnosed with bilateral sensorineural hearing loss, posted for cochlear implant carries risk of laryngomalacia, limited neck movements, muscle contractures posing risk of difficult airway and intravenous access.
  - iii) And the list goes on with Williams syndrome, midline facial cleft, Desbuquois syndrome etc. all requiring tailored anaesthetic approaches.
- Another significant advantage is the ability to promptly find drug dosages for medications rarely used in routine paediatric cases. This is particularly crucial in emergency scenarios, such as managing LAST (Local Anaesthetic Systemic Toxicity)—a rare but critical complication. How often do we actually encounter it in practice?
- COVID-19: The era when the world was connected digitally sharing experiences and learnings.

### Advantages of Online Access for Paediatric Anaesthesiologists:

- **Evidence-based practice:** Quick access to latest guidelines;
- **Global collaboration:** Connect with experts worldwide;
- **Improved patient safety:** Learn from adverse event reports and patient safety databases;
- **Enhanced training & education:** Online courses, webinars, and clinical discussions.

### Challenges & Limitations:

- **Information overload** –Difficulty in filtering relevant data;
- **Paywalls & restricted access** –Some high-impact journals require subscriptions;
- **Quality concerns** –Risk of relying on non-peer-reviewed or predatory journals;
- **Time constraints** –Clinicians may struggle to keep up with the vast amount of literature available online.

### Conclusion & Future Prospects:

As paediatric anaesthesiology advances with AI-driven research and open-access resources, the ability to critically evaluate information is essential. High-quality research and publication in reputable-indexed journals ensure widespread knowledge dissemination, fostering improvements in patient safety, clinical outcomes, and training. These advancements continuously elevate standards of care, reinforcing excellence in paediatric anaesthesia.



### References:

- 1) Sood A, Ghosh AK. Literature search using PubMed: an essential tool for practicing evidence- based medicine. *J Assoc Physicians India* 2006 Apr; 54:303-8.
- 2) Antel R, Sahlas E, Gore G et al. Use of artificial intelligence in paediatric anaesthesia: a systematic review. *BJA Open* 2023 Feb; 5:100125.
- 3) Brennan N, Edwards S, Kelly N et al. Qualified doctor and medical students' use of resources for accessing information: what is used and why? *Health Info Libr J* 2014 Sep; 31(3):204-14.
- 4) Khare R, Leaman R, Lu Z. Accessing biomedical literature in the current information landscape. *Methods Mol Biol* 2014 June; 1159:11-13.
- 5) Jin Q, Leaman R, Lu Z. PubMed and beyond: biomedical literature search in the age of artificial intelligence. *eBioMedicine* 2024 Feb; 100:104988.



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## TRAINING: THE “OG” GAME CHANGER OF PAEDIATRIC ANAESTHESIA

While many might argue that procedures like caudal anaesthesia, drugs like clonidine, or devices like the I-gel or ultrasound machine have been game changers in paediatric anaesthesia, none have been so transformative as specialised training in this nuanced speciality. The effective utilisation of these innovations is contingent upon proper training; making training- as Gen Z would call it- the “OG” or “original” game changer of paediatric anaesthesia.



**DR. MRIDUL DUA,  
MUMBAI**

Consider a 1-year-old boy with Apert’s syndrome and craniosynostosis scheduled for cranial vault repair. Here everything from intravenous access, to intubation, to pain management is a challenge. The anaesthesiologist may employ ultrasonography to facilitate the placement of central venous and arterial lines. He/ she may use a video-laryngoscope to secure the airway. But training alone can alleviate the anxiety typically experienced by the anaesthetist when managing such a case.

The paediatric anaesthesia posting during the MD, DA or DNB programmes is usually a brief one. Consequently, the qualified anaesthesiologist often feels underconfident while handling paediatric patients.<sup>1</sup> A viable solution is specialized, structured, hands-on training in paediatric anaesthesia, available through a one-year fellowship, two-year FNB, or three-year DM course.

The main goal of paediatric anaesthesia training programmes is to ensure that trainees become competent and confident paediatric anaesthesiologists. This is accomplished by providing exposure to neonatal and paediatric cases across various paediatric surgical specialties. Additionally, these programmes include formal lectures, informal case discussions, and research activities, which add an extra feather in the cap of the anaesthesiologist.

There are several reasons why specialised training in paediatric anaesthesia is required. Firstly, it allows us to recognise that a 6-month-old infant has anatomical, physiological, pharmacological, and psychological differences, not only from an adult, but also from a 6-year-old child. Secondly, issues such as prematurity, congenital disorders and syndromes, difficult intravenous access, challenges in pain assessment and management, susceptibility to hypothermia, separation anxiety and emergence delirium, are far more common in the paediatric population.

Advancements in obstetrics, neonatology, and paediatrics have led to increased survival rates for infants with complex medical conditions who may require surgery at a young age. It is estimated that in developing countries including India, nearly half the population is less than 18 years old, and almost 85% will need some surgery before their 15<sup>th</sup> birthday.<sup>2</sup> Consequently, super-speciality surgery warrants super-speciality anaesthesia.

Another significant rationale for the necessity of training in paediatric anaesthesia is the growing demand for non-operating-room anaesthesia in paediatric patients. These requirements may range from monitored anaesthesia care to general anaesthesia, intensifying the challenge in limited resource settings.

Lastly, there is a significantly higher incidence of perioperative complications in paediatric patients. The Pediatric Perioperative Cardiac Arrest (POCA) Registry reports that cardiac arrest is two to three times more common in infants than adults.<sup>3</sup> Morbidity, or worse, mortality is usually a result of respiratory and cardiovascular events, which are encountered more often when patients are managed by inexperienced anaesthesiologists.<sup>4</sup>

As for me, training in paediatric anaesthesia has been a total game changer in more than one way. Anaesthesia induction for paediatric patients used to be a chaotic nightmare. After my fellowship, my approach is calmer and more collected. I no longer need drug dosage charts, and my airway trolley is decluttered as I'm more certain of tube sizing. Laryngospasm is no longer a dreaded complication- I now prevent and treat it, rarely needing suxamethonium. Most importantly, my patients recover comfortably in the post-anaesthesia care unit, instead of waking up distressed.

Paediatric anaesthesia is an evolving branch, and there continue to be some challenges and limitations. Unlike some developed countries, there are no recommendations by the Indian medical councils that only trained paediatric anaesthesiologists should care for patients below a specific age. Job opportunities may be limited as several hospitals are under-equipped to manage paediatric patients. Some view it as less glamorous compared to other sub-specialities like cardiac or regional anaesthesia, and fear losing touch with adult anaesthesia. However, I believe that even a year's training in paediatric anaesthesia can enhance one's management of adults, unlike seasoned adult anaesthesia practitioners who may feel intimidated when anaesthetising children.

Paediatric anaesthesia training makes the learner an anaesthetist in the moment- managing a 2 kg neonate for a tracheo-oesophageal fistula repair one minute, the next, a 20 kg kid for an adenotonsillectomy. When I see my colleagues and fellows engaging with our patients, I am convinced beyond doubt that training in paediatric anaesthesia has not merely been a game changer, but a LIFE CHANGER for us all.

I end with a quote from Dr. Robert Gross, a pioneer in paediatric surgery:

"The surgeon realizes that his chances for success or failure are determined in great measure by the capabilities of the person at the head of the table who is administering the anesthetic."

So let us work towards training more anaesthesiologists in the field of paediatric anaesthesia and give the tiniest of our patients the care they deserve.



Before Training in Paediatric Anaesthesia



After Training in Paediatric Anaesthesia

## REFERENCES

1. Sen I, Dave N, Bhardwaj N, Juwarkar C, Beegum S. Specialised training in paediatric anaesthesia: Need of the hour. *Indian J Anaesth* 2021;65:17-22.
2. Hodges SC, Walker IA, Bosenberg AT. Paediatric anaesthesia in developing countries. *Anaesthesia* 2007;62(Suppl 1):26-31.
3. Bhanaker SM, Ramamoorthy C, Geiduschek JM, Posner KL, Domino KB, Haberkern CM, et al. Anesthesia-related cardiac arrest in children: Update from pediatric perioperative cardiac arrest registry. *Anesth Analg* 2007;105:344-50.
4. Auroy Y, Ecoffey C, Messiah A, Rouvier B. Relationship between complications of pediatric anesthesia and volume of pediatric anesthetics. *Anesth Analg* 1997;84:234-5.

## CROSSWORD ANSWERS

Down: 1. Phenobarbital 3. Device 4. None 5. Virtual reality 7. One 8. Latex 12. Remimazolam 13. Cypd 17. RR 18. Hypoxia  
 Across: 2. Caffeine 6. Rocuronium 9. Sbar 10. Aschner 11. Tapase 13. Cheetaah 14. Frog 15. Anaemia 16. Norepinephrine



Dr. Harick B. Shah  
Mumbai

**Combining Tools, Enhancing Outcomes: A Different Approach to Paediatric Hybrid Intubation**



Dr. Vedhika Shanker  
Mumbai

Introduction:

Difficult tracheal intubation poses a notable challenge in paediatrics, with infants and neonates facing a higher incidence (0.9–5.8%).<sup>1</sup> Repeated attempts at intubation in children are linked to increased complications such as hypoxemia and cardiac arrest. The advent of video-enabled devices like video laryngoscopes and flexible bronchoscopes have empowered anaesthetists to devise innovative strategies for managing these complex airway scenarios. Notably, a hybrid approach that combines the simultaneous use of both device types can be particularly beneficial in specific circumstances, allowing clinicians to capitalize on the unique advantages of each while minimizing their respective drawbacks.

Case Series:

Reviewing the cases done using our technique of hybrid intubation. All the 4 patients were of Pierre - Robin Syndrome with anticipated difficult airway.



Figure 1. Use of direct laryngoscopy, rigid endoscope and FROVA introducer loaded with endotracheal tube

Table 1. Case details

S. No	Age	Surgery
1	25 days	Airway Assesment SOS Procedure
2	9 months	Cleft Palate Repair
3	2 years	Celft Palate Repair
4	11 months	Celft Palate Repair

Our technique involves the use of direct laryngoscopy to help create space and improve visualization of the airway. Following this, a zero-degree Hopkins rigid endoscope is inserted, which functions as a camera to provide a clear view of the laryngeal structures. While the endoscope maintains visualization, a second operator guides a preloaded FROVA introducer into the trachea. Once proper placement is confirmed, the endotracheal tube is passed over the FROVA and advanced into the airway, ensuring secure and accurate intubation.



Figure 2. Endoscopic view demonstrating introducer in the glottic opening

Discussion:

The hybrid intubation technique is indicated in several critical scenarios to enhance the safety and success of securing a patient's airway. Primarily, it is employed when an anticipated difficult airway is identified due to anatomical abnormalities or a history of previous intubation challenges. Furthermore, it serves as a crucial next step in cases where traditional intubation techniques have failed. It also offers a valuable educational opportunity for novices to learn proper fibreoptic-scope manoeuvres in a more manageable setting.

In essence, the use of a hybrid intubation strategy is driven by the need to improve intubation outcomes and patient safety in complex airway management situations.

The most commonly used techniques are<sup>2</sup>:

- ➊ Fiberoptic Intubation via Supraglottic Airway (SGA) - A SGA (e.g., LMA or air-Q) is inserted first to ventilate and oxygenate, then used as a conduit for fiberoptic-guided intubation.
- ➋ Video Laryngoscopy-Assisted Fiberoptic Intubation (VLAFOI) - Combines video laryngoscopy for better exposure with fiberoptic bronchoscopy for fine navigation through the vocal cords.

The inspiration for our take on hybrid intubation comes from necessity; due to the temporary lack of a reliable video laryngoscope, we needed a bridge between direct laryngoscope blades and fiberoptic intubation. The Hopkin's Video endoscope fulfilled the criteria – ready availability, familiarity with the equipment and cost effectiveness with no disposable items. The familiarity came from having worked closely with the ENT surgeons during airway assessments. Whilst the term hybrid intubation refers to using a video laryngoscope and a fiberoptic bronchoscope in concert, this technique is simpler in that it has only one screen and uses a direct laryngoscope which is firmly within our wheelhouse of expertise. The advantages of this technique are, as already stated, cost-effectiveness, ready availability, and can be used in the smallest of neonates as the endotracheal tube does not need to be passed over the scope, but over an intubating guide that is held by the second operator.

#### Conclusion:

Hybrid airway techniques provide critical alternatives when single methods fall short. Understanding and practicing these methods enhance success and safety in managing complex paediatric airways.

#### References:

- ➊ Stein ML, Park RS, Kiss EE, et al. Efficacy of a hybrid technique of simultaneous videolaryngoscopy with flexible bronchoscopy in children with difficult direct laryngoscopy in the Pediatric Difficult Intubation Registry. *Anaesthesia*. 2023;78(9):1093-1101. doi:10.1111/anae.16049
- ➋ Olomu PN, Hsu G, Lockman JL. Hybrid approaches to the difficult pediatric airway. *Manag Difficult Pediatr Airw*. Published online 2019:118-128. doi:10.1017/9781316658680.011

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 Anaesthesiologists



One Vision, One Goal  
 A Collaborative Approach to Safety

INDIAN ASSOCIATION OF  
 PAEDIATRIC ANAESTHESIOLOGISTS  
**IAPA**  
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2026  
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10-12th  
 September  
 2026



Christian Medical College,  
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**LIVER TRANSPLANT AS A METABOLIC RESCUE IN A TODDLER WITH PROPIONIC ACIDAEMIA – A CASE REPORT**

**DR SRIJAA AEMIREDDY, DR SUNIDHARA REDDY, DR RAVICHANDRA RAYA, HYDERABAD**



Introduction:

Propionic acidaemia (PA) is a rare autosomal recessive disorder of metabolism with a prevalence of 1 in 100,000. The condition is caused by deficiency of mitochondrial enzyme, propionyl-coenzyme A carboxylase (PCC) which plays a key role in:

1. Catabolism of branched chain amino acids such as leucine, isoleucine, valine, threonine, and methionine.
2. Beta-oxidation of odd chain fatty acids and
3. Metabolism of the cholesterol side chains(1)

Derangements in these pathways result in the accumulation of potentially toxic metabolites such as propionic acid and methylmalonic acid leading to secondary lactic acidosis(1)(2). The onset of clinical manifestation is usually early, from several hours to weeks after birth, and the affected infants present with a wide spectrum of features from poor feeding, failure to thrive, vomiting, lethargy, metabolic acidosis, hyperammonaemia to coma and death, depending on the severity of the enzyme impairment(3). The liver is the major site of branched chain amino acid transamination and subsequent propionic acid production. Therefore, liver transplantation (LT) has recently been considered as one of the treatment options for patients with PA to lower the risk of acute metabolic decompensation and to improve the quality of life(4).

Anaesthesia is focused on minimizing the severity of metabolic acidosis with following considerations:

1. Maintaining optimal tissue perfusion by avoiding hypotension,
2. Preventing hypoglycaemia,
3. Avoiding factors causing metabolic acidosis like hypoxia, dehydration and providing bicarbonate to compensate for the acidosis,
4. Avoiding drugs that are metabolised to propionic acid, odd chain organic acids, odd chain alcohol, acrylic acid and odd chain fatty acids, like succinylcholine, atracurium, cis-atracurium, and mivacurium, propofol and analgesics including ibuprofen, naproxen, and ketoprofen,
5. Low dietary protein load with continuous lipid infusions in the peri-operative period.

Case details:

We report the case of a 17-month-old female child (body weight: 6kg, height:72cm, BMI-11.76) with PA scheduled for a living donor LT. She was a full-term, born to parents who lost their elder daughter on the 5th post-natal day probably due to the same metabolic genetic disorder. She was diagnosed with PA on 7th day of life, when she presented with poor feeding, lethargy, hypotonia and failure to thrive. After the diagnosis, her medical treatment included metanutrition (low protein supplements) to reduce the load on amino acid catabolism and administration of L-carnitine, biotin, folic acid and calcium. She had multiple hospital admissions due to pneumonia, metabolic acidosis, poor oral intake and delayed developmental milestones. Preoperative laboratory results were as follows:

Table 1: Preoperative laboratory tests

CBP	RENAL, ELECTROLYTE	COAGULATION PROFILE	VIRAL SCREENING	ACID BASE GAS	OTHERS
Hb - 9.8 gm/dL	Urea – 24 mg/dL	PT 15 sec, INR 1.1, APTT 45 sec	HIV, HCV - NR	pH – 7.44, pCo2 – 24.6 pO2 – 107	Glucose – 81 mg/dL
WBC – 8650 / μL	Creatinine - 0.2 mg/dL	Anti-thrombin III – 84 %	EBV- Reactive	Lactates-1.0 mmol/L	LFT normal
Platelet - 3,85,000 /μL	Na – 136 mmol/L, K-3.5 mmol/L, Ca - 8.9 mg/dL, Mg - 2.3 mg/dL	Protein C 39%, Protein S 69.4%	CMV IgG - Reactive	Bicarb - 19.2 mmol/L	Vit D – 78 ng/mL

Child was optimised after a thorough pre-anaesthetic checkup with stable haemodynamic parameters and blood components were reserved. Patient received glucose containing crystalloid @ 35ml/hr and SMOF lipid (20%) (S-Soybean oil, M-Medium chain triglycerides, O-Olive oil, F-Fish oil) @ 2gm/kg/day pre-operatively.

Anaesthesia was induced with midazolam 0.2mg IV, ketamine 10mg IV, vecuronium 1mg IV, fentanyl 12.5mcg IV, endotracheal tube placed and was maintained with sevoflurane in air and oxygen (inspiratory oxygen fraction of 0.5) and vecuronium - 0.05mg/kg/hr along with fentanyl 1mcg/kg/hr. Controlled ventilation was provided to ensure maintenance of end tidal CO<sub>2</sub> (ETCO<sub>2</sub>) of 35 - 40mmHg. Anaesthesia monitoring included electrocardiogram with QT analysis, non-invasive blood pressure monitoring, pulse oximetry, capnography and oesophageal core temperature. Invasive monitoring included continuous arterial pressures via left femoral artery and central venous pressure via 4.5 French 3 lumen venous catheter placed in the right internal jugular vein. Intravenous fluids given were 5% albumin at 2ml/kg/hr, 25% dextrose at 1ml/kg/hr, 0.45% normal saline at 10ml/kg/hr. Nor-adrenaline at 0.03mcg/kg/min, N-acetyl cysteine (NAC) 200mg/kg in 50ml NS at 1.1ml/hr and SMOF lipid at 2.7ml/hr infusions were continued in the intraoperative period. Blood glucose, arterial blood gas analysis, urinary ketones and urine output were measured hourly and adjusted accordingly with dextrose and bicarbonate infusions. Blood component therapy was guided by rotational thromboelastogram. Sodium benzoate 1gm was given through nasogastric tube to control hyperammonaemia. Ammonia levels measured intra-operatively were normal. L-carnitine 150mg/day was supplemented.

During the pre-anhepatic period, the haemodynamic parameters remained stable. Persistent hypokalemia was corrected with 0.5 - 1mEq/kg potassium chloride (KCl) infusion over 2 - 4 hours. With KCl on flow, intermittent monomorphic ventricular premature contractions (VPCs) were seen. KCl infusion was immediately halted and treated with 10% calcium gluconate IV 10ml slowly, which reverted the rhythm back to sinus. A second repeat run of VPCs were seen which culminated rapidly to asystole. Cardiac arrest protocol was initiated. 9 cycles of CPR done with adrenaline, glucose insulin regimen, calcium gluconate, bronchodilator therapy and sodium bicarbonate were given suspecting the etiology of arrest to be hyperkalemia in the background of mitochondrial dysfunction and inborn errors of metabolism where a minute alteration of electrolytes can trigger fatal arrhythmias. Effectiveness of CPR was evidenced by mean arterial pressure > 45mmHg and ETCO<sub>2</sub> >35mmHg throughout the CPR. Return of spontaneous circulation (ROSC) was achieved after 22 mins of CPR. Post CPR echocardiography confirmed no clot or pericardial effusion with good bi-ventricular systolic function. Bilateral pupils were reactive to light and 3 mm in size. Decision to continue the transplant was taken in view of normalized hemodynamic, physiological and biochemical parameters.

The anhepatic period began at 7 hours 30 minutes after induction of anaesthesia. Methyl prednisolone 15mg/kg was given 30mins prior to reperfusion. Mild drop in blood pressure observed in immediate reperfusion period which was managed with crystalloid and colloid bolus along with addition of adrenaline infusion.

During the post neohepatic phase, hypokalaemia was observed again and guarded correction was done with 0.5 mEq/kg of KCl over 2 - 4 hours. Metabolic acidosis was optimised with 1 mEq/kg of sodium bicarbonate infusions.

Anaesthesia is focused on minimizing the severity of metabolic acidosis with following considerations:

I: Pre-anhepatic phase, II: Anhepatic phase, III: Neohepatic phase, HR: Heart rate, BP: Blood pressure (systole/diastole), ABGA: Arterial blood gas analysis, BE: Base excess.

Total amount of fluids the patient received were 1/2 NS - 1000ml, 25% dextrose - 250ml, 5% albumin - 400ml, 20% SMOF lipid - 30ml, PRBC - 150ml, FFP - 60ml, Cryoprecipitate - 20ml and SDP 70ml. Total duration of surgery was 12 hours. Warm ischemia time was 28 mins and cold ischemia time was 34 mins.

Post-operatively, the patient was transferred to the transplant intensive care unit for postoperative mechanical ventilation with stable vitals, normothermia, GRBS of 182mg/dl and pupils 3 mm and reactive to light. ABGA showed lactates of 6.8 (declining trend), Hb 9.7, hypokalaemia and the rest within normal limits. Infusions of noradrenaline - 0.02mcg/kg/min, adrenaline 0.01mcg/kg/min, 5% albumin, 25%

Table 2: Preoperative laboratory tests

Hemodynamic Data	I	I+2 hr	I+4 hr	Arrest	ROSC	ROSC + 1 hr	I + 7:30 hr	II	III	III+1 hr	III+2 hr	Post-operative
HR beats/min	142	138	146	0	160	154	150	148	152	142	153	124
BP mmHg	80/40	90/40	80/40		60/40	70/30	90/40	120/80	80/40	80/50	85/45	90/40
pH	7.23	7.32	7.37	7.1	7.08	7.23	7.25	7.33	7.18	7.36	7.35	7.51
paCO2 mmHg	44.3	42.1	29.5	51.7	70	46.9	44.3	32.4	59.1	34.9	41.7	28.6
paO2 mmHg	281	206	203	64.9	227	130	163	182	212	187	175	180
Na mEq/L	132	129	132	123	130	128	131	130	138	141	141	134
K mEq/L	3.3	3	2.8	21.4	8.2	6.2	6	4.4	3.6	3.1	2.8	3
HCO3 mEq/L	17.9	21	19	13.6	16.3	18.2	18.5	18	18.7	20.5	22.5	25.2
BE mEq/L	-7.8	-4	-7.1	-12.6	-8.8	-7	-6.7	-8.1	-5.7	-5	-2.2	0.5
Glucose mg/dL	198	205	228	73	458	252	291	172	162	172	185	154
Lactate mmol/L	0.6	0.8	1.5	2.3	4.8	3	3.3	4.3	6.7	7.6	6.8	2.9

dextrose (to achieve normal glucose homeostasis), fentanyl, vecuronium and NAC were continued. Patient was followed up in the post-operative period. On day 2, patient was extubated to non-invasive ventilation and later to HFNC support the next day. On day 5, patient was put on nasal prongs with minimal oxygen flows. 12 days later, patient was shifted to room in stable condition and discharged successfully.

**Conclusion:**

Liver transplant is a promising treatment for patients with propionic acidemia by reducing metabolic decompensations, neurological sequelae and prolongs life expectancy. Goals of anaesthetic management involves primarily to tackle metabolic acidosis meticulously, provide glucose homeostasis, close frequent monitoring of metabolic function (ammonia, urinary ketones) and continuous glucose along with lipid infusions to prevent hyper-catabolic state. This case highlights the importance of vigilant peri-operative monitoring and preparedness for metabolic decompensation in patients with mitochondrial dysfunction and inborn errors of metabolism.

**References:**

- Ryu J, Shin YH, Ko JS, Gwak MS, Kim GS. Intractable metabolic acidosis in a child with propionic acidemia undergoing liver transplantation: a case report. *Korean Journal of Anesthesiology*, 2013, 65(3): 257–261. doi:10.4097/kjae.2013.65.3.257.
- Rodriguez LI, Tainsh EJ, Varga E, Mavarez AC. Anesthetic Management for Pediatric Liver Transplantation in a Patient with Propionic Acidemia: A Case Report. *J Investig Med High Impact Case Rep*. 2021;9:1–4.
- Rajakumar A, Kaliamoorthy I, Reddy MS, Rela M. Anaesthetic considerations for liver transplantation in propionic acidemia. *Indian J Anaesth*. 2016;60(1):50–54.
- Rela M, Battula N, Madanur M, Mieli-Vergani G, Dhawan A, Champion M, et al. Auxiliary liver transplantation for propionic acidemia: a 10-year follow-up. *Am J Transplant*. 2007;7:2200–2203.

## JOURNAL SCAN: RECENT ADVANCES AND INSIGHTS IN PAEDIATRIC ANAESTHESIA



Dr. Sujata Rawlani  
Mumbai

This journal scan presents a curated selection of recent publications from high-impact, PubMed-indexed journals in the field of paediatric anaesthesia. The aim is to provide readers with a concise overview of significant contributions that have emerged over the past few months, spanning original research, review articles, editorials and case reports. Each entry has been selected to reflect both the breadth and relevance of current literature, highlighting evolving practices, innovations, and clinical experiences that continue to shape the landscape of paediatric anaesthetic care.

### 1. **BIS-Guided Titration of Sevoflurane in Pediatric Patients Undergoing Elective Surgery** *Pediatric Anesthesia, April 2025*

This multicentre randomized controlled trial by Templeton et al. evaluated the impact of Bispectral Index (BIS) monitoring on sevoflurane administration in children aged 4–18 years. The study demonstrated that BIS-guided titration resulted in significantly lower average end-tidal sevoflurane concentrations across all age groups without adversely affecting recovery profiles. Notably, the BIS group also showed a lower incidence of emergence delirium and higher Aldrete scores indicating discharge readiness. While no difference in time to discharge was observed, these findings suggest that BIS monitoring can support more precise anaesthetic delivery, potentially reducing anaesthetic exposure in paediatric patients. This study reinforces the clinical value of processed EEG monitoring as a tool to optimise both patient safety and anaesthetic resource utilisation.

### 2. **Anesthesia for Rigid Bronchoscopy in an Extremely Premature Un-Intubated Micro Preemie** *Anesthesia & Pain Medicine, April 2025*

This case report by Weingarten et al. describes the perioperative challenges of managing a 1-day-old, 560g micro preemie undergoing urgent rigid bronchoscopy. Despite confirmed tracheal intubation, end-tidal CO<sub>2</sub> was initially undetectable due to severe atelectasis likely caused by untreated neonatal respiratory distress syndrome (NRDS). Effective ventilation and capnography were only restored after applying sustained high inspiratory pressures. The report underscores the importance of anticipating surfactant deficiency, maintaining spontaneous ventilation and considering NRDS when capnographic confirmation fails. It highlights the complexities of airway management in extremely premature neonates and the critical need for individualised anaesthetic strategies in such high-risk cases.

### 3. **Preoperative Anxiety Management Practices in Pediatric Anesthesia: Comparative Analysis of an Online Survey Presented to Experts and Social Media Users** *JMIR Pediatrics and Parenting, January 2025*

This comparative survey study by Sablewski et al. examined how paediatric preoperative anxiety is managed by expert anaesthesiologists versus healthcare professionals active on social media. Despite the expert group having significantly more clinical experience and specialist certification, both groups demonstrated similarly heterogeneous practices in using pharmacological and nonpharmacological interventions. The study highlights the growing influence of digital platforms in shaping practice and highlights the need for evidence-based, standardised guidelines to manage paediatric anxiety effectively. It also raises important questions about how expertise is defined and how knowledge is disseminated in modern paediatric anaesthesia care.

#### 4. Pediatric Anesthesia: The Essential Value of a Well-Supported Clinic *Children, February 2025*

In this editorial, Vittori and Cascella argue for the critical importance of structured paediatric anaesthesia services supported by robust scientific training and research engagement. Highlighting the limitations of extrapolating adult data to paediatric care, the authors stress the need for dedicated paediatric expertise, critical appraisal skills, and leadership in research. The article advocates for a model where clinical care and scientific inquiry are inseparable, emphasising that without a research-oriented foundation and inter-institutional collaboration, the quality of paediatric anaesthesia delivery may be compromised. This piece serves as a timely reminder of the academic and clinical rigour required in paediatric anaesthetic practice.

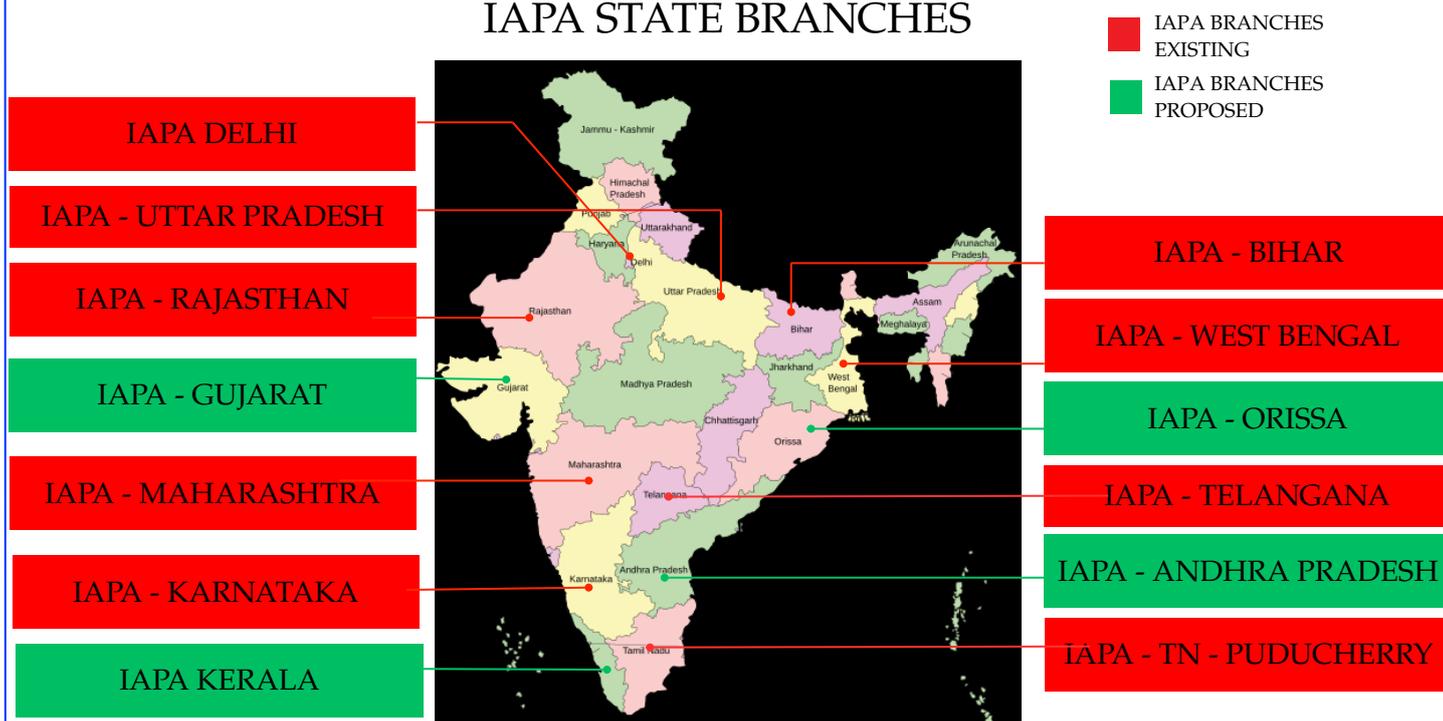
#### 5. Medication Errors and Adverse Drug Events in Perioperative Pediatric Anesthetic Care Over Twenty Years: A Retrospective Observational Study *BMC Anesthesiology, May 2025*

This retrospective study by Abbasi et al., conducted at a tertiary teaching hospital in Pakistan, analysed 196 medication errors in paediatric anaesthesia over two decades. Most errors occurred during drug administration and preparation with neuromuscular blockers, opioids, and sedatives most commonly involved. Human factors such as failure to check, judgement errors, and communication gaps accounted for 92% of incidents. Thirteen percent of these errors resulted in adverse drug events, including one life-threatening case. The study highlights the impact of low-cost interventions like critical incident meetings and safety workshops in reducing errors and improving paediatric medication safety in resource-limited settings.

This journal scan highlights recent advances and key reflections in paediatric anaesthesia, encouraging continued awareness, learning, and evidence-based practice. We hope it serves as a quick yet meaningful resource for staying updated and inspired in your clinical journey.

P.S. - Selection of articles is at the discretion of the author and reviewer. All articles in our newsletter undergo a peer-review process, which requires time, the articles published in the last couple of months are included in the subsequent newsletter.

### IAPA STATE BRANCHES



## Perioperative Paediatric Temperature Management Workshop, 8<sup>th</sup> March 2025

Perioperative Paediatric Temperature Management Workshop of Indian Association of Paediatric Anaesthesiologists, Delhi branch was organized by Vardhman Mahavir Medical College on 8<sup>th</sup> March 2025 at Safdarjung Hospital, New Delhi. The event was attended by thirty-two delegates from various institutions. The program started with a welcome address by Head of department Anaesthesiology Dr. Kavita Rani Sharma, Dr. Ranju Singh Ex-President IAPA Delhi and Dr. Sujata Chaudhary, Ad DGHS, Government of India followed by Saraswati Vandana.



Dr. Kavita Rani Sharma  
Delhi

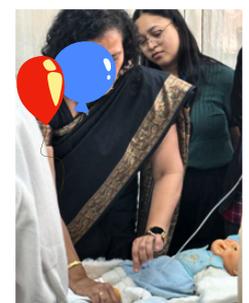
Fifteen faculty, experienced in paediatric anaesthesiology from Vardhman Mahavir Medical College, Lady Harding Medical College, Sir Ganga Ram Hospital and AIIMS Delhi conducted the hands-on interactive sessions. Various means of monitoring temperature and managing with and without dedicated temperature maintenance equipment in OT and during transportation at four simultaneous running workstations led to interesting discussions. Vote of thanks was delivered by Dr. Mamta Panwar, Organizing Secretary of the workshop.



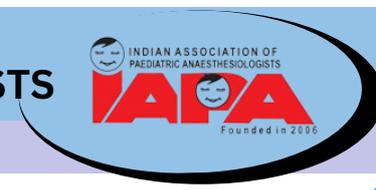
### Scientific Program

Time	Topic	Speaker
1.30 pm - 2.00 pm	Registration	
2.00 pm - 2.20 pm	Welcome and introduction	
2.20 pm - 2.30 pm	Anatomy and physiology relevant to pediatric thermoregulation	Dr Ranju Singh
2.30 pm - 2.40 pm	Perioperative paediatric temperature management	Dr Kavita Sharma
2.40 pm - 2.50 pm	Science of Warming	Mr Tarveer
3.00 pm - 3.30 pm	Round 1 Hands-on workstation	
3.30 pm - 4.00 pm	Round 2 Hands-on workstation	
4.00 pm - 4.15 pm	Tea break	
4.15 pm - 4.45 pm	Round 3 Hands-on workstation	
4.45 pm - 5.15 pm	Round 4 Hands-on workstation	
5.15 pm - 5.30 pm	Wrap up	

Faculty	
Station 1	Dr Sujata Chaudhary, Dr Nishi Agrawal, Dr Anjali Kocher, Dr Shraya Krishna
Station 2	Dr Kavita Sharma, Dr Mamta Panwar, Dr Shiro Aggarwal, Dr Nitin Chaudhary
Station 3	Dr Ranju Singh, Dr Navdeep Sethi, Dr Sapna Bathia, Dr Nisha
Station 4	Dr Deepanjali Pant, Dr Suman Sahni, Dr Amandeep



The workshop was very well appreciated by all participating delegates and faculty alike.



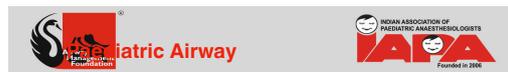
## 4<sup>th</sup> EXCLUSIVE PEDIATRIC AIRWAY SEED WORKSHOP 6<sup>th</sup> APRIL 2025

The fourth exclusive Pediatric Airway Seed Workshop of Indian Association of Pediatric Anesthesiologists, Delhi branch was conducted in collaboration with Airway Management Foundation on 6th April 2025 at Lady Hardinge Medical College, New Delhi. The event was a great success with around hundred delegates and forty faculty members participating. The over whelming response to this innovative skill-based workshop filled the seats fast and registrations had to be closed much before the event.



Dr. Kavita Rani Sharma  
Delhi

The event had pediatric airway specific didactics and case discussions followed by hands on training with experienced faculty instructors facilitating skill empowerment and knowledge transfer at fourteen simultaneous running workstations, working on specific neonatal and infant airway manikins. The basics of airway management, including optimum positioning, oxygenation, mask ventilation, direct laryngoscopy and intubation using different blades and supraglottic airway devices placement were an integral part of the skill stations. A unique anatomy station was setup providing a clear pediatric airway applied anatomy to the delegates. A wide range of advanced pediatric airway equipment including fiberscopes and video laryngoscopes were also available for practice by the delegates. The workshop was very well appreciated by all participating delegates and faculty alike.



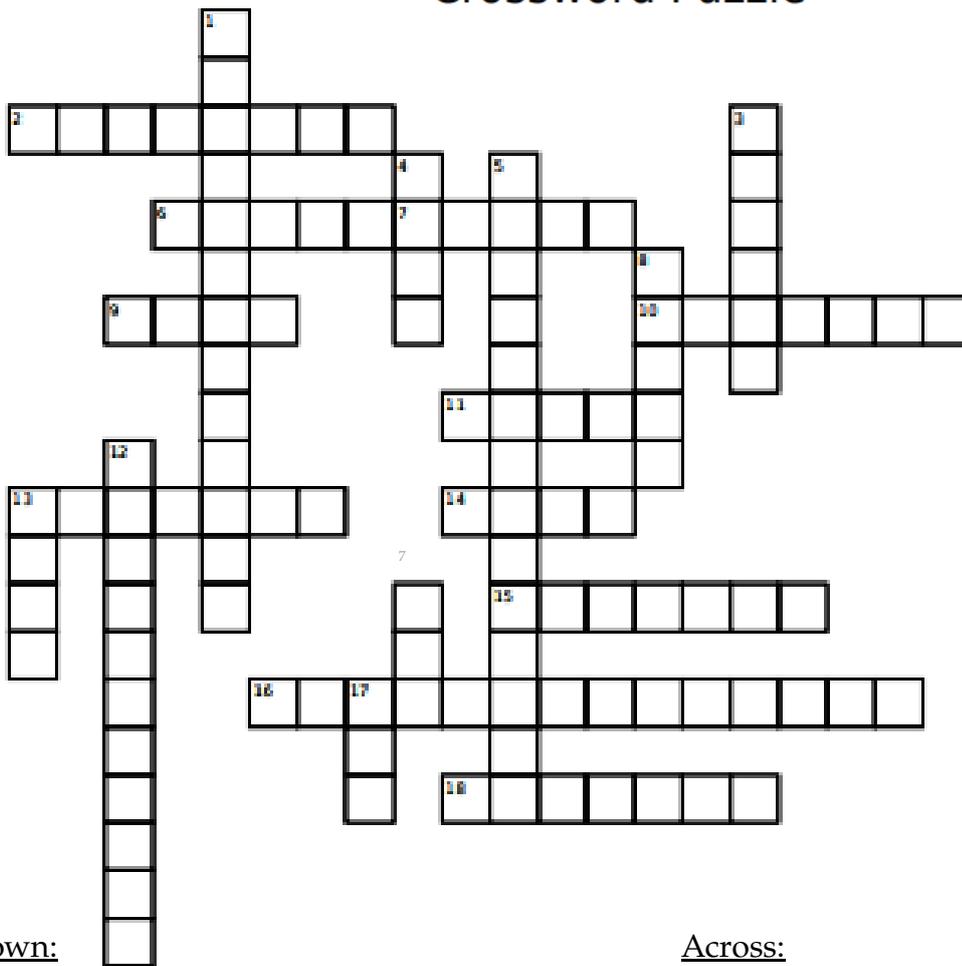
### 4<sup>th</sup> Pediatric Airway Seed Workshop & CME

Time	Topic	Speaker
08.00am – 09.00 am	Poster presentation Judges: Dr. Binla Sharma, Dr. Nidhi Agrawal	
09.00am – 09.10 am	Introduction & Welcome	Team IAPA & AMF
<b>Session 1</b>		
	Chairpersons: Dr. Binla Sharma, Dr. Neeraj Banerjee, Dr. Sushma Nangia	
9.10 am - 9.30 am	Applied airway anatomy, physiology and oxygenation during paediatric airway management	Dr. Kavita Rani Sharma Dr. Ranuja Singh
9.30 am – 9.50 am	Airway assessment in paediatric patients	
9.50 am – 10.10 am	Sedation/ GA for paediatric airway management	Dr. Rakesh Kumar
10.10 am – 10.30 am	Discussion & Q/A	
10.30 am – 11.15 am	Chairperson: Dr. S D Sharma, Dr. Anil Misra Case discussions: Paediatric difficult airway situations	Dr. Rakesh Kumar, Dr. Sunil Kumar, Dr. Neera Gupta Kumar
11.15 am – 11.30 am	Inauguration	
11.30 am - 12.15 pm	<b>Hands-on workstations</b>	
12.15 pm – 12.45 pm	Round 1	
12.45 pm – 1.15 pm	Round 2	
1.15 pm – 1.45 pm	Round 3	
1.45 pm – 2.30 pm	Lunch	
2.30 pm – 3.00 pm	Round 4	
3.00 pm – 3.30 pm	Round 5	
3.30 pm – 4.00 pm	Round 6	
4.00 pm – 4.15 pm	Tea break	
4.15 pm – 4.45 pm	Round 7	
4.45 pm – 5.00 pm	Wrap up	

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### Crossword Puzzle



Dr. Gayatri Sasikumar  
Bangalore.

**Down:**

1. Barbiturate reinstates for paediatric status epilepticus
3. What does D stand for in COLDS criteria
4. Age below which uncuffed ETTs “routinely preferred”
5. Non-Pharmacological method used for anxiolysis during paediatric induction
7. ASA fasting update minimum clear-fluid interval (hours)
8. Allergy to Kiwi fruit may signal sensitivity to
12. Newly approved ultra-short benzodiazepine for paediatric sedation
13. This “pharmacogenomic” test is being explored to predict opioid sensitivity in children
17. Predominant gene mutation behind malignant hyperthermia

**Across:**

2. I’m a legel “stimulantt” in both mugs and incubators - what am I?
6. Standardised tool after used for structured handover in paediatric anaesthesia
9. When a surgeon tugs at tiny eyes, i slow the heart with vagal ties. Known by another’s name. I’m a reflex of fame-what am i called
10. This echocardiographic parameter is considered most sensitive for detecting early right ventricular dysfunction
11. This “non-invasive” cardiac output monitor uses bioreactance technology in paediatric anaesthesia
13. This “non-invasive” cardiac output monitor uses bioreactance technology in paediatric anaesthesia
14. This “named position,” characterized by hip and knee flexion with external rotation, is often used for caudal epidural blocks or spinal anaesthesia in infants.
15. A common cause of post-op apnoea in ex-preterm infants
16. First-line vasopressor for neonatal hypotension as per 2024 consensus
18. NAP5 paediatric data - leading cause of peri-op cardiac arrest

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Email: vibnaik@gmail.com

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Dr. Anisha De – West Bengal, Dr. Sunidhara Reddy P – Telangana,  
Dr. Gayatri Sasikumar – Karnataka.

Crossword Answers on Page no: 8

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<p><b>4</b> <u>RESEARCH COMMITTEE</u></p> <p>Lead – Dr. Rakhee Goyal, Delhi Email: rakheegoyal@gmail.com</p> <p>Members – Dr. Preethi J Mathew - Chandigarh, Dr. Priyanka Karnik – Maharashtra, Dr. Anju Gupta – Delhi, Dr. Sailaja – Telangana.</p>	<p><b>9</b> <u>WFSA SAFE PAEDIATRIC ANAESTHESIA COURSE</u></p> <p>Lead – Dr. Gita Nath, Telangana Email: drgitanath@hotmail.com</p> <p>Members – Dr. Raja Narsing Rao, Telangana, Dr. Rakhee Goyal, Delhi</p>
<p><b>5</b> <u>NEWSLETTER COMMITTEE</u></p> <p>Lead – Dr. Vibhavari Naik, Telangana Email: vibnaik@gmail.com</p> <p>Members – Dr. Ekta Rai – Tamil Nadu, Dr. Ranju Singh – Delhi Dr. Anisha De – West Bengal, Dr. Sunidhara Reddy P – Telangana, Dr. Gayatri Sasikumar – Karnataka.</p>	<p><b>10</b> <u>STATE BRANCHES COMMITTEE</u></p> <p>Lead – Dr. Shiva PV – Telangana Email: shivavputcha@gmail.com</p> <p>Members – Dr. Damodara Rao – Telangana, Dr. Debashish Saha – West Bengal.</p>
<p><b>9</b> <u>WAKE UP SAFE INDIA COMMITTEE</u></p> <p>Lead – Dr. Elsa Varghese Email: elsakmc@gmail.com</p> <p>Members – Dr. Gita Nath (Rainbow Hospitals, Telangana), Dr. Ekta Rai (CMC Vellore), Dr. Sandhya Y (PGI Chandigarh), Dr. Renu Sinha (AIIMS, New Delhi).</p>	<p style="text-align: center;"><b>THANKS FOR BEING A MEMBER OF IAPA FAMILY</b></p>