

15% during head pinning, incision, and craniotomy without any complications or increased analgesic requirements intraoperatively.

Keywords: craniotomy, levobupivacaine, hemodynamic parameters

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A014 Comparison of 0.375% Levobupivacaine, 0.375% Bupivacaine, and 0.375% Ropivacaine in Terms of Analgesia and Hemodynamic Stability following Scalp Block in Patients Undergoing Awake Craniotomy: A Prospective Randomized Double Blind Study

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Introduction: The anesthetic challenges of awake craniotomy are to maintain adequate sedation, analgesia, and hemodynamic stability in an awake patient who should be able to cooperate during intraoperative neurological assessment. Conventionally, scalp block is performed with racemic bupivacaine with epinephrine. Studies on bupivacaine isomers have shown reduced cardiovascular toxicity of its levorotatory form (levobupivacaine). Ropivacaine, the S(-) enantiomer of bupivacaine analogue, is known to have lesser cardiotoxicity with similar pain relief at equivalent analgesic doses in comparison to bupivacaine. This study was undertaken to compare levobupivacaine, bupivacaine, and ropivacaine for analgesia and hemodynamic stability and complications following scalp block in awake craniotomy patients.

Methodology/Description: The study was conducted at the Department of Neuroanesthesiology, P D Hinduja Hospital and M.R.C, Mumbai, after obtaining approval from the Institutional Review Board. Sample size of 42 patients (14 + 14 + 14) was determined using “MedCalc” and patients were randomized into one of the three arms based on computer-generated random numbers. Analgesia and hemodynamic parameters were noted at various time intervals. Results were analyzed by the Kruskal–Wallis test.

Results: All three groups were comparable in terms of demographic characteristics. There was no statistically significant difference in the VAS scores and hemodynamics at Application of Mayfield head pin ($p = 0.54$), skin incision ($p = 0.98$), craniotomy ($p = 0.299$), raising of bone flap ($p = 0.47$), opening of dura ($p = 0.50$), replacing of bone flap ($p = 0.14$), and skin closure ($p = 0.41$) in all three groups.

Conclusion: Levobupivacaine and ropivacaine provided equally good analgesia, hemodynamic parameters and

operating conditions as racemic bupivacaine and can be used routinely in our armamentarium of drugs for scalp block in awake craniotomy with better safety profiles.

Keywords: ropivacaine, levobupivacaine, awake craniotomy

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A015 Optic Nerve Sheath Diameter Measured by Ultrasonography: How Well Does It Correlate with Intracranial Pressure According to the New Brain Trauma Foundation Guidelines?

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Introduction: Bedside ultrasonography (USG), measurement of optic nerve sheath diameter (ONSD) has been proposed as a method to detect raised intracranial pressure (ICP) in various clinical settings. We aimed to evaluate the use of USG in the case of intracranial hypertension and find out the cutoff point that predicts ICP accurately at 22 mm Hg.

Methodology/Description: A retrospective analysis of the data collected from a prospective double-blind study performed by performing ocular ultrasounds in 52 adult patients with features of intracranial hypertension was done. The ONSD was measured by USG under anesthesia and compared with the intraventricular ICP measured simultaneously. The optimum cutoff of ONSD to predict ICP > 22 mm Hg was sought.

Results: There was a significant correlation of sonographic ONSD with ICP ($r = 0.498$, $p = 0.000173$). An ONSD threshold of 6.3 mm predicted ICP > 22 mm Hg with high sensitivity (89%) and specificity (73%, area under ROC curve = 0.814, $p = 0.000424$, CI = 0.672–0.956).

Conclusion: Our study confirms the utility of optic nerve ultrasound in the diagnostic evaluation of patients with known or suspected intracranial hypertension. We recommend an ONSD cutoff of 6.3 mm for predicting ICP > 22 mm Hg.

Keywords: ONSD, ICP, ultrasound

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A016 O-C1-C2 Dynamics during Flexible Fiberoptic Bronchoscopy and Video Laryngoscopy in Patients with Atlantoaxial Dislocation: A Preliminary Analysis

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Introduction: Until now fiberoptic bronchoscopy (FOB) is considered the gold standard for securing airway in atlantoaxial dislocation (AAD). Our aim is to compare the inter-relationship and dynamic change of bony landmark associated with FOB when compared with videolaryngoscopy (VL), which could be suggestive of possible worsening/improving cervical spinal canal diameter in patients with AAD.

Methodology/Description: After approval from Institutional Ethics Committee prospective, randomized, clinical trial was conducted in 49 patients, aged 12 to 65 years from April 2017 to September 2017. Patients were randomized for intubation with either VL or FOB and process was continuously recorded cinefluoroscopically. The data were analyzed to calculate following distances:

Distance D1 = atlantodental interval (ADI)

Distance D2 = vertical (v), horizontal (h), and diagonal (d) distance between inferioposterior point on posterior atlas arch and superioanterior point at C2 spinolaminar junction.

Results: We analyzed 49 patients (26 in FOB, 23 in VL). ADI was calculated in 10/26 FOB group and 19/23 VL group. ADI was significantly reduced in VL group (84.20%) compared with FOB group (40%) with statistically significant *p* value of 0.032. The vertical (V), horizontal (H), and diagonal (D) distances were calculated in 25/26 FOB group and 22/23 VL group. We did not find any statistically significant difference in V, H, and D distances. None of the patients developed fresh neurologic deficit at 6 hour postoperatively and at discharge.

Conclusion: We conclude that VL is comparable to FOB in respect to dynamic changes of bony landmarks in patients with AAD and appears to be a good alternative technique to FOB for endotracheal intubation with advantage of improving spinal canal diameter.

Keywords: AAD, FOB, VL

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A017 Perioperative Management of Pituitary Macroadenoma for Transcranial Resection

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Introduction: Pituitary surgery presents challenges to anesthesiologists due to anatomic location and physiological function. Postoperative disorders of fluid and electrolyte balance are very common, requiring prompt diagnosis and treatment.

Methodology/Description: A 42-year-old obese, known diabetic man with subnormal mental development presented with headache for 6 months with fever. Examination revealed sparse facial hair, gynecomastia, and visual disturbances. MRI showed pituitary macroadenoma encasing bilateral cavernous internal carotid artery with mild hydrocephalus. Blood investigation showed hyperprolactinemia with hypothyroidism. After failure of medical management with cabergoline 0.5 mg twice a week, transcranial resection was planned. Anesthetic concerns were anticipated difficult airway, positioning, hemodynamic instability, and hormonal disturbances. Videolaryngoscope was used to secure airway. Balanced anesthesia technique with insulin infusion, anti-convulsants, and steroids was used for maintenance. Surgery lasted 7 hours with blood loss of 800 mL. Patient was extubated and monitored in ICU. On postoperative day 7, patient was put on ventilator due to decreased mentation. Patient had high urine output with hyponatremia, hypovolemia, natriuresis, low serum osmolality, and high urine osmolality, pointing toward diagnosis of cerebral salt wasting. Clinical condition improved with 3% sodium chloride at 10mL/hour and intravenous fluids. Patient was extubated on day 13 and discharged home on day 18.

Conclusion: Postoperative polyuria can be challenging due to life-threatening hyponatremia. Fluid and electrolyte balance is very important. Good knowledge, planning, preparation, and teamwork are fundamental to successful perioperative patient care.

Keywords: polyuria, pituitary surgery, macroadenoma

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A018 Ictal Bradycardia: A Missed Etiology for Intraoperative Bradycardia

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Introduction: Intraoperative bradycardia and asystole are the most dreaded anesthetic emergencies. We report a