IAPA NEWSLETTER

by Indian Association of Paediatric Anaesthesiologists

IAPA Fellowships

Paediatric Anaesthesia Fellowships now under the auspices of IAPA !!

Course duration - 1 yr

Qualifications needed M.D. or D.N.B in Anaesthesiology

Accredited Institutions Rainbow Hospitals, Hyderabad and GKNM Hospital, Coimbatore

Find more details on IAPA website www.iapaindia.com

UPCOMING CONFERENCE !!

9th National Conference of IAPA in the city of Nawabs – LUCKNOW Dates will be announced soon !!

PRESIDENTS MESSAGE

by Dr Pradnya Sawant
President, IAPA
Mumbai

Dear Colleagues,

It is my esteemed privilege to welcome you all, along with the executive committee of **Indian Association of Paediatric Anaesthesiologists**. This association was the brainchild of a few like-minded anaesthesiologists, from the city of Mumbai, and was born in March 2006 in Mumbai. The aim was to provide a platform for anaesthesiologists to share ideas, techniques and experiences in the care of the paediatric patients.

The association has seen seven successful annual national conferences, various workshops and CMEs at different parts of India. We have just finished the first CME meeting of this year on **"Perioperative Complications in Paediatric Anaesthesia"** in Mumbai on 10th January 2016, which was well attended by postgraduates and consultants.
This is a very exciting time to be part of IAPA, the association is taking efforts in Paediatric anaesthesiology education, research, and patient care initiatives. This is therefore an even more exciting time to be IAPA President.

As we learn from our experiences in the past and present, we look to the future knowing we must adapt to a changing healthcare environment. We will adapt to the changing needs of our members and utilize their strengths to move our paediatric anaesthesia specialty forward. IAPA is undergoing a major renovation. Our governance has been redesigned and our committees realigned to match the goals outlined in our strategic plan. Please visit our redesigned and updated website where navigation to and from IAPA-related sites are made easier for all our users. A hearty congratulations and thanks to Dr. Subrahmanyam and Dr.Vibha Naik from Hyderabad for their efforts to organize the website.

It is my great pleasure to introduce the **first issue of the IAPA e-Newsletter** edited by a group of dedicated people. The newsletter will be published biannually, and we will ensure that cutting-edge science is relayed, and that informational and educational needs are satisfied.

This active association needs YOUR input and participation to make this association stronger in India. I welcome your suggestions, criticisms, and feedback for future newsletter topics.
Finally I welcome you whole-heartedly to the Association. Please pass the message to your friends and co-workers, interested in paediatric anaesthesia. We need your help to provide the best possible care to all children, who trust us with their wellness and their life. Looking forward to interact with you.

Long live IAPA !!

SPECIAL ARTICLE

by Dr Rebecca Jacob
Past President, IAPA
Bengaluru

For many years specialization in any branch of anaesthesia was frowned upon and all anaesthetists were expected to anaesthetise all surgical cases. Slowly cardiac and neuroanaesthetists branched off but it took a little longer for paediatric anaesthesia to be recognized as a skill based specialty requiring a special understanding of and empathy towards children. Paediatric anaesthesia as a specialty has now been recognized by the World Federation of Societies of Anaesthesiologists and training programs (Fellowships) in paediatric anaesthesia have been supported by them the world over since 2006. The first program was started in Chile and the second at the Christian Medical College in Vellore, India. Since then a number of centers of excellence in India have started paediatric anaesthesia fellowship programs including one sponsored by the IAPA.

Specialized training programs help young anaesthetists interested in the subject improve their clinical knowledge and practical skills. The trainee is taught to audit, analyze and synthesize data and is expected to be accurate and accountable for his/her actions. Proper documentation is vitally important and here examples set by senior role models plays an important part. I have been working with different organizations trying to analyze untoward events and critical incidents, trying to make sense of the documents submitted. Sadly most of them are woefully incomplete. Often there is no contemporaneous recording of medications given and vital signs recorded – most often this is in relation to anaesthesia records and /or terminal events. Preoperative examination, even if done thoroughly, is not recorded, postoperative orders are poorly written, dates and times forgotten, orders given over the telephone but not documented later. Scribbled signatures will not hold up in a court of law. Often trade names of drugs are used like butadol, lumina, flunarizine and reflin. Doses are often not accurate for example 'detvac 1 amp. IM'. Antibiotics especially, seem to be given in a rather haphazard manner. We need to be more careful in choosing our drugs and accurate in administration and documentation.

The support of seniors skilled and experienced in the subject guiding trainees in clinical matters as well as in good ethical practices is vitally important. Trainees should be encouraged to read and report, analyse data and present that data to a larger forum so as to improve their communication skills. New ideas and developments should be encouraged and shared.

INDIAN ASSOCIATION OF PAEDIATRIC ANAESTHESIOLOGISTS
IAPA Founded in 2006

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QUIZ SECTION

1. Where is the glottis located in newborns?
a. C2-3 b. C3-4 c. C4-5 d. C5-6

2 . Which of the following is not a trigger for malignant hyperthermia?
a. Thiopentone b. Sevoflurane
c. Succinyl choline d. Ether

3. What is dose of intranasal midazolam for premedication?
a. 1 mg/kg b. 5 mg/kg
c. 0.2 mg/kg d. 0.7 mg/kg

(Don't peek into the answers on the 5th page !!
Challenge your mind first ☺)

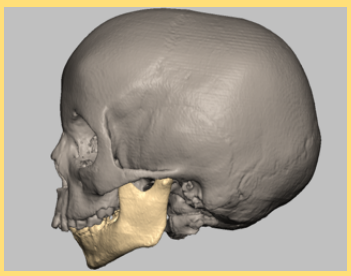
IMAGES FOR CASE REPORT

Before

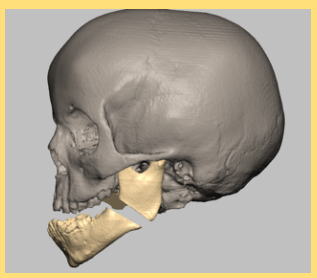
After

Distractor with Tracheostomy

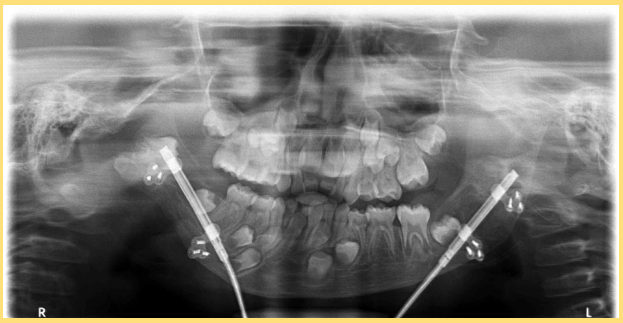
After Decannulation



Before Distraction



After Distraction



X-ray with Distractor

SPECIAL ARTICLE CONTD...

We need to recognize that change is inevitable. We've changed from ether to sevoflurane, from red rubber tubes to disposable RAE tubes, a hand on the pulse to fancy monitors. We have been given opportunities to push our own boundaries. Never be satisfied with your present or grow too complacent with your achievements- after all we are dealing with human lives. But, push your boundaries, think out of the box and share your knowledge with the next generation.

Our aim should be to help the next generation of paediatric anesthetists to confidently and skillfully manage the very small and the very sick child and his family with empathy and caring within the ambit of safe clinical practice.

CASE REPORT

ANAESTHETIC IMPLICATIONS FOR THE VARIOUS TECHNIQUES USED IN THE MANAGEMENT OF OBSTRUCTIVE SLEEP APNOEA SYNDROME IN A SINGLE PATIENT

Authors : Dr. S. Ramesh, Dr. Indu Ravishankar, Dr. R. Jayanthi, Dr. Shilpa Chandan, Dept. of Anaesthesia, Kanchi Kamakoti CHILDS trust hospital, Chennai.

A 5 year old girl weighing 14 kg presented to the paediatric ENT out-patient department with symptoms of snoring and mouth breathing for 6 months; and history of always sleeping in the sitting posture. On examination, she was found to have congenital temporomandibular joint ankylosis, causing restricted mouth opening (2 finger breadths), retrognathia and micrognathia. An echocardiogram was done, which showed normal pulmonary pressures. She was planned for a flexible naso-pharyngo-laryngoscopy to evaluate the potential areas of dynamic obstruction: the nose, the palate (oropharynx), and the base of the tongue (hypopharynx).

This child had features of an anticipated difficult airway. The plan was to do a Drug Induced Sleep Endoscopy (DICE) to identify the level of maximumum obstruction during sleep. Hence the anaesthesia plan was to induce anaesthesia with sevoflurane, maintaining spontaneous respiration. The child was taken into the OT, IV access was secured with a 22G cannula, and oxygen and sevoflurane were administered in a step up pattern. All monitors were attached as per ASA standards. Even with just 1% of sevoflurane the child obstructed and started to desaturate. Since mask ventilation was becoming difficult, a size 2 Proseal LMA placement was attempted, however LMA placement was not optimal. Hence a Proseal LMA 1.5 was placed. As this was also not satisfactory, direct laryngoscopy was attempted, which showed a Cormack Lehane grade 4 view, even with optimal external laryngeal manipulation. Laryngoscopy was abandoned, and LMA placement tried again. Size 1 Proseal LMA was inserted, but with less than optimal ventilation. This was removed when the child was fully awake, and she was kept under observation in the ICU.

In consultation with maxillofacial and ENT surgeons, the child was scheduled for a distraction osteogenesis of the mandible, under cover of a tracheostomy. This time, awake nasal fibre-optic intubation was planned for airway management. The airway was anaesthetized by nebulisation with 2% lignocaine, superior laryngeal and translaryngeal nerve blocks, and nasal packing with lignocaine and adrenaline. A size 3.5 mm fibre-optic scope loaded with a 5.5 mm cuffed endotracheal tube was inserted, and the trachea intubated successfully. After confirmation of correct ET tube placement with fibre optic bronchoscopy and capnography, anaesthesia was induced with 2 mg/kg propofol, 1 µg/kg fentanyl and 0.5 mg/kg atracurium. Anaesthesia was maintained with oxygen, nitrous oxide and sevoflurane, with pressure control ventilation and tracheostomy was done with a size 5.0 mm cuffed tube.

Ten days later, the child underwent a distraction osteogenesis of the mandible. Repeat flexible laryngoscopy after three months showed enlargement of the lingual tonsil and soft tissue obstruction. Soft tissue reduction was done with a coblator. These subsequent procedures were done under cover of the tracheostomy. Three months later, the child was scheduled for decannulation and tracheostomy closure. Video laryngoscopy was done and the larynx and the vocal cord could be visualized. The Great Ormond Street protocol for decannulation trial was followed and the tracheotomy closed surgically. The child is doing well, under follow up, with no symptoms of snoring or disturbed sleep. This case is presented for the various stages of management of a complicated case of obstructive sleep apnoea (OSA) and its anaesthetic significance. OSA is not a simple problem and several procedures had to be done for this child before the problem was completely rectified. Anaesthesia remains a challenge in this condition.

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ORIGINAL ARTICLE

ORAL DEXMEDETOMIDINE VS ORAL TRICLOFOS SODIUM AS PREMEDICATION IN PEDIATRIC PATIENTS UNDERGOING CLEFT LIP AND PALATE SURGERIES

AUTHORS : Dr. Mahati Priyadarsini, Dr. Vibhavari Milind Naik, Dr. Basanth K. Rayani. Department of Anaesthesiology, Basavatarakam Indo-American Cancer Institute and Research Center, Hyderabad.

Keywords: Oral premedication, dexmedetomidine, triclofos sodium

INTRODUCTION : Preoperative anxiety in children is a common problem which results in perioperative complications. Emergence delirium is one such complication seen during recovery from general anaesthesia. This study has compared the effects of preoperative dexmedetomidine vs. triclofos sodium on level of sedation, parental separation anxiety, mask acceptance and its effect on emergence delirium.

METHODS : After attaining the approval of institutional ethical committee, this randomized double blind controlled trial was conducted in 100 children of ASA I and II category, posted for cleft lip and palate surgeries, weighing > 6kgs, between the age of 6 months to 6 years. They were divided into two groups; Gr D, where Dexmedetomidine was given orally in a dose of 3 µg/kg and Gr T, where triclofos sodium was given orally in a dose of 100 mg/kg. The various scales used for monitoring have been listed below in Tables 1-4.

Table 1. Paediatric Sedation Score (PSS)

Sedation Score	Patient Reaction
1	Clinging or drowse
2	Awake, not clinging, may whimper, but not cry
3	Lying comfortable with eyes spontaneously open
4	Lying comfortable with eyes spontaneously closed, but responds to mild stimulation
5	Eyes closed, does not respond to mild stimulation

1 = Agitated, 2 = Alert, 3 = Calm, 4 = Drowsy, 5 = Asleep

Table 2. Parental Separation Anxiety Scale (PSAS)

Score	Description
1	Easy Separation
2	Whimpers, but is easily reassured, not clinging
3	Cries and cannot be easily reassured, but not clinging to parents
4	Crying and clinging to parents

PSAS score of 1or 2 was classified as acceptable separation and 3 or 4 as difficult separations. (Next please read Table 3 &4)

Statistical Analysis : All numerical data were represented as mean ± standard deviation (SD) and the qualitative data as frequencies. Unpaired t test was used to compare the means between two treatment groups. To compare qualitative data, chi-square test was performed. *p* values less than 0.05 were considered as statistically significant.

RESULTS : There was no significant difference between two groups in terms of demographic data, depth of sedation and parental separation anxiety score (*p* value>0.05).

Table 3. Mask Acceptance Scale (MAS)

Score	Description
1	Excellent (unafraid, cooperative, accepts mask readily)
2	Good (slight fear of mask, easily reassured)
3	Fair (moderate fear of mask, not calmed with reassurance)
4	Poor (terrified, crying or combative)

MAS score of 1 or 2 was considered satisfactory and 3 or 4 was considered unsatisfactory.

Table 4. Paediatric Anaesthesia Emergence Delirium Scale (PAEDS)

Score	Description
1	Makes eye contact with caregiver
2	Actions are purposeful
3	Aware of his or her surroundings
4	Restless
5	Inconsolable

RESULTS contd. : Time to sedation was less and mask acceptance was better in Gr T (*p* value<0.05) whereas incidence of emergence delirium was less in Gr D (*p* <0.05). There was no significant difference between systolic and diastolic blood pressures perioperatively in both the groups. Heart rate was significantly well controlled perioperatively in the Gr D when compared to Gr T (*p* <0.05), especially after infiltration of adrenaline. There was no significant difference in incidence of complications like hypotension, PONV and bleeding between the two groups and also in time to feeding the children in the postoperative ward.

Table 5. Demographic information

Group	Gr D	Gr T	*p* value
Age (months)	26.26 +/- 20.47	19.94 +/- 13.73	0.073
Gender (M/F)	27/23	25/25	0.68
Weight (kgs)	9.88 +/- 3.50	0.50 +/- 0.51	0.076
Time to sedation (mins)	29.44 +/- 8.72	26.04 +/- 8.03	0.045
Time to feeding (mins)	131.10 +/- 39.00	121.00 +/- 40.03	0.204

CONCLUSION : We found that better perioperative hemodynamic stability and decreased incidence of emergence delirium is seen with dexmedetomidine whereas better mask acceptance is seen with triclofos sodium.

DISCUSSION : Premedication in paediatric patients has always posed a challenge for the anaesthesiologist due to their non-cooperation, preferred atraumatic route of administration and their susceptibility to respiratory depression. No ideal drug has been found yet, serving all these purposes and hence the quest for the ideal agent still continues.

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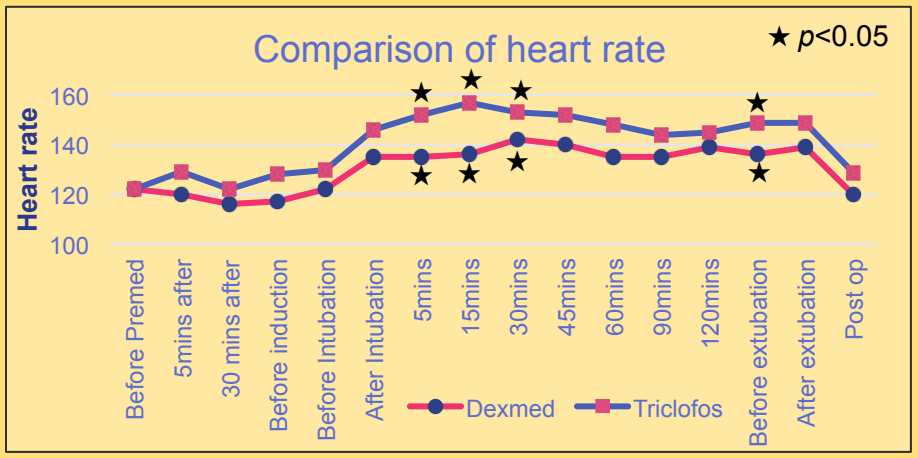
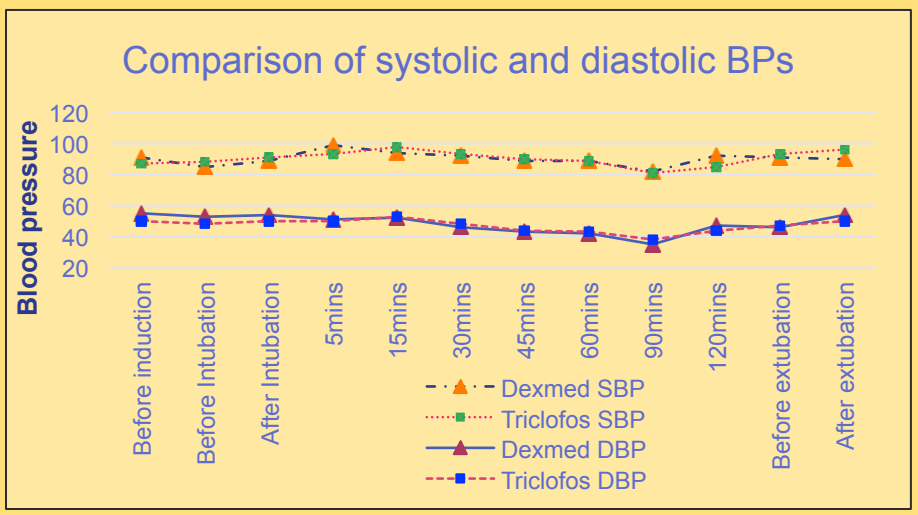
ORIGINAL ARTICLE CONTD....

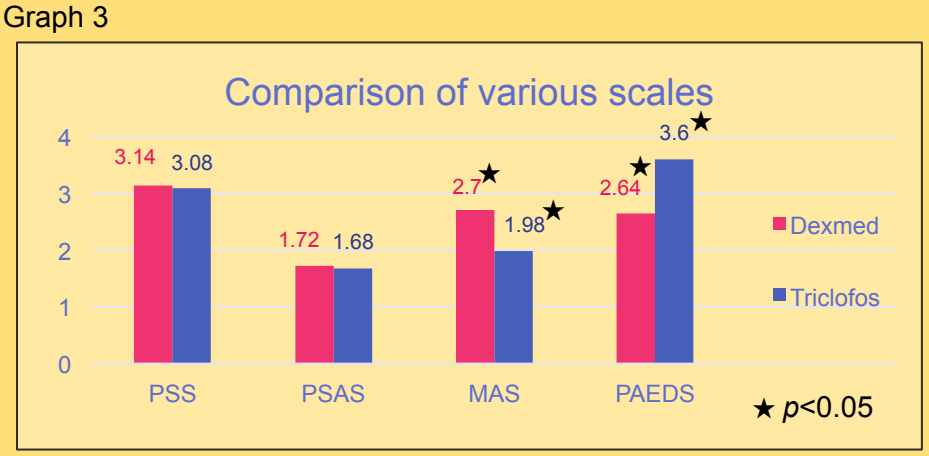
Graph1



Graph 2



Graph 3



Anxiety in the perioperative period is stressful not only for the children but also their families. Many post operative negative responses, like emergence delirium, are the effects of preoperative anxiety. Emergence delirium is a state of dissociated consciousness seen commonly in children during recovery from general anesthesia, when the child is irritable, inconsolable, crying and thrashing around. This study has been designed to investigate the role of preoperative oral dexmedetomidine on anxiety due to parental separation, anesthesia mask acceptance, stabilization of intra operative heart rate and effect on emergence delirium when compared to triclofos sodium.

Chloral hydrate is an old sedative hypnotic drug, of which triclofos sodium is a stabilized form. Trichlorethanol is the active metabolite, which causes CNS depression. Triclofos supposedly acts similarly to barbiturates and is more palatable than chloral hydrate. It is well absorbed orally and sedates children within 20-30 mins, in doses of 25-100 mg/kg. It has been used as a premedication agent in children less commonly and more often as a sedative for short procedures.

Dexmedetomidine is an alpha2 agonist agent which has greater affinity for alpha2 receptors when compared to clonidine. Inhibition of neuronal firing in brain and spinal cord as a result of activation of receptors causes bradycardia, hypotension, analgesia and sedation. Zub *et al.* used oral dexmedetomidine in a dose ranging from 1.0 and 4.2 µg/kg orally. Ray and Tobias recommended dosing of oral dexmedetomidine to 2.9 to 4.4 µg/kg for premedication in children. The results showed that dexmedetomidine was effective orally in doses ranging from 2.9 to 4.4 µg/kg. They also concluded that it decreased the incidence of emergence delirium.

In our study, we have used a dose of 3 µg/kg of dexmedetomidine, which was associated with good perioperative heart rate control along with reduced incidence of emergence delirium on recovery from general anesthesia. Airway was always maintained patent in children who received oral dexmedetomidine. Mask acceptance may also improve if used a little higher dose of the drug, which can be tried in the future studies.

IMPLICATIONS : Oral dexmedetomidine can be considered as a routine premedication agent in pediatric patients to achieve the goal of calm, sedated but arousable child being brought into the operating room and also being taken out of the operating room post-surgery with stable perioperative hemodynamics.

HELPFUL WEBSITE LINKS

by Dr. Vibha

1. Checkout the new website of IAPA !! More information, more features now !! You can check your membership number, fellowship details, upcoming events and more…

Click www.iapaindia.com

2 . Keep abreast of the recent pediatric difficult airway guidelines !! Check this link on DAS website

Click http://www.das.uk.com/guidelines/paediatric-difficult-airway-guidelines

3. Find loads of literature on paediatric anaesthesiology on WFSA's initiative - Virtual library. Click the link below and select 'Paediatric Anaesthesia' in the 'Primary Category' to pull out hundreds of tutorials and updates !!

Click http://www.wfsahq.org/resources/virtual-library

4. Just hot out of the press !! NICE Guideline NG 29 released in Dec 2015 - " IV fluids in children". Learn the indications, reasons for choice and assessment during IV fluid therapy in children.

Click https://www.nice.org.uk/guidance/ng29

IAPA membership now possible ONLINE !!

3 easy steps

1. download membership form from the website,
2. wire transfer to IAPA account,
3. mail the scanned filled membership form and the wire transfer receipt to iapaindia.com@gmail.com

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JOURNAL ARTICLE REVIEW

By Dr. R. Jayanti

1. The European Society of Regional Anaesthesia and Pain Therapy and the American Society of Regional Anesthesia and Pain Medicine Joint Committee Practice Advisory on Controversial Topics in Pediatric Regional Anesthesia

Ivani G, Suresh S, Ecoffey C, Bosenberg A, Lonnqvist PA, Krane E, Veyckemans F, Polaner DM, Van de Velde M, Neal JM. The European Society of Regional Anaesthesia and Pain Therapy and the American Society of Regional Anesthesia and Pain Medicine Joint Committee Practice Advisory on Controversial Topics in Pediatric Regional Anesthesia. Reg Anesth Pain Med. 2015 Sep-Oct;40(5):526-32.

Summary - Some of the controversial issues in the clinical management of Regional anaesthesia have been addressed in this article. They are –
1)Performance of regional blocks in children under GA or deep sadation(DS)
2)Test dose in children
3)Air or saline or both for determining loss of resistance during an epidural.
In an effort to give a practice advisory on these topics ESRA and ASRA have together done a literature search, looked at case reports and also obtained expert opinion where appropriate on each of these issues.

Performance of regional blocks under GA/DS is associated with reasonable safety and should be viewed as standard of care. The overall risk of complications is 0.66%.

Test dose and intravascular injection : Injection of LA solution containing epinephrine produces a haemodynamic response in awake adults undergoing a regional, but in children where most blocks are done under GA/DS, the recognition of intravascular injection is more difficult. The volume of paediatric test dose was defined as volume of 0.1 mL/kg of LA solution containing 5 µg/mL of epinephrine, that is, a dose of 0.5 µg/kg epinephrine. This was found sufficient to produce a haemodynamic response but not large enough to cause harm. The article says that use of test dose is discretionary. Any injection of an LA solution should be performed slowly, in small aliquots (0.1–0.2 mL/kg) and with intermittent aspiration and observation of the ECG tracing. Any modification of heart rate or T wave within 30-90 sec of injection of LA should be considered positive test dose until proved otherwise. Imaging modalities help avoid accidental intravascular needle placement in peripheral blocks.

Loss of Resistance: Even though Ultrasound techniques are common today, the traditional LOR with saline or air are still a commonplace. With air (still commonly used) problems like nerve root compression, pneumocephalus, incomplete analgesia, and venous air embolism have been reported. All this depends on the volume of air, and is likely to occur with multiple attempts. Limiting the amount of air used to 0.5 to 1 ml will avoid this. On the other hand, excessive amounts of saline may dilute subsequently injected LA, may make the identification of unintentional dural puncture more difficult, and can together with the volume of LAs cause transient reduction in cerebral blood flow in small infants. The advisory recommends use of either air or saline but in small quantities. Use of both air and saline is also recommended when suitable, as it limits the amount of air injected.

By Dr. Vibha

2. Peripheral nerve catheters in children: an analysis of safety and practice patterns from the pediatric regional anesthesia network (PRAN).

Walker BJ, Long JB, De Oliveira GS, Szmuk P, Setiawan C, Polaner DM, Suresh S; PRAN Investigators. Br J Anaesth. 2015 Sep;115(3):457-62.

Summary - This is the latest publication of PRAN, which was formed around four years back with the aim of research and quality improvement in pediatric regional anesthesia. This paper evaluates the safety of peripheral nerve catheters (PNC) in pediatric population. It is a prospective, multicentric, observational study data from more than 2000 PNCs. Data was collected for all upper extremity, lower extremity and truncal blocks. Most cathters were placed using ultrasound guidance alone, or along with nerve stimulator/fluoroscopy as appropriate. The authors observed a low complication rate of 12.1% which included minor complications like – block failure (1.3%), catheter malfunction (7.3%), excessive motor block (0.6%), vascular (0.9%) and infective (0.9%) complications. No permanent injury was recorded. Infective complications were only minor and superficial, and seen with longer catheter duration 4.5(3-7)days as compared to 3(1-3) days in those who did not have infections. There was no patient with local anesthetic toxicity or overdose. This study reiterates the safety of PNCs and supports its use for postoperative analgesia in pediatric population.

Paediatric anaesthesia crossword Across answers

5. Apnea 6. Stroke 8. Scoline 9. Tone 12. Caudal 15. Dantrolene 16. Limb 17. Blue 18. Surfactant 19. Osa 20. Downs 22. Rose 23. Durant 25. Armitage 27. Milk 29. Bougie

Paediatric anaesthesia crossword Down answers

1.Halothane 2. Rae 3. Rectal 4. Prongs 7. Emergence 10. Acidosis 11. Rubella 13. Pierre robin 14. Cricoid 17. Boot 21. Oral 24. Taylor 26. Gag 28. Igel

Answers to the Quiz Section

1. b – At birth, the glottis is located at C3-4 and it slowly descends to C5-6 in adults.

2. a – Both volatile agents and depolarising muscle relaxants can induce malignant hyperthermia

3. c – Usually nasal midazolam is administered in 0.1-0.3mg/kg dose. Whereas the dose of oral midazolam is 0.5-1mg/kg.

INTERNATIONAL CONFERENCES

ESPA - 8th European Congress on Pediatric Anaesthesia on 29th Sept - 1st Oct 2016 at Belgrade,Serbia. (http://www.euroespa.com/congress/2016-belgrade/)

SPA - Pediatric Anesthesiology 2016 on 1st-3rd April at Colorado Springs, USA. (http://www2.pedsanesthesia.org/meetings/2016winter/guide/)

SPANZA - The Society of Pediatric Anaesthesia in New Zealand and Australia (SPANZA) 2016 on 27th - 30th Oct 2016 at Adelaide, Australia. (https://willorganise.eventsair.com/QuickEventWebsitePortal/2016-spanza/asm-website)

IAPA NEWSLETTER

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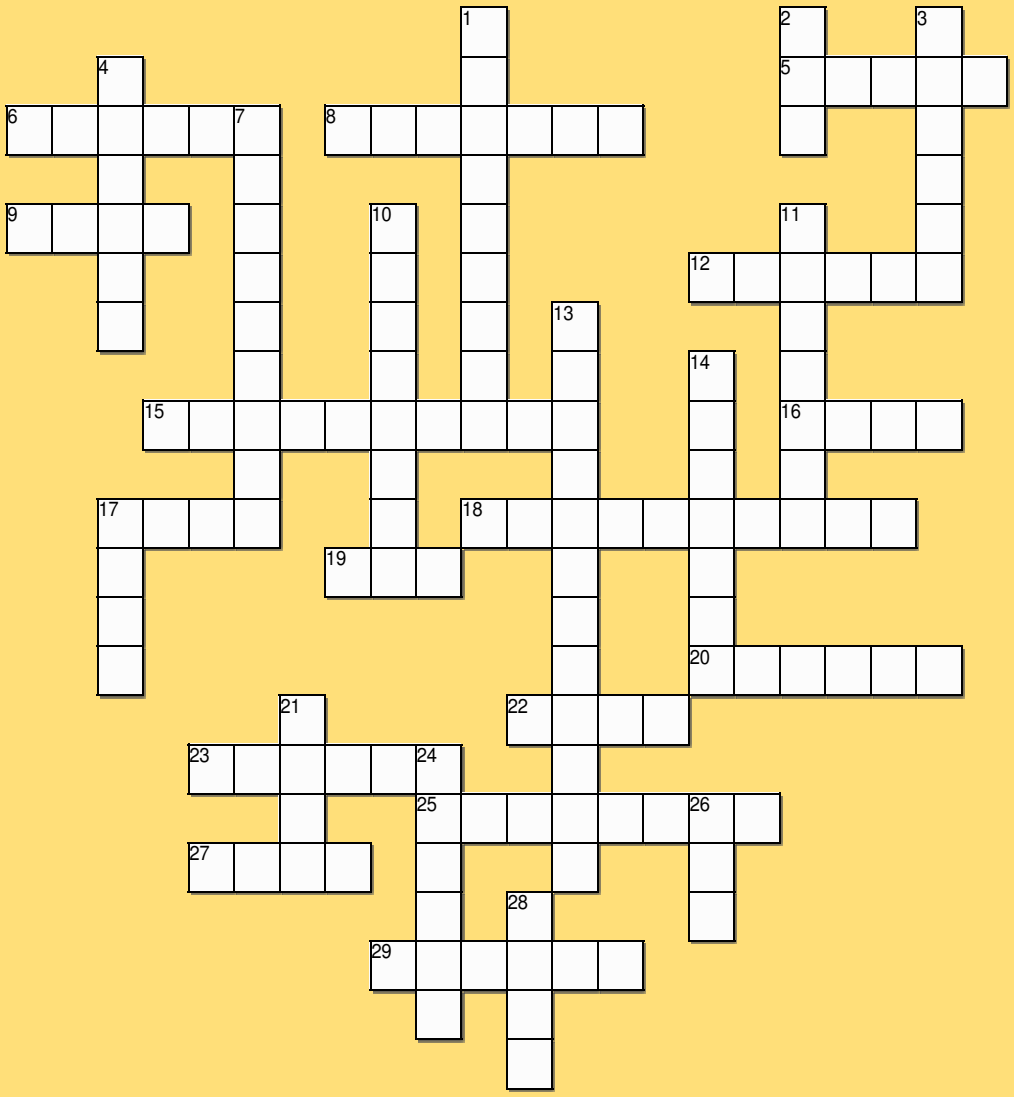
READY FOR SOME FUN FILLED ACADEMIC ACTIVITY ?? SCRATCH YOUR BRAIN !!

Paediatric anesthesia crossword

Dr Indu (Fellow, Kanchi Kamakoti Child's Trust Hospital, Chennai)



Across

5. Preterms are prone to this (5)
6. A complication of TOF (6)
8. End to laryngospasm (7)
9. A component of APGAR (4)
12. A triangular space (6)
15. Cools malignant hyperthermia (10)
16. The 'L' in VACTERL (4)
17. 22 G IV cannula (4)
18. Produced at 32 weeks (10)
19. An indication for tonsillectomy (3)
20. A syndrome of hypertelorism and simian crease (6)
22. Tonsillectomy position (4)
23. Air embolism manoeuvre (6)
25. A caudal formula (8)
27. Requires NPO for 4 hours (4)
29. A difficult intubation aid (6)

Down

1. Sweet smelling (9)
2. North or south tube (3)
3. 30-40 mg/kg of paracetamol (6)
4. Nasal oxygen delivery device (6)
7. Sevoflurane (9)
10. The deadly triad - hypothermia, coagulopathy and - - (8)
11. Causes PDA, cataracts and deafness (7)
13. An anaesthetist's nightmare sequence (12)
14. Narrowest part of the larynx (7)
17. TOF heart (4)
21. Route of intubation (4)
24. Line joining the iliac crests (6)
26. A reflex (3)
28. A supraglottic device (4)

CASE REPORT

INFANT IMPRISONED FOR GOOD! CAN WE REDUCE ANAESTHESIA EXPOSURE ?

Authors : Dr. Dinesh kumar Gunasekaran, Dr. Rajani Sundar, Dr. Ejaz Abdullah, Department of Pediatric Anesthesia & Critical Care, GKNM Hospital, Coimbatore, India.

There is increasing literature raising a possible link between anaesthetic exposure to the developing brain and neuro-toxicity. There is a concern for these possible effects from almost all medications used for sedation and general anaesthesia. Concern has reached a point where the FDA, SmartTots and the American Academy of Pediatrics have recommended that elective procedures with anesthesia be delayed until three years of age. MRI is an increasingly used modality for diagnosis without radiation exposure. In our institute we follow the *'feed and swaddle'* technique using a Medvac infant immobilizer. With our experience using it for over 200 cases, we have overcome major setbacks in the MRI room for infants like unnecessary anaesthetic exposure, hypothermia, apnea, bradycardia, desaturation, supplemental oxygen, longer hospital stay and increased cost. Given the growing concern over the possible neuro-toxic effects of anaesthetic drugs on the developing brain, more centres should consider this technique. We recommend that 'Feed & Swaddle' technique should be the first line method used, to obtain MRIs, with sedation. GA should be reserved for special circumstances or failed F&S attempts. We have no disclosures to make. www.medvac.com

IMAGES FOR CASE REPORT