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AORA 4U NEWSLETTER

Obstetric Anaesthesia – I

Bump up the quality: Improving Maternal care through quality improvement projects

Written by: Dr Sunil T Pandya, Dr Ankita J Patil

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Message by the President

Greetings!

Obstetric anaesthesia has long been a subspecialty that challenges anaesthesiologists with a dynamic spectrum of clinical scenarios and, at times, intense emotions. As our field continues to evolve, scientific advancements have underscored the pivotal role of the anaesthesiologist in obstetric care, ensuring maternal and fetal safety during labour, caesarean sections, and high-risk pregnancies. We provide labour analgesia, regional and general anaesthesia, hemodynamic management, and emergency interventions. Our expertise in pain relief, airway management, and resuscitation remains vital for optimizing maternal and neonatal outcomes.

The integration of ultrasound-guided regional anaesthesia and point-of-care ultrasound (POCUS) has significantly enhanced our ability to manage complex cases, offering greater precision and improving patient safety. However, beyond technical advancements, it is imperative that we continuously assess and refine the quality, efficiency, and consistency of the care we provide.

We are privileged to feature contributions from leading national experts in this edition of the newsletter. The editorial team and contributors have dedicated significant time and effort to compiling this issue, and we hope you find it both informative and valuable in your clinical practice.

Yours truly,
Dr Amjad Maniar
President, AORA India

Message by the Secretary

Dear AORA members, colleagues and Obstetric Anaesthesia practitioners,

Greetings from the desk of Team AORA. In our pledge and endeavour to encourage Anaesthesiologists to upgrade their skills, practices and patient care AORA through this newsletter intends to throw some light on upscaling the practice in Obstetric Anaesthesia.

As we all are aware, irrespective of the zone across the country or Asian subcontinent Obstetric Anaesthesia forms the majority of the work for most of the Anaesthesiologist. In spite of the advances in the Obstetric anaesthesia practices in recent years the challenges faced by the Obstetric Anaesthesiologists still continue to affect the delivery of high-quality health care to the parturient. Challenges faced during the Obstetric Anaesthesia aren't just restricted to the mother but extended to the neonate too. They aren't limited to the obstetric medical condition or emergencies but also to the dynamic physiologic changes in the parturient and the neonate.

This second Newsletter of AORA under our Academic Director Dr Hetal Vadera brings to your door, the experiences thoughts knowledge and skills of the Doyens in Obstetric practice not just nationally but internationally. Dr Sunil Pandya has nicely enlightened how one can deliver and audit one's own services to international standards. Dr Preet Anand Singh has stressed upon extending our focus from just Obstetric Anaesthesia to Perioperative Analgesia. Dr Danish Azam has ably guided us to use POCUS in Obstetrics and how it can help us troubleshoot and get us out of most pertinent practice dilemmas. The immense experience and knowledge shared by Dr Anju Grewal and Dr Manokanth in form of real case scenarios will definitely make each one of us nostalgic of our own cases. Dr GL Ravindra and team have shared their insights with us to help us establish a Labour Analgesia clinic in our area.

Dr Neha and Dr Amrita will tease our brains with their quizzing abilities which I am sure you will enjoy. The inspirational interviews of AORA fellowship Gold medallists by Dr Manshad will definitely inspire many RA enthusiasts in coming years to follow.

Overall, I would say this edition will definitely be a game changer in creating a difference in practice for each one of us. On your behalf and from every one of us at AORA, I congratulate Dr Hetal Vadera for his Endeavour to extend our knowledge of Regional Anaesthesia to field of Obstetric Anaesthesia.

"We only know what we know when we need to know it"
Sukhada Pathanam

Yours truly,
Dr Ujjwalraj Dudhedia
Secretary, AORA India

From the desk of editor:

Advancing Excellence in Obstetric Anaesthesia

Dear Readers,

Obstetric anaesthesia stands at the crossroads of maternal and foetal well-being, demanding a seamless blend of precision, preparedness, and compassionate care. With evolving clinical practices, technological advancements, and increasing patient expectations, our role as anaesthesiologists in obstetric care has never been more crucial.

This edition of AORA4U delves into critical aspects of obstetric anaesthesia, bringing together expert insights on enhancing maternal care through quality improvement initiatives, tackling challenges in labour analgesia, and addressing dilemmas in obstetric anaesthesia with a case-based approach. The integration of point-of-care ultrasound (POCUS) in obstetric emergencies is transforming our decision-making capabilities, while procedure-specific analgesia in LSCS is optimizing peri-operative comfort for mothers.

Beyond clinical excellence, we also celebrate the dedication and aspirations of young anaesthesiologists. The AORA fellowship Gold Medalist interview highlights the journey of a rising star in regional anaesthesia, inspiring us all to strive for innovation and mastery in our field.

As we navigate the complexities of modern obstetric anaesthesia, let us continue to learn, collaborate, and elevate our standards of care. Together, we can ensure safer outcomes and a more fulfilling childbirth experience for every mother and baby.

Happy reading!

Warm regards,

Yours truly,
Dr Hetal kumar Vadera
Scientific Chairperson, AORA
Editor, AORA Newsletter

Editorial Team

Bump up the quality: Improving Maternal care through quality improvement projects

Written by: Dr Sunil T Pandya, Dr Ankita V Patil

Introduction

The global maternal mortality ratio (MMR) has declined significantly in the west, however in lower- middle income countries (LMICs), the reductions have been seen from 339 to 223 deaths per 100,000 live births during the period 2000 to 2020. The lifetime risk of maternal death of 1 in 40 (compared to 1 in 16,000 in Australia and New Zealand). These poor outcomes are the result of complex and multifactorial health system deficiencies.

The safe provision of anaesthesia remains a key goal to improve maternal and neonatal outcomes, although it is just one aspect within a complex, interconnected and interdependent obstetric healthcare system.

Quality improvement methods are effective in improving healthcare delivery using sustainable, collaborative, and cost-effective approaches. Quality improvement (QI) and interventions with metrics have been part of the national agenda aimed at reducing maternal morbidity and mortality.

Maternal care improvement strategies, especially in LMICs, encompass community involvement, standardising obstetric anaesthesia practices, data-driven approaches (audits), and health system strengthening during the peripartum and perioperative period where the physician anaesthesiologist plays a pivotal role, further may help in standardising anaesthesia and resuscitative practices, thus reducing MMR in LMICs.

Fortunately, anaesthesia for obstetric procedures and epidural analgesia for pain relief in labour have an excellent safety record and have been the lowest among the causes of maternal and neonatal morbidity / mortality rates. However, there is a scope of further improvement in anaesthesia quality care.

Maternal anaesthesia is a critical component of obstetric care, ensuring safe and effective pain management for mothers during labour, caesarean sections, and other obstetric procedures. Enhancing the quality of maternal anaesthesia care is essential for reducing maternal morbidity and mortality. One of the most effective strategies to achieve this is through the systematic use of audits and metrics. By continuously monitoring, evaluating, and improving anaesthesia practices, healthcare providers can enhance patient outcomes and optimise resource utilisation.

Rapid advances and improved networking abilities have led to the widespread adoption of technology in healthcare, especially focused on medical records, documentation and evaluation, or mining of data (clinical audits) to improve outcomes.

The role of audits in maternal anaesthesia quality improvement

Audits serve as a structured approach to assessing and improving maternal anaesthesia care. They involve a systematic review of practices, procedures, and outcomes against established benchmarks or guidelines. The Eisenhower matrix (Fig. 1) is a useful method to begin with.

Select parameters, the institute or the department wants to improve from this matrix e.g. Reducing PDPH and changing to pencil point needles (A, in the matrix), reducing failed neuraxial blocks (B, in the matrix), reducing hypotension following spinal anaesthesia (A, in the matrix), having video laryngoscope for all obstetric cases (A, in the matrix), just to name a few.

Key benefits of conducting audits include:

Identifying gaps and areas for improvement: Audits highlight deficiencies in maternal anaesthesia care, including delayed interventions, inadequate pain management, or suboptimal resource allocation.

Ensuring compliance with guidelines: Regular audits help ensure adherence to national and international anaesthesia protocols, such as those recommended by the World Health Organisation (WHO), the American Society of Anesthesiologists (ASA) and Association of Obstetric Anaesthesiologists (AOA), India.

Enhancing patient safety: By identifying preventable complications and errors, audits promote a culture of continuous improvement and patient safety.

Facilitating data-driven decision-making: Audits provide empirical data that can inform policy changes, training programs, and resource distribution.

Types of Audits in Maternal Anaesthesia

Several types of audits can be implemented to enhance maternal anaesthesia quality care:

Clinical audits: Assess the quality of anaesthesia care by comparing actual practice against established standards. This includes evaluating pain management effectiveness, anaesthesia-related complications, and adherence to protocols.

Process audits: Examine the workflow and processes involved in delivering anaesthesia care, such as preoperative assessments, medication administration, medication error prevention and emergency response preparedness.

Outcome audits: Focus on patient outcomes, including maternal morbidity and mortality rates, neonatal health, and postoperative recovery experiences.

Peer review audits: Involve an external or internal team of experts who review cases to provide unbiased feedback and recommendations.

Patient experience audits: Gather feedback from mothers regarding their anaesthesia experience to identify areas for patient-centered improvements.

Key metrics for evaluating maternal anaesthesia quality

To ensure the effectiveness of audits, key performance indicators (KPIs) must be established. These metrics provide measurable data on maternal anaesthesia care quality. Important metrics include:

Anaesthesia-related complication rate: The percentage of maternal patients experiencing complications such as hypotension following spinal anaesthesia, labour analgesia, respiratory depression, or post-dural puncture headaches.

Timeliness of epidural placement: The average time between epidural request and administration, ensuring timely pain relief.

Use of neuraxial techniques: The proportion of caesarean sections or labour analgesia cases utilising neuraxial anaesthesia (e.g., spinal, epidural, or combined spinal-epidural / continuous spinal anaesthesia) versus general anaesthesia.

Maternal satisfaction scores: Patient-reported experiences and satisfaction levels regarding anaesthesia care and pain management.

Adherence to preoperative assessment protocols: The percentage of patients receiving thorough preoperative assessments, including risk stratification and allergy checks.

Conversion rate from regional to general anaesthesia: The frequency at which regional techniques fail and necessitate conversion to general anaesthesia.

Postoperative pain scores: Patient-reported pain levels within the first 24 hours post-procedure, indicating the effectiveness of anaesthesia and analgesia plans.

Neonatal outcomes related to anaesthesia: Apgar scores at 1 and 5 minutes, indicating the impact of maternal anaesthesia choices on neonatal health.

Staff training and competency levels: The percentage of anaesthesia providers who have undergone continuous education and simulation training.

Implementing audit and metrics-based improvements

To effectively use audits and metrics for quality improvement in maternal anaesthesia, hospitals and healthcare institutions should adopt a structured approach

Establish a multidisciplinary audit team: Include anaesthetists, obstetricians, midwives, nurses, and quality improvement officers to ensure a comprehensive review process.

Standardise data collection methods: Utilise electronic health records, patient surveys, and direct observation techniques to gather accurate data.

Regularly review audit findings: Conduct quarterly or biannual meetings to discuss audit results and implement corrective measures.

Implement quality improvement initiatives: Use audit findings to introduce targeted interventions, such as enhanced training programs, revised clinical guidelines, and infrastructure improvements.

Engage in continuous education and simulation training: Offer regular workshops and simulations to ensure anaesthesia providers remain proficient in best practices and emergency management.

Leverage technology for real-time monitoring: Utilise digital dashboards and predictive analytics to track key metrics and identify trends in real-time.

Encourage patient involvement: Solicit patient feedback to improve the overall anaesthesia experience and ensure a patient-centered approach to care.

How we implemented it?

Initially, we just started as data collection process of all the procedures we did. Then slowly migrated into data analytics. Identified the variables and areas of concern (e.g. failed spinal for an elective caesarean section, unanticipated difficult airway etc) and slowly worked towards closing these gaps. Over the decades we matured and created into a dynamic dashboard audit with defined standards and outcomes into coloured zones (**green – acceptable** international standards e.g. dural puncture during labour analgesia incidence < 0.4%, **amber – area of concern** e.g. dural puncture during labour analgesia incidence 0.4 to 0.6%%, **red – alert**, e.g. dural puncture during labour analgesia incidence > 0.6%, immediate action needed, awareness under GA, total spinal, major neurological sequelae, we have put our standards a zero %. Even one case is flashed as red on the dashboard). This dashboard has helped us immensely to bump up our quality metrics, so much so that our data is comparable / better than the recommended RCOA / OAA / SOAP standards.

The following figures are the excerpts from our Obstetric Anaesthesia Dashboard:

Fig 2, 3 & 4: Parameters and defined standards with zoning; Fig 5: Administrative parameters

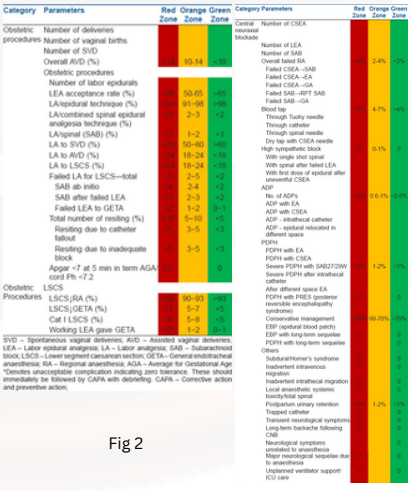

Fig 2

Fig 3

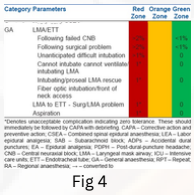

Fig 4

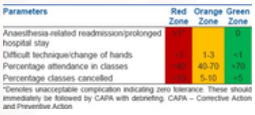

Fig 5

Navigating Challenges

Despite the benefits of audits and metrics, challenges exist in their implementation. Common challenges and corresponding solutions include:

Data inaccuracy and incompleteness: Encourage standardised documentation practices and implement electronic health record systems. Encourage reporting by inculcating no blame culture. Follow the acronym **KISS – Keep It simple & straight-forward.** Start with just a few parameters and advance as you progress.

Resistance to change: Foster a culture of continuous improvement through leadership support and staff engagement. Discuss the clinical audit and KPIs on a monthly basis. Compare the institute's (Individual's) data with peers.

Limited resources: Advocate for institutional investments in staff training, equipment, and technology to facilitate audit processes. Present the consolidated data to the management to seek organisational support. KPIs that are organisational dependent should be highlighted.

Time constraints: Integrate audit activities into routine workflows to minimise additional workload on healthcare providers. We as a team, now are investing in making an mobile bases APP so that data entry is simplified.

Conclusion

Bumping up the maternal anaesthesia quality care through audits and metrics is a crucial step toward enhancing patient safety and clinical outcomes. By systematically monitoring key performance indicators, identifying areas for improvement, and implementing evidence-based interventions, healthcare institutions can ensure high-quality, patient-centered anaesthesia care for mothers.

Create an accountable system with culture of excellence in the department. Continuous assessment and learning will ultimately lead to better maternal and neonatal health outcomes, aligning with global standards.

Acknowledgment

Figures 2, 3, 4 & 5 have been obtained from my own published article:

Sunil T Pandya, Kausalya Chakravarthy, Aparna Vemareddy. Obstetric anaesthesia practice: Dashboard as a dynamic audit tool. Indian J Anaesth 2018;62:838-43.

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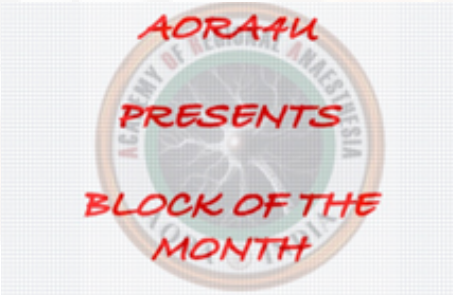

Enigmas and Dilemmas in Obstetric anaesthesia practice: A case-based practical approach

Written by: Dr Manokanth Madapu, Dr Anju Grewal

Anaesthesia in a parturient with obstetric complications or medical disorders presents a unique challenge that requires a sound knowledge of its interaction with physiological changes of pregnancy and its impact on foetal wellbeing. Hypertensive disorders of pregnancy (HDP) which includes gestational hypertension, chronic hypertension, pre-eclampsia (PE), eclampsia, and HELLP syndrome (Haemolysis, Elevated liver enzymes and Low platelets) is one such example and often encountered with misleading and varied clinical presentations. Here, we shall discuss three unique but not uncommon presentations of HDP and approach to anaesthesia.

Case 1: Mrs. Sy Primigravida was booked for antenatal care at 8.1 weeks of gestational age (GA). She received antenatal vitamins, and vaccines as per standard antenatal care. Thrombocytopenia of 90,000/cumm was detected at 20 weeks GA. At 26 weeks GA, she was diagnosed with gestational diabetes mellitus (GDM) and anaemia for which treatment was initiated promptly. She was admitted in emergency at 34.5 weeks GA with complaints of raised blood pressure of 150/86 mm of Hg, preterm premature rupture of membranes and headache. Investigations pertaining to PE were sent to; antihypertensives Tab. Labetalol 100 mg eighth hourly and Tab. Nifedipine 10 mg eighth hour was started along with a magnesium sulphate loading dose of 4 grams intravenous (IV) followed by a maintenance dose of 1 gram/hour initiated.

Initial investigations reported platelet counts to be 89,000/cumm, Serum glutamic pyruvic transaminases (SGPT) 198 IU/L, Lactate dehydrogenase (LDH) 239 IU/L and serum creatinine of 0.6mg/dL. A diagnosis of severe PE with thrombocytopenia was made. She remained clinically stable, but repeat investigations after 6 hours reported a fall in platelet count to 71,000/cumm and a raise in LDH to 342 IU/L. Partial HELLP syndrome was diagnosed and an urgent cesarean section (CS) was done under Spinal anaesthesia. Postoperatively , magnesium sulphate prophylaxis was continued for 24 hours. She was discharged on 3rd post- operative day after noting her lab parameters to be on an improving trend and blood pressure well controlled on antihypertensives. Antihypertensives Tab.Nifedipine 20 mg eighth hourly and Tab.labetalol 100 mg eighth hourly was continued for 2 weeks postpartum. Prophylactic anticoagulation with low molecular weight heparin (LMWH) was given for 10 days postpartum.

Discussion:

Parturients with HDP often require preoperative optimization and blood pressure control before planning anaesthesia. Inj. Labetalol, oral short acting Tab.Nifedipine and Inj. Hydralazine are the preferred

Test	First trimester	Second trimester	Admission	Preop	1st Post op	4thPost op
Haemoglobin g/dL	11.2	10.9	12.6			10.1
WBC cell/cumm	8000	5400	7900			5200
Platelet count L/cumm	1,05,000	94000	89000	71,000	93,000	1,68,000
SGPT IU/L			198	180	139	
LDH IU/L			239	342	273	
Serum Creatinine mg/dL			0.6	0.6	0.6	
Prothrombin time Seconds			13.7			
INR			0.95			
Activated Partial thromboplastin time seconds			28.6			

Table 1: Case 1 Blood Reports

Zuspan Regimen	Pritchard Regimen
Loading dose : 4-6 grams IV prepared as 20% solution over 20 minutes	Loading dose : 4 grams IV over 5-10 minutes (20% solution) followed by 5 gm intramuscular (IM) in each buttock (50% solution) - 10 gm IM total
Maintenance dose : 1-2 grams / Hour IV infusion (20% solution)	Maintenance dose: 5 grams IM every 4 hours in alternate buttocks (50% solution)
Therapeutic range : 4 -7 mEq/L or 5-9 mg/dL	
Antidote for magnesium toxicity : 10% Calcium gluconate 10 ml over 3 minutes	

Table 2: Common magnesium sulphate regimens [3]

antihypertensives in managing hypertensive emergencies in PE. Oral Labetalol, Nifedipine and Methyldopa are first-line antihypertensives used to manage hypertension in pregnancy [1,2]. Dosages of commonly used antihypertensives are elaborated in Table 2.
Magnesium sulphate for seizure prophylaxis and eclampsia management is an extremely important aspect of preeclampsia management. Two popular regimens of magnesium administrations are Zuspan and Pritchards regimen [3].

Anaesthesia management: Neuraxial anaesthesia is the preferred technique in all women with severe preeclampsia in absence of coagulopathy and platelet counts > 70,000/ccmm . Severe PE women are less prone to hypotension after spinal anaesthesia compared to normal women and the resulting hypotension can easily be corrected with small doses of vasopressors. Epidural anaesthesia does not confer any additional benefit over spinal anaesthesia, while having a slightly higher risk of epidural haematoma due to indwelling catheter [4].
Society of obstetric anaesthesia and perinatology (SOAP) interdisciplinary consensus statement on neuraxial procedures recommends neuraxial anaesthesia when platelet counts are > 70,000/ccmm with normal coagulation profile. For counts between 50,000 - 70,000/ccmm and in absence of coagulopathy, airway vs neuraxial risk assessment should guide choice of anaesthesia. When counts are < 50,000/ccmm it may be reasonable to avoid spinal anaesthesia [5]. Overall, the incidence of neuraxial haematoma is extremely low in absence of coagulopathy when compared to difficult airway and airway related morbidity[4]. For case 1 therefore, with the platelet count of 71,000/cumm and in absence of coagulopathy, spinal anaesthesia is the natural and safe choice.

Drug	Route of administration	Dose range	Remarks
Labetalol	IV (for initial control)	10 - 20 mg first dose. 20 -80 mg from the second dose. Maximum total dose 300 mg Or 1-2 mg / min infusion	Incremental doses should be administered at least 10 -30 minutes apart
Labetalol	Oral	100 - 200 mg twice daily initially 200 - 2400 mg in divided doses / 24 hours	Watch for bradycardia
Hydralazine	IV (for initial control)	5 mg first dose 5-10 mg subsequent dose Maximum total dose 20 mg or Infusion 0.5 - 10 mg/hr	Incremental doses should be administered at least 20 -40 minutes apart
Cap. Nifedipine (Immediate release)	Oral (for initial control)	10-20 mg first dose Maximum dose 180 mg / day	Incremental doses should be administered at least 20 minutes apart
Tab Nifedipine (Extended release)	Oral	30 -120 mg / day in divided doses	
Tab Methyldopa	Oral	250 mg twice or thrice daily initially 500 - 3000 mg / day in divided doses	Not used in the postpartum period due to increased risk of postpartum depression
Tab. Hydrochlorothiazide	Oral	12.5 - 50 mg / day	Second line agent

Table 3: Commonly used antihypertensive medication [2]

Case 2: Mrs. Gv Primigravida referred at 32 weeks GA with breech presentation and doppler compromise. She was initially asymptomatic with mild pedal edema, blood pressure of 140/80 mm Hg,and trace proteinuria. After 8 hours of admission her blood pressure started to rise and Tab.Nifedipine 10 mg 12th hourly was administered. A few hours later she started complaining of severe epigastric pain, blurring of vision, restlessness and irritability. Acute severe hypertension with decreased urine output was noted and magnesium sulphate Zuspan regimen was started. Within a span of 5 hours platelet counts dropped to 78,000/ccmm from 3,34,000 /ccmm, LDH and SGPT increased to 3579 IU/L and 2684 IU/L respectively. Ultrasound abdomen unfortunately revealed abruption and fetal demise. Emergency CS was performed under general endotracheal anaesthesia (GETA). Post operatively she was electively ventilated for 8 hours and extubated after her irritability fully resolved. Her creatinine continued to rise, eventually requiring dialysis.

Discussion :
Rapid deterioration of laboratory parameters, irritability and uncooperative patient favoured GETA as a better choice in this case. Neuraxial anaesthesia is contraindicated in patients with frank coagulation failure, who are unconscious or unequivocally refuse to the procedure despite adequate counselling. Rapid fall in platelet counts from 3,34,000/cumm to 78,000/cumm within a short span of 5 hours adds a layer of complexity in deciding mode of anaesthesia as the counts may fall further to dangerously low levels by the time anaesthesia is administered. Such platelets may also function sub-optimally, even when counts are reasonable. GETA can be challenging as pregnancy related airway edema further worsens in preeclampsia increasing the risk of difficult intubation over and above that exists in normal pregnant women[6]. Additional senior help during intubation, availability of advanced airway equipment like video laryngoscope (VLS), and second-generation supraglottic airway devices (SAD) are vital while

attempting intubation in a severe PE mother. Hypertension from laryngoscopic response should be mitigated by timely administration of beta blockers like labetalol, esmolol or opioids like fentanyl, remifentanil before intubation.Depolarising muscle relaxant like succinylcholine is preferred at the time of intubation. Long acting muscle relaxants like vecuronium and atracurium should be used cautiously at reduced dosages due to potential prolongation of effect from concurrent use of magnesium sulphate[4]. In presence of AKI and elevated potassium levels, rocuronium for intubation may be a better choice.Sugammadex must be available to reverse rocuronium at the end of surgery.

Test	Admission	8 hours after admission	13 hours after admission	1st Post op	2ndPost op	3rd Post op
Haemoglobin (g/dL)	13		14	8.8	8.0	7.6
Platelet count L/cumm	262000	334000	78000	55000	48000	52000
SGPT IU/L	39	270	2684	2991		3227
LDH IU/L	162	455	3579	4026		6967
Serum Creatinine mg/dL	0.7	0.7	1.0	1.0	1.7	2.4

Table 4: Case 2 blood reports

Case 3: Mrs. Dq G2P1L1 at 36 weeks GA with BMI of 43 was referred to a tertiary obstetric hospital for management of suspected HELLP syndrome. She was diagnosed with high blood pressure at 33 weeks gestation and was started on Tab.Labetalol 100 mg twice daily by her primary obstetrician. Later at 36 weeks, she visited her obstetrician with complaints of progressive swelling of the body, headache and uneasiness. Upon evaluation she had blood pressures of 160/100 mm Hg , platelet counts of 35,000/ccmm , deranged LFT, serum creatinine 1.0 mg/dL. Her obstetrician administered 2 gram magnesium sulphate IV and referred for further care.

She arrived at the referral hospital well past midnight. Her history and referral notes were reviewed, she was examined clinically and laboratory investigations were sent. She was clinically stable with a blood pressure of 140/90 mm Hg, room air saturations of 99%. Tab.labetalol 200 mg eighth hourly daily was started along with magnesium sulphate (Zuspan regimen). Investigations at referral hospital reported SGPT of 250 IU/L, LDH 1741 IU/L, serum creatinine of 1.0 mg/dL, uric acid of 8.1 mg/dL, platelet count of 32,000/ccmm and total bilirubin of 11.9 mg/dL (direct 8.9mg/dL; indirect 3.0 mg/dL). Coagulation profile was normal and fibrinogen level was 335 mg/dL. Upon preanaesthetic evaluation, difficult airway (grade IV mallampati score), anasarca and difficult to palpate spine was noted. She was taken up for an emergency CS in view of HELLP syndrome. One unit of single donor platelet (apheresis platelets) was transfused before induction and 2 units of PRBCs (packed red blood cells) were reserved. A bedside clotting test was performed in a red top vacutainer by drawing 3 ml blood and leaving the vacutainer undisturbed for 5 min initially and then checking for clot every 30 seconds by tilting the vacutainer. A strong clot was noted by the 9th minute, when the vacutainer could be turned upside down. The duty anaesthetist performed a spinal anaesthesia for CS after weighing in risks associated with GETA in absence of prompt additional help at odd hours in the night. Cesarean section was uneventful with minimal blood loss. Magnesium sulphate prophylaxis was continued postoperatively. She regained full sensory and motor power within 4 hours after spinal block and there were no undue complications associated with anaesthesia. Tab.Labetalol 200 mg eighth hourly and Tab Nifedipine 20 mg eighth hourly were given for blood pressure control. Her lab parameters gradually improved over 72 hours. Thromboprophylaxis with LMWH was started once platelet count improved to >1,00,000 /ccmm and discharged on 3rd post-op day.

Discussion:

The choice of anaesthesia for the third case is undoubtedly controversial, but it also gives us an insight into how the duty anaesthetist might have weighed his chances for choosing spinal anaesthesia over GETA. Let us examine this by delving into the available literature and case reports. Firstly, it's important to note that the risk of airway related mortality is much higher than epidural haematoma from spinal anaesthesia in the absence of coagulopathy[4]. The second thing to consider is whether platelet transfusion prior to spinal anaesthesia increases safety of the neuraxial block. There are a number of published case reports which support this practice. In a retrospective single center case series, five cases with severe thrombocytopenia with platelet counts < 50,000/cumm were identified and four of these patients received spinal anaesthesia after platelet transfusion with no adverse outcome. In one patient, counts were 8,000/cumm and CS was done under GETA after platelet transfusion. All five women had no coagulopathy and all five women had maximum amplitude (MA) > 60 mm on thromboelastogram (TEG) [7].

Finally, understanding the role of fibrinogen in clot formation is crucial. Fibrinogen, platelets and von willebrand factor are responsible for primary haemostasis. Fibrinogen plays an important role in platelet aggregation and clot formation by binding to GP IIa/IIIb receptors along with other proteins.

There is evidence that fibrinogen may independently improve the clot strength even in thrombocytopenic patients. Lang T et al [8], conducted a series of experiments on plasma with different platelet counts ranging from 10,000/cumm to 1,00,000/cumm and then spiking the plasma with two different fibrinogen concentrates of 550 mg/dl and 780 mg/dl. They demonstrated the clot strength decreased with platelet counts < 1,00,000 /cumm using rotational thromboelastometry (ROTEM). Using fibrinogen thromboelastometry (FIBTEM) they illustrated increasing fibrinogen concentration increases clot strength in a dose dependent manner even at low platelet counts (10,000/cumm). In another study Mishra N et al[9], sought to correlate a simple and inexpensive point of care clotting test time with fibrinogen levels. They found a negative correlation between clotting time and fibrinogen levels and suggested bedside clotting time could be used as a surrogate to quickly estimate fibrinogen level. A clotting time > 11 minutes may indicate fibrinogen levels < 200 mg/dL.

In case 3 the duty anaesthetist noted that the platelet count remained stable but low as the counts were similar to the one tested at primary site. Fibrinogen level was 335/dL and coagulation profile normal. Bedside clotting time at 9 minutes also was within normal range. Since the patient had a difficult airway and immediate help was unavailable, choosing spinal anaesthesia after platelet transfusion was a reasonable choice.

Test	Admission	1st Post op	2thPost op	3rdPost op
Haemoglobin g/dL	12.0			10.3
WBC	11000			16000
Platelet count L/cumm	32000	33000	81000	137000
SGPT IU/L	250	161	105	65
LDH IU/L	1741	869		
Serum Creatinine mg/dL	1.0	1.2	1.1	0.8
Prothrombin time Seconds	16.8			
INR	1.23			
Activated Partial thromboplastin time seconds	33.1			
Fibrinogen mg/dL	335			
Bilirubin mg/dL	11.9	2.2	0.7	0.8

Table 5: Case 3 blood reports

Conclusion:

HDP has varied presentations and a thorough risk-benefit analysis helps in making safe anaesthesia choices. Thrombocytopenia in itself does not rule out spinal anaesthesia as an option. Coagulation status, fibrinogen levels, point of care testing (TEG /ROTEM) when available, bedside clotting test in low resource setting, patients neurological status and urgency of CS, all play a role in optimizing the choice of anaesthesia. We conclude by emphasizing that when platelet counts are below 50,000/cumm, spinal anaesthesia should be administered only and only after a thorough risk-benefit analysis but not as a norm and certainly not causally.

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Challenges in setting up epidural labour analgesia as a freelancer anaesthesiologist

Written by: Dr G L Ravindra, Dr Bharatkumar U R, Dr Praveen BJ

In today's world of evolving healthcare landscape, labour analgesia has become an essential component of maternal and childcare. Epidural labour analgesia (ELA) is a crucial service for managing pain during labour and delivery and is gaining acceptance and recognition quickly. For freelancer anaesthesiologists, setting up this service presents unique challenges. From the complexities of working in various hospital settings to ensuring patient safety and managing logistics, there are several factors that must be carefully navigated. Here, we will explore some of the key challenges faced by us in setting up our epidural labour analgesia practice and provide solutions to these challenges we successfully employed.

Challenge 1: Building a team

Epidural labour analgesia set up requires a highly skilled team working in sync who share intent and passion- anaesthesiologists, obstetricians, paediatricians, hospital management, and nursing and other support staff. As a freelance anaesthesiologist, one of the significant challenges is finding professionals who share the same unwavering ***intent and passion*** for patient care and pain management. Without this shared commitment, ensuring smooth procedures and providing optimal outcomes can be difficult.

Solution:

Building strong professional relationships with individuals who share your vision, intent and passion is key. While it can be challenging to form a cohesive team in a freelance environment, establishing long-term relationships with like-minded professionals will help. Always prioritise honest, clear communication and mutual respect with colleagues to foster a collaborative environment. It helps to align the personal and professional goals of all team members by having frank discussions. Harbouring unspoken thoughts and misaligned goals of different team members are the biggest hurdles in building a long-lasting successful team. Over time, you can build a reliable network of trusted professionals who share your passion for high-quality care.

Challenge 2: To convince the Obstetricians to join the Epidural Labour Analgesia (ELA) setup

Many obstetricians may be reluctant to incorporate epidural labour analgesia into their practice due to concerns about safety of procedure, the added cost, liability issues and potential disruption to their usual care routines. These concerns can present a significant barrier to establish the ELA setup.

Solution:

1) Understand and address the concerns of our obstetrician:

As an obstetrician and indeed as all doctors, our primary priority is the wellbeing of our patients. Complications can occur even in normal pregnancies without warning. This leads to an attitude of playing safe by the Obstetricians. The practice of '**Don't change something that works well'** doesn't help either. Thus, the Obstetricians don't want the risk of introducing a new variable; no matter how efficient it is. To alleviate their concerns, we must engage in open and transparent discussions with obstetricians, addressing their fears and providing reassurance backed by evidence and data about the safety and efficacy of the procedure.

2) Emphasise parturient centered care:

Highlight the importance of providing women with choices and control over their labour experience where they can focus on welcoming new life with joy and serenity, rather than being overwhelmed by pain and anxiety.

To demonstrate the benefits of ELA we encouraged our obstetrician colleagues to visit a renowned state of art labour analgesia centre where they witnessed the transformative impact of the service - **'Silent labour wards and elated mothers'**. The visit proved to be a turning point for our Obstetricians. After the visit, there was a paradigm shift from initial scepticism to enthusiasm. Upon their return they themselves expressed their eagerness to introduce epidural labour analgesia services, recognising the profound impact it could have on parturient lives.

Challenge 3: To convince expectant mother and their families

Initially expectant mother and their families may be hesitant to adopt labour analgesia due to lack of awareness regarding about the safety and benefits of the procedure, misconceptions about potential risks and concerns about the added cost. Some may not fully understand the benefits of pain relief during labour and may be apprehensive about the procedure itself. Some expectant mothers, unaware of the intense pain the labour analgesia confidently decline labour analgesia, only to find themselves unprepared and overwhelmed by escalating pain, ultimately requesting for relief - a distressing scenario that could be avoided with earlier access to labour analgesia. As a freelancer, providing labour analgesia such mothers on short notice poses significant challenge.

Solution:

1.Reassurance: In reality, most expectant mothers are often apprehensive about labour pain and if we can reassure them that the goal of ELA is to ensure their comfort and reduce the distress of labour pain, many are less concerned about the added cost, particularly when the benefits are clearly explained.

2.Effective communication, counselling and education: Engage expectant mother and their families in educational sessions, videos and pamphlets that provide accurate information about the safety, effectiveness and positive outcomes associated with epidural analgesia

ideally during antenatal visits, so families have ample time to understand the benefits, clear their doubts and address any misconceptions. When expectant mother and families are well informed and confident in their choices, they are more likely to embrace the idea of labour analgesia. As more women experience the power of labour analgesia, word of mouth advocacy will amplify, driving increased demand.

Challenge 4: Engaging hospital administrators:

Convincing hospital administrators to support the labour analgesia setups requires addressing the initial investment required for equipment, staffing and other resources. The administrations are often apprehensive regarding the capital needed, involvement of multiple specialities, insurance processing, and potential medicolegal complications.

Solution:

Having frank discussions and addressing their concerns will overwhelmingly convince hospital administrations to promote ELA practice as it eventually works toward augmenting their revenue stream. Overall, the benefits of an ELA set-up far outweigh the cost.

1. Initial investment requirements such as monitoring equipment and ICU care setups are almost always present in all hospitals providing maternal care as they are already equipped to handle emergency caesarean sections and post-op care.
2. The additional cost will mostly be marginal. It mostly involves the cost of training nursing/supporting staff and marketing of the program.
3. Closer involvement of anaesthesiologists with the obstetric and paediatric departments leads to better safety outcomes for the hospital. The addition of a closely working anaesthesia team with the obstetric team also enables the unit to admit and treat more complex cases. This in turn enables the hospital to expand its potential patients and revenue.
4. The team can initially offer to absorb the cost of the program to demonstrate efficacy and viability.
5. Work together to address concerns about staffing, equipment and other resources.

Challenge 5: Maintaining consistent parturient care

As a freelancer, the lack of continuity in care can sometimes compromise parturient comfort and safety. There may also challenges in ensuring that all necessary pre-procedure assessments are completed in timely manner.

Solution:

1. Establish and rigorously implement evidence-based protocols for:

a) Comprehensive pre-procedure assessments
b) Epidural initiation and dosing
c) Standardised concentration and volume of local anaesthesia
d) Sensory and motor block assessment
e) Evaluating pain levels
f) Regularly recording vital signs
g) Continuous foetal monitoring
h) Guidelines for management of complications

It's also important to ensure that you are always up to date on the latest safety protocols and patient monitoring guidelines.

2. Recognise reliable and efficient labour ward nurses and designate them as '***pain nurses***'. Empower them through rigorous training to vigilantly monitor expectant mothers and swiftly identify potential complications.
3. Initially administering top-ups preferably in our presence, later in the presence of duty doctors after prompt notification.
4. Cultivate strong, collaborative relationships with obstetricians, paediatricians, physicians and other speciality doctors in the hospital, establishing a strong network of trusted allies. This rapport enables us to confidently request their availability in case of complications arising during our absence, providing an added layer of assurance and expertise for optimal patient care.

Challenge 6: Time management and scheduling

As a freelancer, time management can be one of the biggest challenges, setting up the procedure in a timely manner and coordinating with staff can put pressure on delivering epidural analgesia on short notice or in busy labour units.

Solution:

1. Initially establish labour analgesia setup in one hospital only, which can be expanded to other hospitals later as the group expands.
2. Start small: Initially offer labour analgesia on a limited basis to ensure a manageable workload. Regularly review the program's effectiveness and make adjustments to optimise care.
3. Advance notification: Collaborate with the obstetrician to receive timely notification about expectant mothers seeking labour analgesia, enabling proactive planning and resource allocation.
4. Be prepared to adjust our schedules, reassign non-emergency cases.
5. Effective communication: In situations where delays occur, empathetically counsel expectant mothers (by obstetrician/pain nurse) empowering them to cope with discomfort until our service is available.
6. Training nursing staff at regular intervals: regular training sessions for our nursing staff will significantly enhance our workflow. By empowering them with the necessary skills and knowledge, they can efficiently manage simple cases, freeing up our time to focus on other critical aspects.

Challenge 7: Revenue sharing

Revenue sharing is a critical component of sustainable ELA service. As a freelancer, establishing a fair and transparent revenue-sharing model is crucial for long-term success of ELA services.

Solution:

1. Separate billing: implement separate billing for ELA services to ensure accurate revenue tracking and distribution.
2. Transparent revenue sharing: establish a clear, transparent revenue-sharing model that outlines the percentage allocated to each team member.

3. Fair compensation: ensure that the hospital and all team members –anaesthesiologist, obstetrician, paediatrician, nursing staff and support staff (housekeeping and others) receive fair compensation for their services.

Benefits of a well-designed revenue-sharing model include:

1. Improved team morale: fair revenue sharing fosters a positive environment, encouraging collaboration and teamwork.
2. Increased job satisfaction: team members feel valued and recognised for their contribution, leading to increased job satisfaction.
3. Enhanced patient care: a motivated and incentivised team provides exceptional patient care, driving positive outcomes and reputation.
4. Long-term sustainability and growth of ELA services.

CONCLUSION:

Setting up epidural labor analgesia set up requires an ***open and collaborative team approach***, effective communication and a willingness to overcome challenges. By proactively addressing these challenges, we can establish a successful ELA set-up. While an individual anaesthesiologist can initiate ELA service, the ultimate goal should be to expand beyond a solo practice into institutional-like practice by incorporating another anaesthesiologist with expertise in obstetric anaesthesia, regional anaesthesia and critical care. This collaborative approach enables the development of a comprehensive obstetric care system, where ELA is an integral part of broader obstetric anaesthesia service. This ensures that expectant mothers receive highest standard of care throughout labour and delivery enhancing their overall birth-experience, while at the same time augmenting the practice and success of anaesthesiologists, obstetricians and hospitals alike.

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AORA 4 U WORKSHOP
GSVM RA CME cum WORKSHOP

PNS guided blocks especially for resource limited setting

The Academy of Regional Anaesthesia of India (AORA) recently organised a highly successful Regional Anaesthesia Workshop at GSVM Medical College, Kanpur, on March 1, 2025. This event underscored AORA's commitment to advancing regional anaesthesia practices across India, especially in settings where resources like ultrasound machines may be limited.

Workshop Highlights: The workshop saw an impressive turnout, with over 150 delegates, including anaesthesiologists, fellows, and medical students, eager to enhance their skills in nerve block techniques.

Distinguished Faculty: The workshop was graced by renowned experts in regional anaesthesia:
Dr. Balavenkatasubramanian J, Dr. Javed Khan, Dr. Apurva Agarwal, Dr. Neha Kumar, Dr. Hetal Vadera, Dr. Shishir Agarwal, Dr. Manish Singh, Dr. Santosh Sharma

Live Demonstrations: A total of 19 nerve blocks were demonstrated on patients using Peripheral Nerve Stimulator (PNS) guidance and landmark-based techniques. These included:

- Interscalene Block (ISB)
- Supraclavicular Block (SCB)
- Vertical Infraclavicular Block (VIB)
- Paracoracoid Infraclavicular Block
- Axillary Block
- Thoracic Paravertebral Block (TPVB)
- Rectus Sheath Block (RSB)
- Transversus Abdominis Plane (TAP) Block
- External Oblique Interfascial Plane Block (EOIFPB)
- Fascia Iliaca Compartment Block (FICB)
- Femoral Nerve Block
- Popliteal Block
- Lumbar Plexus Block (LPB)
- Sciatic Nerve Block using Raj Approach
- Ankle Block
- Superficial and Intermediate Cervical Plexus Block (CPB)
- Continuous Spinal Anaesthesia

Educational Sessions: The workshop featured didactic lectures on various nerve blocks, providing participants with a comprehensive understanding of both the theoretical and practical aspects of regional anaesthesia.

AORA4U BLOG

Acknowledgements: AORA extends heartfelt congratulations to the dedicated Anaesthesia Team of GSVM Medical College for their unwavering commitment and meticulous organisation, which were instrumental in the workshop's success. Their efforts have significantly contributed to the professional development of attendees and the broader medical community. Special thanks to Dr Apurva Agarwal – Organising Chairperson, Dr Neha Mishra – Organising Secretary and Dr Neetu Singh – Organising Secretary.

Participant Feedback: Attendees expressed immense satisfaction with the workshop's content and execution. Many highlighted the value of hands-on experience with PNS-guided and landmark-based techniques, especially in environments lacking ultrasound facilities.

Looking Ahead: Building on the momentum from this workshop, AORA is enthusiastic about organising similar events nationwide.
These initiatives aim to empower anaesthesiologists with the skills and knowledge necessary to deliver safe and effective regional anaesthesia, ultimately enhancing patient care across diverse clinical settings.

For more information on upcoming workshops and events, please visit ***www.aoraindia.com***

Spotlight on excellence: An exclusive interview with fellowship of AORA gold medalists

Dr. Subramanian and Dr. Prarthana In a candid discussion with Dr Manshad Showkath

The Fellowship of the Academy of Regional Anaesthesia is a prestigious, structured training program designed to enhance expertise in regional anaesthesia through rigorous academic and hands-on clinical experience. With a strong focus on ultrasound-guided techniques, the fellowship nurtures anaesthesiologists into skilled practitioners, advancing the field through innovation and excellence. At present, the program is conducted across 25 centres in India, providing standardised training and mentorship to the next generation of regional anaesthesia specialists.

The pursuit of excellence in regional anaesthesia requires dedication, skill, and an unyielding commitment to learning. In this edition of AORA4U, we bring you an exclusive conversation with the brightest minds of our fellowship program—Dr. Subramanian and Dr. Prarthana, the esteemed gold medalists of the AORA Fellowship.
In a candid discussion with Dr Manshad Showkath, they share their journey, challenges, and insights into what it takes to achieve excellence in regional anaesthesia. Their stories not only inspire but also reflect the evolving landscape of our field, where knowledge, precision, and perseverance pave the way for success.
Join us as we celebrate their achievements and learn from their experiences!

DR PRARTHANA M RAJ

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ASTER RV BENGALURU

On Fellowship Experience

1. Can you describe your overall experience while pursuing the AORA Regional Anaesthesia fellowship?

My experience during the AORA Regional Anaesthesia Fellowship at Aster RV, Bengaluru, has been nothing short of transformative. I am extremely overwhelmed and grateful for having completed this fellowship. The fellowship not only sharpened my clinical skills but also deepened my understanding of the nuances of regional anaesthesia techniques. The combination of hands-on experience in real-time clinical settings, coupled with systematically organised classes, was truly a rewarding journey. The guidance and unwavering support of my beloved mentors, Dr. Subramanyam sir and Dr. Deepak sir, made every challenge feel surmountable. Their mentorship has been instrumental in helping me grow both professionally and personally.

2. What were some of the most challenging aspects of the fellowship, and how did you overcome them?

There were both good and bad days during my fellowship, as I navigated the learning curve. At times, I struggled with visualising my needle placement, but over time, I came to understand the deeper rationale behind each block. I realised that mastering sonoanatomy and the ability to accurately visualise and identify the underlying structures are just as crucial as the precision of the needle itself. By the time my fellowship ended, I had gained a comprehensive understanding of both the technical and anatomical aspects, and I felt much more confident in my ability to perform blocks.
Another important aspect I encountered during my fellowship was patient variability and the limitations of the ultrasound machine, which, at times, had suboptimal imaging quality. In such instances, it would often take me longer to perform a block, and I would rely on the guidance of my mentors. Over time, these challenges taught me the nuances and tricks of working with different ultrasound machines, helping me realize that it's not always about blaming the machine or the patient. Instead, these experiences sharpened my ability to adapt and improve my technique.
One of the most challenging aspects of the fellowship was mastering the precision, confidence, and meticulous planning required, especially when regional anaesthesia was the sole method of anaesthesia, particularly in cases involving patients with multiple comorbidities. It was in these high-risk scenarios that I truly honed my skills, learning how to approach each case with careful consideration and confidence.
Dr. Subramanyam's patient yet thorough teaching approach, and Dr. Deepak's in-depth insight into technique and anatomy and repetitive teaching and supervising, helped me gain the confidence to perform blocks with accuracy. I learned that with every difficult procedure, there's a lesson to be taken, and every mistake is a step toward mastery.

3. How did the training and mentorship during the fellowship shape your clinical skills in regional anaesthesia?

The training provided by AORA was immensely comprehensive and tailored to individual growth. Being required to present monthly and quarterly updates, along with tracking the number of blocks performed, was a powerful way to stay engaged and focused. Every mentor I encountered was incredibly inspiring and enthusiastic about teaching. Their passion for learning and exploring newer techniques made me aspire to be like them someday. The methodical approach to logbook writing was something I truly valued; we even had a dedicated session on how to properly maintain a logbook, emphasising the importance of learning from each block.
The All India exam, conducted in a single location, truly elevated the standards of the fellowship. While it instilled a sense of fear and seriousness, it also motivated me to not only perform well in the exam but to improve myself to be a better anaesthesiologist. It was a reminder that our learning journey goes beyond exams — it's about continually refining our practice and striving for excellence in every aspect of regional anaesthesia

It significantly shaped my clinical skills in regional anaesthesia by encouraging hands-on practice with a broad range of cases. Under the mentorship of Dr. Subramanyam sir and Dr. Deepak sir, I was taught not only the technical aspects but also the critical importance of patient safety, communication, and decision-making in high-pressure environments. The fellowship truly transformed my approach to anaesthesia, making me a more skilled, confident, and thoughtful practitioner.

4. Can you share a memorable case or patient interaction from your fellowship that significantly impacted you?

Rather than just one particular case, I would say it was all the cases that truly changed my perspective. Coming from a medical college where laparoscopic surgeries were performed by very few surgeons, we often believed that lap surgery caused minimal pain. In fact, systemic analgesia was all that we administered, and I would often reassure patients while transferring to PACU, saying, 'We've just done the surgery, pain is expected, and it'll get better soon.'

However, when I joined Aster RV, I was astounded to find that 9 out of 10 patients I transferred to the PACU never complained of any pain. This was a huge surprise to me, and it opened my eyes to the incredible impact of multimodal analgesia and the vast array of regional anaesthesia techniques involved in addressing every aspect of the patient's pain.

This shift in approach completely transformed my entire perspective on anaesthesia practice. It wasn't just about managing pain during the surgery, but about making the entire surgical experience bearable for the patient, both during and after the procedure. The holistic approach to pain management through regional anaesthesia made me fall even more in love with this specialty, and it deeply reinforced my belief in the power of regional anaesthesia to improve patient outcomes in ways I had never imagined.

5. What makes AORA fellowships unique from other Anaesthesia fellowships in India and abroad?

AORA fellowships truly stand out due to their deeply personalised approach to training. They are constantly striving to implement innovative ways to ensure that the fellowship reaches every student interested in regional anaesthesia. What sets AORA apart is their commitment to the quality of the fellowship, not just treating fellows as temporary workers who are needed by hospitals to cut costs.

The fellowship goes beyond simply mastering the techniques of regional anaesthesia. It's about being guided by mentors who genuinely care about your growth as a clinician.

AORA places a strong emphasis on hands-on experience, practical knowledge, and a deep understanding of the anatomy and physiology that underlie each procedure. The monthly classes strike the perfect balance between theory and practice, equipping every fellow with the skills needed to face real-world challenges. The fellowship also includes an exam that is impartial yet stimulating, with invaluable inputs from each mentor, ensuring that all aspects of regional anaesthesia are covered comprehensively.

AORA's holistic approach to training truly makes it a standout program, not just in India, but internationally.

On Personal Journey

1. Were there any moments in your training when you felt like giving up? How did you overcome these challenges and become resilient?

I began this fellowship just two months after my dad passed away. At that time, my keenness for regional blocks was there, but the fellowship initially felt like more of a diversion for me. I was still processing my grief, and emotionally, it was incredibly challenging. There were times when things didn't go as planned, whether it was struggling to visualise the needle or facing complications in real-time scenarios, or a day before the presentation of a class. I felt frustrated, and there were times I thought of giving up.

And then, there were moments when every successful block, no matter how small, felt like a tiny victory. Slowly, as I continued to learn and grow, these challenges began to shift. What once felt like an emotional burden turned into a source of motivation. The joy of mastering a difficult block, or even improving my skills just a little bit, began to outweigh the moments of doubt.

Over time, I realised that the journey wasn't just about mastering the techniques — it was about learning resilience, patience, and self-compassion. The process, the struggle, and the little joys along the way helped me heal and grow, both personally and professionally.

What kept me going during those challenging times was the unwavering support of my family, especially my mother, sister, and fiancé, as well as my mentors. Their constant encouragement and guidance helped me see that every challenge was not a setback, but rather an opportunity for growth. They reminded me that difficulties were part of the journey, and through their support, I learned to turn those moments into valuable learning experiences..

Slowly, I learned to be kind to myself, to embrace mistakes as part of the learning curve, and to remember why I started this journey in the first place — to make a meaningful difference in patient care. Through their mentorship, I built resilience. I learned that setbacks were just temporary and that persistence, coupled with hard work and the right guidance, would lead to growth.

2. How has winning the gold medal influenced your career trajectory and aspirations in anaesthesia?

Winning the gold medal was an incredibly humbling and rewarding experience, and I truly feel blessed. More than just an achievement, it felt like a beautiful tribute to my father. It was one of the very first moments of happiness after a year filled with immense stress and loss. At this very moment as well, the gold medal is placed as a garland on my father's photo, and I completely owe it to him. (I am all torn while typing this interview)

It wasn't just about the recognition, but the validation that all the hard work, sleepless nights, and long hours of learning had paid off. It gave me the confidence to push further in my career and reminded me of the importance of staying focused on my goals.

The gold medal has opened many doors, both in terms of career recognition and further educational pursuits including this interview. Thank you for giving me the opportunity to express my heart and share this journey.

It has given me the drive to aim higher, not just for personal success, but also to contribute to the field by

sharing my experiences with others . My aspiration now is not just to excel in clinical practice but also to teach, learn and stay updated. The achievement has fuelled my determination to continue advancing the practice of regional anaesthesia, whether through research, teaching, or more specialized work in this field.

On Networking and collaboration

1. Can you tell us how collaboration has helped you in regional anaesthesia and how it was demonstrated during your training ?

Collaboration has been absolutely happy experience in my journey with regional anaesthesia. During my fellowship, the close collaboration with my mentors, particularly was invaluable. They not only guided me through challenging cases but also encouraged open communication with fellow fellows, surgeons, and other medical professionals involved in patient care.

This teamwork allowed me to approach each case from multiple perspectives, enhancing my learning and providing a deeper understanding of the importance of coordination in successful regional anaesthesia.

For example, during complex cases with comorbidities, I was able to collaborate with the surgical team to plan anaesthesia strategies tailored to the patient's needs. The feedback loop created through this collaboration — where we could discuss and refine techniques — was instrumental in improving my clinical skills.

Additionally, learning to communicate effectively with my peers and mentors created an environment where knowledge was constantly shared, and new approaches were explored. This culture of collaboration truly reinforced the importance of working together for the best patient outcomes

For Future Generation

1. What is your advice to budding anaesthetists looking to explore regional anaesthesia as their sub-specialty?

To all budding anaesthetists considering regional anaesthesia, my advice would be to approach it with patience, dedication, and a constant thirst for learning. Regional anaesthesia should be seen as an essential skill, just like other aspects of anaesthesia, and it complements the broader scope of our practice.

Don't be discouraged by the challenges you face early on; every mistake is an opportunity to learn and improve. Seek guidance from experienced mentors who can offer invaluable insights and support. Immerse yourself in both theoretical knowledge and hands-on practice — it's the balance of both that will truly help you excel.

Follow the framework and approach that AORA has laid out, as it provides a solid foundation for mastering the art of regional anaesthesia. If you stay focused, dedicated, and keep learning, you will undoubtedly reach your end goal beautifully

And most importantly, don't forget the human side of it — always remember that you're not just performing a procedure, but making a difference in your patient's journey. Keep learning, stay curious, and never stop refining your skills.

2. Can you tell us about the habits you inculcated that enabled you to grab the 'gold medal"?

Winning the gold medal was the result of a combination of a deep hunger to learn and an openness to being an 'empty pot' — eager and awed by the nuances of regional anaesthesia. And, of course, there are the important ones: "consistency, hard work, discipline", and a strong commitment to my goals. The habits that helped me achieve this were a blend of both practical and personal strategies. First, I made it a habit to deeply understand the allied aspects of regional anaesthesia, from anatomy and physiology to the intricate pathways of each nerve, from the spinal cord to the fingertips. I didn't just study to pass exams but aimed to truly grasp the underlying concepts and techniques. This deep understanding proved invaluable in both practical situations and theoretical knowledge.

I also kept a reflective logbook, which helped me track my progress and identify areas for improvement. This practice not only kept me organised but also encouraged constant self-assessment.

Second, I learned that regular practice is crucial. Regional anaesthesia is as much about hands-on experience as it is about theory. I made it a point to be in most of the operating theatre where blocks were performed, either observing or performing the blocks, consistently. Whether during clinical hours or in my personal study time, I strived to refine my skills with every block I performed.

Additionally, presenting classes twice a month and repeated volunteer scanning ensured I covered important topics, and preparing slides for these sessions made all the effort worthwhile in the end.

Seeking feedback was another habit that played a key role in my growth. I regularly approached my mentors for constructive criticism to fine-tune my technique. This mindset of always striving to improve — rather than settling for mediocrity — kept me on track.

Lastly, balancing academic dedication with emotional resilience was crucial, especially after losing my father. The fellowship was not just an intellectual journey; it was deeply emotional. I learned to practice self-care, and mindfulness, and to lean on my support network — my family, mentors, and peers — who helped me stay grounded and focused during tough times.

DR SUBRAMANIAN

Fellowship in Regional Anaesthesia (AORA)

Ganga Hospital, Coimbatore

On Fellowship Experience

1. Can you describe your overall experience while pursuing the AORA Regional Anaesthesia fellowship?

The fellowship programme was meticulously designed to provide in-depth theoretical knowledge through regular academic classes and case-based discussions. The hands-on exposure I received at my institution made me proficient in identifying Sonoanatomy and performing ultrasound-guided blocks. The cadaveric workshop during the AORA conference further enhanced my orientation to anatomical structures that I had been identifying through ultrasound.

2. What were some of the most challenging aspects of the fellowship, and how did you overcome them?

Although I had administered PNS and landmark-guided blocks during my postgraduate training, I was a novice in ultrasound when I joined the fellowship. Developing hand-eye coordination and identifying sono-anatomy took time. Despite working 11-hour shifts with only one weekly day off, I never felt the workload was overwhelming. The busy OT schedule and short academic sessions during free time kept me engaged and on my toes.

3. How did the training and mentorship during the fellowship shape your clinical skills in regional anaesthesia?

During block procedures, I received direct supervision from experienced national faculty members, from probe handling and needling to understanding sonoanatomy, selecting the appropriate block for a particular surgery, and managing failed blocks. AORA classes provided insights into practices and protocols followed at other institutions, broadening my perspective on regional anaesthesia. The guidance and support from my mentor Dr Balavenkatasubramanian sir helped me immensely during my journey.

4. Can you share a memorable case or patient interaction from your fellowship that significantly impacted you?

One of the most impactful experiences was witnessing the effect of an "on-arrival block." Seeing a patient in severe pain and agony at the casualty transition into a calm, pain-free state after a simple block reinforced my belief that every trauma patient should have access to this intervention.

5. What makes AORA fellowships unique from other Anaesthesia fellowships in India and abroad?

AORA, the highest academic body for regional anaesthesia in India, has structured its fellowship programme with well-defined learning objectives, covering basic, advanced, and emerging RA techniques along with POCUS. Unlike in foreign countries, where patient volume is lower and hands on training is less, all AORA-accredited fellowship institutes offer a high patient load while maintaining a balanced focus on clinical and academic training along with research objectives. The programme also includes a structured logbook, case discussions, and a national exit examination to ensure objective competency-based assessment.

On Personal Journey

1. Were there any moments in your training when you felt like giving up? How did you overcome these challenges and become resilient?

Long work hours, initial failures in administering blocks, and balancing academics with workload were challenging. However, I never felt like giving up. I was fortunate to have supportive and enthusiastic mentors who brought out the best in us. By the end of the fellowship, I felt transformed—what once seemed impossible had become second nature, making all the hardships worthwhile.

2. How has winning the gold medal influenced your career trajectory and aspirations in anaesthesia?

Winning the gold medal boosted my confidence in regional anaesthesia and earned me recognition at my workplace. It also motivated me to pursue the EDRA exams.

On Networking and collaboration

1. Can you tell us how collaboration has helped you in regional anaesthesia and how it was demonstrated during your training?

Collaborating with co-fellows, by assisting each other's blocks enhanced our efficiency, especially in high-volume centers like my institute. Discussing cases with peers fostered knowledge exchange and problem-solving. Additionally, interacting with mentors and fellows from other institutes provided insights into alternative approaches for managing cases beyond our institutional practices.

For Future Generation

1. What Is your advice to budding anaesthetist looking to explore regional anaesthesia as their subspecialty?

Regional anaesthesia is a great option. One should understand that it should be incorporated whenever possible and that expertise in RA techniques can make anaesthesia practice easier and more effective while improving overall patient satisfaction.

2. Can you tell us about the habits you inculcated that enabled you to grab the gold medal?

I would say a systematic approach to the subject helped me secure the gold medal. I tried to clear the basic concepts, figured out the gross anatomy and tried to understand the sonoanatomy from that knowledge: I tried to justify the reason behind giving a particular block for a particular surgery and this helped me in structured learning. Observing blocks performed by my colleagues and mentors, spending extra time scanning volunteers, and giving blocks independently helped me master the scanning and block techniques. Discussing failed blocks helped me learn troubleshooting techniques. Actively engaging in weekly classes in my institution, and monthly AORA fellows classes helped me in refining clinical reasoning. Solving previous year's test papers, and giving mock tests helped me to improve time management.

AORA QUIZ

Prepared by Dr Neha Singh & Dr Amrita Rath

1. Which of the following is the most effective regional analgesic technique for post-cesarean pain relief?
A) Epidural morphine
B) Transversus abdominis plane (TAP) block
C) Ilioinguinal-iliohypogastric block
D) Intrathecal fentanyl

2. Which peripheral nerve block will provide the most effective analgesia following LSCS?
A) Ilioinguinal-iliohypogastric nerve block
B) Transversus abdominis plane (TAP) block
C) Quadratus lumborum block (QLB)
D) Wound site infiltration

3. What is the primary disadvantage of using intrathecal fentanyl for post-cesarean analgesia?
A) Delayed onset
B) Short duration of action
C) Increased nausea and vomiting
D) Respiratory depression

4. Which ultrasound feature is most predictive of severe pre-eclampsia-related cardiac dysfunction?
A) Ejection fraction <40%
B) Global longitudinal strain (GLS) impairment
C) Hyperdynamic LV function
D) Inferior vena cava (IVC) collapse

5. Which NSAID is safest for post-cesarean pain control in breastfeeding mothers?
A) Ibuprofen
B) Diclofenac
C) Ketorolac
D) Celecoxib

6. Which of the following factors least influences the duration of TAP block analgesia?
A) Type of local anesthetic used
B) Volume of injectate
C) Patient weight
D) Use of ultrasound guidance

7. Which of the following increases the risk of respiratory depression with intrathecal morphine for LSCS?
A) BMI >30 kg/m²
B) Dose >200 mcg
C) Co-administration of fentanyl
D) Gestational age

8. Which opioid has the lowest transfer to breast milk when used for LSCS analgesia?
A) Morphine
B) Fentanyl
C) Oxycodone
D) Codeine

9. In case of failed spinal anaesthesia for a category 1 LSCS, the safest immediate management is:
A) Convert to general anaesthesia
B) Reattempt spinal injection at a higher level
C) Administer epidural top-up
D) Perform local infiltration at the incision site

10. A parturient undergoing LSCS with a history of mitral stenosis requires regional anaesthesia. Which of the following is the MOST crucial hemodynamic consideration during spinal anaesthesia in this patient?
A) Maintaining a high heart rate to preserve cardiac output.
B) Preventing any decrease in systemic vascular resistance.
C) Ensuring a slow, gradual onset of sympathetic blockade.
D) Aggressive fluid boluses to counteract preload reduction.

Don't forget to check your Answers in the next newsletter


AORA 2025
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Theme : Evolving Trends In Regional Anaesthesia
18th-21st September 2025 | Radisson Blu, Amritsar
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THURSDAY 18TH SEP, 2025
CME
Case Based Discussions/Masterclass
Break to Wagha Border & Golden Temple
FRIDAY 19TH SEP, 2025
Plenary Sessions
4 Halls
PNS Track
USG Track
Pain Track
Podium Presentations
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