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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

case of intraoperative bradycardia and brief asystole, which was in fact an ictal bradycardia, visualized in the intraoperative electroencephalogram (ECoG) recordings. By convention, anesthesiologists consider seizures as an etiology in intraoperative tachycardia scenarios. It is important to identify ictal bradycardia as a potential harbinger of lethal rhythms, such as asystole; this may lead to sudden unexpected death in epilepsy patients (SUDEP) presenting for surgery.²

Methodology/Description: A 30-year-old male patient diagnosed with mesial temporal sclerosis of right temporal lobe presenting for right anterior temporal lobectomy and hippocampectomy had brief period of bradycardia, asystole lasting less than 30 seconds, revived with CPR. Concomitantly the electrophysiologist reported ictal activity on the ECoG. Immediate intravenous administration of inj. thiopentone 100 mg resulted in cessation of the electrographic seizures with simultaneous termination of bradycardia with heart rate settling back to the baseline.

Conclusion: The search of literature proved that there are no reported cases of intraoperative ictal bradycardia being suspected as a cause for intraoperative bradycardia. Thus, authors intend to create awareness about this rare phenomenon, which remains undiagnosed and may lead to life-threatening events in intraoperative period.

Keywords: intraoperative, seizures, bradycardia

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A019 Utility and Predictive Value of CHIDA Score in Pediatric Traumatic Brain Injury: A Pilot Study

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Introduction: The appropriate initial care of children with complicated mild traumatic brain injury (mTBI, Glasgow Coma Scale [GCS] scores of 13 to 15 and intracranial injury on CT) remains unclear. ICU observation detects early neurological worsening but it increases costs. The Children's Intracranial Injury Decision Aid (CHIDA) score identifies which children can be safely observed in ward. The goal of this study is to assess the utility of CHIDA score to predict the need for ICU admission in children with complicated mTBI.

Methodology/Description: This prospective observational study, following ethics committee approval, included children < 18 years of age admitted to trauma ICU from July to September 2017 with mTBI. Patients with trivial trauma, penetrating TBI, GCS < 13 were excluded. CHIDA score was calculated. The primary study outcome was the composite

of neurosurgical outcome, intubation for > 24 hours for head trauma or death. Sensitivity, specificity, predictive values, and likelihood ratios were calculated.

Results: Twenty-eight out of 50 patients had CHIDA score > 0 while 25 patients scored > 2. Of these, six patients (12%) experienced the primary outcome including one death. Using a cutoff of score > 0 to admit to ICU had a sensitivity of 100% and a negative predictive value of 100%. Using a cutoff of score > 2 had a sensitivity of 83.33% and a negative predictive value of 96%. Using these cutoffs, ICU admission would have been avoided in 44 and 50% patients, respectively.

Conclusion: CHIDA score seems to be a useful tool but needs to be validated in developing countries in more patients.

Keywords: traumatic brain injury, Pediatric, CHIDA

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A020 Venous Air Embolism in Brain Tumor Surgery Presentation under Anesthesia and Its Association with Postoperative Venous Infarction of the Brain

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Introduction: Venous air embolism (VAE) is a relatively common occurrence in neurosurgical procedures (16-86%), although the proportion of clinically significant VAE is lesser. A higher incidence is seen with sitting position and posterior fossa surgery. However, it is less commonly associated with the occurrence of venous infarct. We hereby present a case of VAE during excision of meningioma and the subsequent development of venous infarct necessitating decompressive hemicraniectomy.

Methodology/Description: Preoperative preparation of the patient was uneventful except for a deranged sugar profile, which required administration of insulin. The intraoperative course was marked by an episode of VAE (sudden severe hypotension, sudden drop in end-tidal carbon dioxide, drop in the saturation) when the neurosurgeons were dissecting the tumor. Such a period of hypotension and hypoxia persisted for barely 3 to 4 minutes and necessitated intensive resuscitation measures. Rest of the surgical and anesthesia course was uneventful, and the patient was shifted to the critical care unit (CCU) for elective ventilation and was subsequently extubated the following day. However, the patient subsequently developed a right parieto-occipital venous infarct requiring a decompressive craniectomy after failure of medical measures to contain the dysfunctional intracranial