A026 Opioid-Free Total Awake Craniotomy and Cortical Mapping: Our Experience

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Background: Awake craniotomy is the preferred technique in surgeries involving eloquent areas of brain. Primary aim of anesthesia management is to provide awake and cooperative patient facilitating functional and neurophysiological monitoring for cortical mapping. Although opioids have minimal effect on neurophysiological monitoring, the side effects, like drowsiness, respiratory depression, itching, chest wall rigidity, nausea, and vomiting, can interfere with patient cooperation. We studied the feasibility of excluding opioids in anesthetic management of awake craniotomy and assessed the patient's response, cooperation, and comfort during the procedure in a series of patients.

Materials and Methods: From January 2019 opioid free anesthetic management was introduced in awake craniotomies in our institute. Age less than 18 years and more than 65 years, ASA III and above, expected surgery duration more than 6 hours, and any comorbidity that warranted asleep–awake–asleep technique were excluded. Data regarding anesthesia management, drugs used, patient cooperation, need for additional anesthetic agents, feasibility of neurophysiological monitoring, and duration of scalp block were collected.

Results: Eight patients met inclusion criteria. Bilateral scalp block was provided with 12 mL of bupivacaine0.5%, Mayfield pin site infiltration was done with 3 mL of bupivacaine 0.5%. Paracetamol 1 gm was given intravenously before scalp incision. Gauze soaked with lignocaine 2% was placed on the dura mater for 3 minutes before incision. All patients were cooperative for functional assessment including language mapping. Satisfactory signals were obtained from neurophysiological monitoring. Mean duration of first perception of surgical site pain was 7 ± 1 hours.

Conclusions: Our case series highlights that total awake craniotomy can be successfully managed with adequate scalp block and paracetamol as preemptive analgesic agents. Opioids can be spared during awake craniotomy management thus minimizing opioid related side effects and without affecting the intraoperative functional monitoring.

A027 Anesthetic Management of a Case of Vein of Galen Aneurysmal Malformation

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Background: A vein of Galen aneurysmal malformation is a rare congenital arteriovenous malformation of intracranial circulation in and causes intractable congestive high-output cardiac failure in a neonate. Atrial septal defect is a common congenital cardiac anomaly resulting from a defect in the interatrial septum that causes shunting of blood from the left atrium to the right atrium through the defect leading to enlargement of the right side of the heart and of the pulmonary arteries.

Case Description: We present a case of vein of Galen malformation associated with atrial septal defect and its associated complications planned for embolization. A 9-month-old infant was brought with complaints of increasing head size and an uneventful birth history. MRI was done and vein of Galen malformation was diagnosed. Chest X-ray showed cardiomegaly and echocardiogram revealed severe atrial septal defect with right atrial and right ventricular enlargement. The infant was apparently normal with no significant events.

Conclusion: Embolization was done under general anesthesia and the patient was hemodynamically stable during the perioperative and postoperative period. The case was challenging because of its association with severe atrial septal defect

A028 Dexmedetomidine-Based Anesthesia Facilitates Intraoperative Electrocorticography in Patients with Lennox–Gastaut Syndrome Presenting for Epilepsy Surgery: Our Case Experience

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Background: Electrocorticography is a useful tool to guide the localization of the epileptogenic focus, for surgical resection in epilepsy surgery. Drug interactions, proconvulsant or anticonvulsant activity of the anesthetics and anesthetic influence on intraoperative electrocorticography (ECoG) are the primary concerns to be addressed in these patients.

Case Description: We report the anesthetic management of two patients with Lennox–Gastaut syndrome presenting for respective epilepsy surgery with intraoperative ECoG. We observed that Dexmedetomidine-based anesthesia facilitates intraoperative ECoG monitoring.

Conclusion: Dexmedetomidine by decreasing the requirements of other anesthetic agents offers better recovery profile and pain relief with minimal respiratory depression in patients undergoing disconnective epilepsy surgeries.

A029 Spondyloepiphyseal Dysplasia: A Perioperative Challenge to the Anesthesiologist

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Background: Spondyloepiphyseal dysplasia congenita (SDC) is a rare autosomal dominant genetic disorder of dwarfism involving the vertebral column and epiphyses of long bones. In addition, these patients are also likely to have short necks with limited flexion and odontoid hypoplasia

with atlantoaxial instability. We present the management of a patient with the above disorder who underwent multilevel posterior spinal decompression and instrumentation.

Case Description: A 19-year-old male known case of spondyloepiphyseal dysplasia presented with spastic paraparesis and bowel-bladder incontinence. Patient had short stature, exostostic limb, and joint swellings with fixed-flexion deformities. There was multilevel platyspondyly with reduced canal diameters of cervical and dorsal spine. Airway assessment revealed reduced mouth opening and neck extension, and inability to bite upper lip. General anesthesia was induced and laryngoscopy was attempted with videolaryngoscope. However, no part of glottis could be visualized. No further attempts were taken, proseal LMA was inserted. Surgical tracheostomy was done. Patient was positioned in prone and surgery proceeded. Intraoperative course was uneventful. Following completion of surgery, residual neuromuscular blockade was reversed. However, patient developed significant swelling and redness over left forearm due to impaired venous drainage at the level of exostosis elbow joint.

Conclusion: Patients with spondyloepiphyseal dysplasia pose multiple perioperative concerns due to difficult airway, cervical spine instability, restrictive respiratory impairment, and problematic positioning. Meticulous planning and careful management of these concerns will help in providing good perioperative care to these patients.

A030 Pneumothorax: Do not Always Blame the Central Line

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Background: Central venous cannulation is often held responsible for iatrogenic pneumothorax. We present a case where faulty PEEP valve was found to be responsible for the occurrence of pneumothorax.

Case Description: A 50-year-old male, with no known comorbidities, was posted for excision of left vestibular schwannoma. Preoperative investigations were normal. On the day of surgery, the patient was wheeled into the theater and standard monitors were attached. Anesthesia was induced with fentanyl, propofol, and rocuronium. After bag-mask ventilation for 3 minutes, airway was secured with an 8.0-mm endotracheal tube. Chest auscultation revealed bilateral rhonchi with a Shark-fin appearance on capnography; airway pressure was 40 cm H2O. A diagnosis of bronchospasm was made and was treated by deepening the plane of anesthesia and administration of salbutamol and hydrocortisone. A right subclavian vein cannulation was done, at second attempt. The patient was positioned right lateral position, immediately after which the airway pressure was increased to 37 cm H2O. Hence, he was reverted back to supine position, but the airway pressure remained persistently elevated. Despite no application of PEEP, it was noted in the monitor of a PEEP value of 12 to 15 cm H2O. Ventilation was then performed manually with bag, but the bellows continued to move. At this point, the hemodynamic parameters worsened. A provisional diagnosis of right pneumothorax was made and needle thoracostomy was done followed by placement of an ICD. The hemodynamic parameters improved and airway pressures settled.

Conclusion: Although central venous cannulation is often implicated in iatrogenic pneumothorax, we should look for other possibilities with an open mind. In our case, a diagnosis of pneumothorax was made presumably due to more than one attempt during subclavian vein cannulation. However, further analysis suggested a faulty PEEP valve to be responsible for it.

A031 Perioperative Management of Cerebral Aneurysmal Clipping: A Neuroanesthetic Consideration of Sickle Cell Disease

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Background: Over 30 million people worldwide have sickle cell disease (SCD). Various surgical procedures in SCD have been associated with relatively increased risks of vaso-occlusive crisis, acute chest syndrome, heart failure, cerebrovascular accident, and acute kidney injury.

Case Description: A young adult female was admitted with history of headache and posted for clipping of right MCA saccular aneurysm. Preoperative assessment included 2D echo to rule out any cardiac dysfunction along with routine investigations. All possible crisis triggering factors were reviewed. Blood transfusion was started along with surgery, patient was well managed in intraoperative and postoperative period keeping high suspicious for vasospasm and possible triggering factors.

Conclusion: Use of preoperative blood transfusions should be selective and individualized based on the baseline hemoglobin, surgical procedure and anticipated volume of blood loss. Intra- and postoperative management should focus on minimizing pain, hypoxia, hypothermia, acidosis, and intravascular volume depletion.

A032 Anesthetic Management of an Adult Male with Fontan Physiology for Thoracic Arachnoid Cyst Excision: A Case Report

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Background: Patients with successful corrections for congenital cardiac anomalies present into adulthood with complex cardiac physiology. Here, we report the successful management of an adult with tricuspid atresia, post–Fontan surgery who underwent excision of a thoracic arachnoid cyst with intraoperative motor evoked potential (MEP) monitoring.