
ANESTHESIOLOGY™ 2012

TRANSFORMING PATIENT SAFETY THROUGH EDUCATION AND ADVOCACY

MEDICALLY CHALLENGING CASES NEUROANESTHESIA

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC41

Intracranial Hypotension With Brain Herniation Treated With Epidural Blood Patch

Walid Alrayashi, M.D., Jamaal Snell, M.D., Ken Sutin, M.D., New York University Medical Center, New York, NY.

This is a case of a 47 year-old female had a craniotomy and clipping of a ruptured left-sided posterior communicating artery aneurysm. A lumbar drain was placed intra-operatively to drain CSF, but removed at the end of the surgery. On POD#1, the patient had low ICP, a dilated left pupil, and a post-op head CT which showed basal cistern effacement and herniation through the foramen magnum. It was determined that an epidural blood patch be done to help stop CSF leakage and worsening herniation. The blood patch was successfully placed and the patient's symptoms resolved in less than 24 hours.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC42

Awake Craniotomy in a Patient With Myasthenia Gravis

Lovkesh Arora, M.D., Surangama Sharma, M.D., Shekar Bhavani, M.D., Anesthesiology, Cleveland Clinic Foundation, Cleveland, OH

82 year-old male with h/o Myasthenia Gravis presented with left-sided weakness, neuroimaging demonstrated a tumor in the posterior right frontal region, underwent Awake Craniotomy. Anesthetic management was challenging considering patient's age, debilitating Myasthenia Gravis and the procedure itself, which necessitates patient's cooperation, adequate analgesia and sedation without respiratory depression. We used continuous IV infusions of dexmedetomidine along with Propofol for induction and maintenance. The pharmacology of dexmedetomidine allowed us to keep propofol infusion to minimum thus preventing respiratory depression in light of Myasthenia gravis. Patient was breathing spontaneously, remained hemodynamically stable and cooperative during the awake portion of the procedure.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC43

Airway Management of Tracheal Stent in a Patient With Elevated ICP Presenting for Urgent Craniotomy

Talia K. Ben-Jacob, M.D., Keyur Trivedi, M.D., Department of Anesthesia, Cooper University Hospital, Camden, NJ.

A 59 year-old woman with metastatic non-small-cell lung cancer (NSCLC) presented for urgent craniotomy for a right frontal mass with midline shift. Prior treatment of NSCLC involved placement a silicone stent to relieve obstruction in her trachea. A chest x-ray revealed the stent extending above the level of the clavicles. We discuss the management of a patient with a symptomatic increase in intracranial pressure and a foreign body in the trachea requiring urgent surgery.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC44

Case Report: Global Neurological Dysfunction as a Result of Cerebral Fat Emboli Syndrome in a Patient With a Patent Foramen Ovale (PFO)

Cole Bennett, M.D., Kenneth Cummings, M.D., Cleveland Clinic Foundation, Cleveland, OH.

63 year-old male presented for a revision of a total hip arthroplasty. During the case, a significant embolic shower was experienced resulting in hypoxia, respiratory acidosis, and hypotension. During recovery, the patient was discovered to have developed global neurological dysfunction due to fat emboli passing through his patent foramen ovale (PFO). This raises the question of whether it may be appropriate to screen for PFOs prior to elective cases that have the potential of a significant embolic load.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC45

Anesthetic Management of a Patient With Osteomyelitis Induced Cervico-Thoracic Hardware Failure Leading to Severe Kyphotic Deformity

Aaron Broman, M.D., James Blair, M.D., Vanderbilt University, Nashville, TN.

A 32 year-old male with a PMH of traumatic cervical fracture requiring complex anterior/posterior fusion presented 20 months post-op with hardware failure in the setting of osteomyelitis. MRI revealed a 60 degree angulation at the cervicothoracic junction. Despite the severe kyphotic deformity, he had preserved motor and sensory function in all extremities. The patient underwent C2-T10 posterior spinal fusion with bilateral trapezius muscle flaps, followed by C5-T4 anterior fusion, (both cases 12+ hours, two days in a row). Anesthetic challenges included the use of SSEPs and MEPs which required total intravenous anesthesia using dexmetomidine, propofol, lidocaine, and remifentanyl infusions.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC46

Temporary Paraplegia Following Minimally Invasive Spinal Microdiscectomy

Georges A. Cehovic, Jr., M.D., Michael H. Haak, M.D., Anesthesiology Section of Critical Care Medicine, Orthopedic Surgery, Northwestern Memorial Hospital, Feinberg School of Medicine, Chicago, IL.

A 40 some year-old woman undergoes minimally invasive spinal discectomy. After extubation, she is paraplegic and requires pressors to normalize her hypotension. MRI imaging excludes an epidural

hematoma and neuro-monitoring records challenge a surgical etiology. Except for a corrected blood loss, her anesthetic course was unremarkable. The possibility of an inadvertent injection of local anesthetic into the epidural space as an explanation is hypothesized and ultimately confirmed by her clinical course. Other rare causes of post-operative paraplegia are discussed, inadvertent injections in the epidural space and factors that may have contributed to this presentation in our case.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC47

Vasopressin Infusion for Verapamil Induced Hypotension Unresponsive to Phenylephrine Infusion During Interventional Radiology Mechanical Thrombectomy - Another Use of Vasopressin

Carina Cheung, D.O., Ehab Farag, M.D., Anesthesiology, Cleveland Clinic Foundation, Cleveland, OH.

37 year-old female with history of breast cancer 2000, chronic anemia and fibroids presented for IR mechanical thrombectomy for left middle cerebral artery stroke. Under MAC, diagnostic angiogram confirmed the thrombus. Vasospasm, encountered in the left cervical artery, was treated with 5mg verapamil intra-arterially. Patient was hypotensive and phenylephrine infusion was started. Hypotension persisted therefore, vasopressin infusion was started and blood pressure responded, which allowed phenylephrine to be titrated off. Despite unsuccessful thrombectomy, patient remained stable and vasopressin was weaned off by end of the case. Another use of vasopressin uncovered to maintain blood pressure after intra-arterial verapamil.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC48

Expansive Subdural Hematoma in the Setting of Anticoagulation: A Review of Perioperative Anticoagulation Management

Howard Ching, M.D., Anesthesiology, New York University, New York, NY.

A 61 year-old man in a motor vehicle accident with LOC, presented complaining of headache and nausea. Initial head CT showed left temporal subdural hematoma without mass effect or midline shift. Initial PT/PTT/INR were 25.6/37.1/2.32. After 1u of FFP and vitamin K, coags were 22.3/32.6/1.97. A few hours later, he had a blown left pupil and generalized right-sided hemiparesis. Repeat head CT showed an increasing left SDH, and a new left temporal intracranial hemorrhage. He went to the OR for emergent evacuation of left SDH. He received Factor IX complex, FFP, and PRBCs without any intraop or postop complications.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC49

Nelson's Syndrome: Intraoperative Management of Endoscopic Pituitary Tumor Resection

Chi-Shin Chiu, M.D., Sergey V. Pisklakov, M.D., Anesthesiology, UMDNJ-NJMS, Newark, NJ.

After bilateral adrenalectomy patients usually have elevated ACTH level, can develop Nelson's syndrome and require physiologic steroid replacement. Adequate perioperative steroid coverage is indicated for numerous reasons. Our patient had previous bilateral adrenalectomy, developed Nelson's syndrome and presented for endoscopic pituitary tumor resection. Pharmacological therapy of Nelson's syndrome usually includes dopamine agonist, valproic acid, somatostatin analogues. However, mineralcorticoid therapy remains an integral part of perioperative management; fludrocortisone was given preoperatively and dexamethasone was given intraoperatively.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC50

Uncontrolled Uremic Bleeding During Transsphenoidal Craniotomy for Pituitary Tumor Resection

Anthony J. Cirone, M.D., Eugenia Ayrian, M.D., Vladimir Zelman, M.D., Anesthesiology, University of Southern California, Los Angeles, CA.

Transsphenoidal craniotomy presents the possibility of bleeding in an enclosed space. A 45 year-old male with end stage renal disease presented for pituitary tumor resection after missing hemodialysis. Potassium was not elevated, so surgery proceeded as scheduled. During resection, blood loss was uncontrolled, and a blood gas revealed BUN >100. Uremic platelet dysfunction was diagnosed. DDAVP 0.3 mcg/kg was administered, and bleeding resolved. Uremia interferes with vWF formation and function of GPIIb-IIIa receptor. DDAVP causes immediate vWF release and corrects platelet adhesion. A literature review revealed no similar reports; as such it was important to present this unique case.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC51

Successful Anesthetic Management After Four 7.5cm Nails Traumatically Placed Through the Calvarium

Kevin Costello, M.D., Matthew Ellison, M.D., Anesthesiology, West Virginia University Hospital, Morgantown, WV.

The authors believe this is the first case describing survival after traumatic placement of four 7.5 cm nails through the cranium: left frontal midline, left frontal lateral, right frontal lateral and left temporal. The patient is a 51 year-old male with an attempted suicide attempt by using a nail gun to place the four aforementioned nails through his calvarium, with some of the nails crossing midline. A general anesthetic with RSI was employed with an arterial line, subclavian central line, and two PIV's (14 and 18 gauge). Four separate craniectomies were performed through which the nails were removed.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC52

Awake Craniotomy in a Difficult Airway Patient

Brandon Davis, Anjali Patel, D.O., Anesthesiology, St. Louis University, St. Louis, MO.

A 61 year-old female presented for an awake craniotomy for tumor removal with intraoperative speech stimulation and testing. The patient's anesthetic plan was further complicated with her history of obstructive sleep apnea and history of difficult airway. The patient was sedated with dexmedetomidine and remifentanyl infusions and maintained spontaneous ventilation throughout the case.

Saturday, October 13, 2012

8:00 AM - 9:30 AM

MC53

Near Catastrophe Avoided by Prompt Diagnosis and Treatment of Venous Air Emboli During Sitting Craniectomy

Kimberly Dugan, M.D., Lisa Q. Rong, M.D., Anesthesiology, NYU Langone Medical Center, New York, NY.

50 year-old male was found unconscious with hypertensive emergency after cocaine use. CT scan revealed intraventricular/subarachnoid hemorrhage. Cerebral angiogram showed a cerebellar AVM and PICA aneurysm. Emergent embolization of the aneurysm was performed. Later, underwent a suboccipital craniectomy and cerebellar AVM resection in the sitting position with a-line, CVL, and precordial

doppler. Acute decreases in EtCO₂, elevated PaCO₂ and low PaO₂ were noted. The surgical field was flooded, air was aspirated from CVL, and jugular venous pressure was applied. A tear in the transverse sinus was found and repaired. Post-op, the patient was taken hemodynamically stable to NICU.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC393

Florid Pulmonary Edema in a Patient With Subarachnoid Hemorrhage Anesthetic Challenges

Sudarshan Setty, M.D., Angelika Kosse, M.D., Montefiore Medical Center, Bronx, NY.

33 year-old F in ED with the worst headache of her life, was intubated in the ED for seizure, AMS. CT angi revealed Grade 3 SAH, ACOM aneurysm. Florid pulmonary edema with 70% saturation on 100% oxygen in OR. Large bore IVs, a-line were secured. The patient was started on a propofol and phenylephrine drip. She received fentanyl, rocuronium, mannitol and lasix. SaO₂ remained in the 70s, PEEP was gradually increased to 16 with serial ABGs to achieve SaO₂ of 90%. The aneurysm was clipped. Post op in ICU PEEP was gradually weaned over 24 hours and extubated. The patient made an uneventful recovery.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC394

Angioedema in Neuro-Interventional Suite

Abraham Sonny, M.D., Hesham Elsharkawy, M.D., Anesthesiology, Cleveland Clinic, Cleveland, OH.

A 68 year-old female with acute ischemic stroke presented to us for mechanical thrombectomy, after failed thrombolysis with tPA. Standard monitoring and arterial line were placed in neuro-interventional suite. Procedure was completed successfully under sedation with dexmedetomidine infusion. Subsequently, she complained of difficulty in breathing and developed marked facial and neck swelling. Emergent awake fiberoptic guided intubation was performed to secure airway, which showed significant edema of supraglottic structures. Upto 5.1% incidence of angioedema has been reported after tPA in these patients. Patients undergoing neurointerventional procedures under sedation need close monitoring to recognize and treat airway complications.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC395

Does Sevoflurane Cause Ischemic Preconditioning in Neurosurgery?: A Case Report and Analysis

Lalitha V. Sundararaman, M.D., Scott Eber, M.D., Anesthesiology, Jackson Memorial Hospital, University of Miami, Miami, FL.

We present a case report wherein a patient had global cerebral ischemia secondary to 2 episodes of cardiac arrest 20 minutes apart. Endtidal sevoflurane concentration was maintained at 1 MAC prior to each ischemic episode and at the time of reperfusion following the first arrest episode. Postoperative evaluation revealed no neurological deficits despite 13 minutes of CPR and neurosurgery close to the motor and optic tracts. Inhalational agents act through mitochondrial potassium channels to produce preconditioning in the ischemic brain. We believe that this is the first case report of preconditioning and postconditioning with a favorable outcome in a female patient.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC396

Failure to Detect Acute Spinal Cord Injury From Graft During ACDF Procedure Under SSEP Monitor

Jun Tang, M.D., Shahriar Pirouz, M.D., Alen Ternian, M.D., Anesthesiology, Cedars-Sinai Medical Center, Los Angeles, CA.

A 56 year-old female scheduled for anterior C5-6 discectomy and fusion 2/2 disc-herniation and stenosis. PMH: hypertension and asthma. Bilateral lower extremities numbness/tingling (+). Induction: propofol-vecuronium. Intubation: fiberoptic. Maintenance: propofol-desflurane. Monitor: SSEP. Surgery (75 min) was uneventful. Neostigmine-glycopyrrolate was given before the end of surgery. After extubation, patient followed command like eyes-opening but unable to move extremities (sensation intact). STAT-CT revealed posterior-position of bone graft causing spinal cord compression. After emergent graft revision. patient was able to move all 4 extremities. 90% muscle strength recovered on POD #2. Discharged on POD #3. Full recovery was noted during follow-up visit 3-mon later.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC397

Sudden Cardiac Arrest in the OR: Unmasking Prolonged QT During a Craniotomy

Miguel A. Telleria, M.D.,M.B.A., Jessica Brodt, M.D., Lorenz Theiler, M.D., Richard Silverman, M.D., Anesthesiology, University of Miami, Miami, FL.

54 year-old female presented for urgent meningioma resection with medical history significant for syncope, headaches and visual disturbances. The patient was hemodynamically stable through induction, intubation and insertion of a lumbar drain. Frontal craniotomy was uneventful, but upon opening of the dura, polymorphic VT developed followed by coarse ventricular fibrillation and cardiac arrest. ACLS was commenced and after multiple shocks and vasoactive medications, spontaneous circulation returned. Surgery was aborted and upon closure of incision, polymorphic VT and ventricular fibrillation recurred, responding to 3 shocks and 2g magnesium. Intraoperative 12-lead EKG showed prolonged QTc.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC398

Accidental Prone Extubation: A Case Report and Prone Airway Management Algorithms

Dennis Thiel, Matthew Wecksell, M.D., Anesthesiology, Montefiore Medical Center, Bronx, NY.

We present a case of accidental extubation while our patient was in the prone position. This occurred when the skull was in a pin-fixation device, with an open surgical field, incomplete vertebral fusion, with a portable CT scanner in place, to a patient with an established difficult airway. Additionally, we provide suggested algorithms for management of loss of ventilation and reintubation of the prone airway.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC399

Post Operative Neurological Deficit Following General Anesthesia

Pratiksha Trivedi, Ned Nasr, M.D., Ramsis Ghaly, M.D., John H. Stroger Hospital of Cook County, Chicago, IL.

Introduction: Despite considerable knowledge and preventive strategies, neurological injuries remain frequent occurrence in the perioperative setting .We had a case of left upper extremity neurological

deficit following colon resection under General Anesthesia. Case description: A 59 year-old man was scheduled for Colon resection General Anesthesia was induced and maintained uneventfully .In Recovery room patient started complaining of left upper extremity weakness which turned out to be brachial plexopathy involving lower cords on initial EMG but surprisingly, Follow up EMG showed cervical polyradiculopathy and no brachial plexus injury. CT Cervical spine showed diffuse degenerative disc disease.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC400

Absence of Motor Evoked Responses Immediately After Anesthetic Induction in a 65 year-old Male Veteran Presenting for Anterior Cervical Discectomy and Fusion

Jacob Vella, M.D., Richard Beers, M.D., Anesthesiology, SUNY Upstate Medical University, Syracuse, NY, Anesthesia, Veterans Administration Medical Center, Syracuse, NY.

A 65 year-old male veteran presented for C4-C7 discectomy and fusion with intraoperative somatosensory and motor evoked potential monitoring. General anesthesia was induced with propofol, lidocaine, and fentanyl. Laryngoscopy and intubation were performed using a video laryngoscope and in-line axial stabilization; succinylcholine was administered for muscle relaxation. When first checked, the somatosensory potentials were normal, but motor potentials could not be elicited. The surgeon asked if there had been a problem during induction and requested guidance as to whether or not to proceed with surgery. The patient was hemodynamically stable; temperature and pulse oximetry measurements were within normal limits.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC401

Spurious Hypoxemia During Emergency Craniotomy

Donald H. Penning, M.D., M.S., Sukhi Walha, M.D., Michelle Herren, M.D., James C. Duke, M.D., M.B.A., Department of Anesthesia, Denver Health, Denver, CO, USA, Department of Anesthesiology, University of Colorado, Denver, CO.

A 31 year-old. male had an emergency craniotomy to evacuate a large spontaneous intracranial hematoma. He had chronic myelogenous leukemia. His WBC count was 400,000, Hct was 13.3, platelets 51,000 and INR 1.85. Intraoperative ABGs (repeated) revealed a pO₂ of 51mmHg and O₂ saturation of 82% despite 100% pulse oximeter readings. Subsequent ABG was sent on ice to the lab and gave a reading of 93%. It was concluded that ongoing O₂ consumption from the massively elevated WBC count caused the spurious hypoxemia. This has been described in the literature at least once. Reference: *Leukemia Research 19: 1001-4 (1995).*

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC402

Refractory Hypotension in a Multiple Sclerosis Patient During a C6-C7 ACDF

Peter B. Wong, Valery Steinbok, M.D., Tufts Medical Center, Boston, MA.

A 38 year-old female smoker with a history of Hypertension, and Multiple Sclerosis presented for a C6-C7 Anterior Cervical Discectomy and Fusion. Her physical examination and laboratory data were within normal limits. She was induced with Propofol, Fentanyl, Rocuronium, and was intubated without difficulty. Within minutes, vitals fell from 150/78 to 71/43. Phenylephrine was started without any improvement blood pressure; then her pulse decreased from 68 to 22. After administration of atropine

and ephedrine, her vitals stabilized, and the case proceeded uneventfully. On postoperative day 1, except some blurry vision, she appeared clinically healthy and was discharged home.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC403

A Case Report: Awake Craniotomy With Known Difficult Airway

Jiang Wu, M.D., Ehab Farag, M.D., Cleveland Clinic, Cleveland, OH

A 45 year-old male (140 kg, 193 cm) with severe OSA, intubation history of easy mask but known difficult intubation was admitted for Lt frontal awake craniotomy. Satisfactory IV sedation was induced with exmedetomidine loading dose at 1mcg/kg over 10 min and propofol infusion at 50mcg/kg/min. The desired level of sedation was achieved with Dexmedetomidine at 0.2mcg/kg/hr and propofol titrated between 50-70mcg/kg/min. After the dura was exposed, propofol was reduced to 25mcg/kg/min to keep the patient completely awake. When resection was completed, propofol was increased to 50-70mcg/kg/min to deepen anesthesia till the end of the procedure.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC404

Anesthetic Management of a Takayasu's Arteritis Patient With Bilateral Carotid Stenosis Requiring Revascularization

Dalia Yerushalmi, M.D., Peter Roffey, M.D., Anesthesiology, University of Southern California, Los Angeles, CA.

Takayasu's arteritis (TA), also known as "pulseless disease", is a large vessel granulomatous vasculitis which causes massive intimal fibrosis and vascular narrowing. Disease progression can lead to total occlusion of common carotid arteries and subclavian arteries requiring vascular bypass procedures. Our patient is a thirty-three year-old female with TA who maintained cerebral perfusion primarily through a single vertebral artery. We describe the anesthetic techniques applied to maintain cerebral protection in a TA patient undergoing revascularization. Our management focuses on maintaining adequate cerebral perfusion pressures and oxygenation. Additionally, we selected anesthetic agents which decrease cerebral metabolic oxygen consumption.

Sunday, October 14, 2012

2:30 PM - 4:00 PM

MC405

Complications of Refractory Obsessive-Compulsive Disorder During Awake Implantation of a Deep Brain Stimulator

Eric Zelman, Todd Hafner, M.D., University of Arizona, Tucson, AZ.

Our patient presented with disabling obsessive compulsive disorder, refractory to medical and behavioral therapies. Her pro bono operation called for awake placement of a halo and insertion of a deep brain stimulator. The patient's high anxiety and obsession with cleanliness posed a major challenge to keep her calm, motionless, and cooperative. She was tearful following halo fixation, but agreed to proceed. Halfway into the operation, environmental stressors proved intolerable. After failed attempts to comfort the patient, and later to oxygenate, an urgent nasal intubation was performed in the slight beach chair position. The operation continued without further complication.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC454

Perioperative Management of Moyamoya

Odinakachukwu A. Ehie, M.D., Anesthesiology, New York University, New York, NY.

A 49 year-old with h/o multiple CVAs diagnosed with moyamoya syndrome. His angiogram demonstrated central distal occlusion of the left ICA with collateral circulation of the posterior region. A left-sided encephaloduroarteriosynangiosis (EDAS) and burr hole placement were performed. EDAS is an indirect bypass with which the superficial temporal artery is placed over the exposed cortex to enhance the generation of collateral flow. All the principle of maintaining increased cerebral blood flow were followed: mild hypertension, hypercarbia, hypervolemia, normothermia. After two and a half hours, patient was extubated and neurologically intact.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC455

A Child With Severe Neuromuscular Scoliosis Secondary to Neurofibromatosis Presented for Posterior Spinal Fusion

Lisa Francis, D.O., Mario Patino, M.D., Mohamed Mahmoud, M.D., Anesthesiology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA, Cincinnati Children's Hospital Medical Center, Cincinnati, OH.

A 7 year-old female with Neurofibromatosis and resultant severe cervico-thoracic scoliosis and severe restrictive lung disease. She presented in halo-femoral traction, for posterior cervical decompression. After intubation with manual in-line stabilization and positioning, motor evoked potential showed significant attenuation. Patients undergoing these procedures require special consideration for airway management. Intubation in the presence of cervical spine involvement and or halo traction can be difficult and may increase the risk of neurologic injury. The anesthesiologist must have an in-depth knowledge of the critical portions of this procedure. Hemodynamic stability must be maintained to insure adequate perfusion to the spinal cord

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC456

Cerebral Aneurysm Coil Embolization in a Patient With Lambert-Eaton Myasthenic Syndrome and Severe Asthma

Derek Fulcher, M.D., John Ohnoutka, M.D., University of Nebraska Medical Center, Omaha, NE.

55 year-old female presenting for cerebral aneurysm embolization with a history of severe asthma, OSA, chronic cough, and new diagnosis of Lambert-Eaton Myasthenic Syndrome. She was intubated under deep anesthesia with minimal cisatracurium. A full MAC of Sevoflurane and remifentanil drip was used without additional neuromuscular blockade. Further NMB was avoided due to concerns that reversal would exacerbate her asthma. A Bailey Maneuver was performed under deep anesthesia in order to maintain a patent airway for emergence and reduce the airway irritation caused by an endotracheal tube. Emergence was smooth and the patient had no residual muscle weakness or bronchospasm.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC457

Centrally Mediated Pulseless Electrical Activity During Craniotomy Surgery for Subdural Hematoma

Ramsis F. Ghaly, M.D., Omar Raja, M.D., N. Nick Knezevic, Kenneth D. Candido, M.D., Anesthesiology, Advocate Illinois Masonic Medical Center, Chicago, IL.

A 44 year-old male brought to the ER with a subdural hematoma was taken to the OR for emergency craniotomy. Induction of GA and surgery began uneventfully. Within a half hour of incision, there was a sudden loss of the arterial line waveform although EKG reading continued to show sinus rhythm. The arterial line was checked for positioning and attempts to find a peripheral pulse were unsuccessful. After the inability to feel a carotid pulse, CPR was initiated. After approximately 30 minutes of CPR, the peripheral pulse and blood pressure returned and the case proceeded uneventfully.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC458

Complete Recovery After Antepartum Massive Intracerebral Hemorrhage in an Atypical Case of Sudden Eclampsia

Ramsis F. Ghaly, M.D., Scott Klier, D.O., N. Nick Knezevic, Kenneth D. Candido, M.D., Anesthesiology, Advocate Illinois Masonic Medical Center, Chicago, IL.

A 32 year-old female, G2P1 at 34weeks of gestational age presented for a routine follow-up visit. She was not in labor, and had no symptoms of pre-eclampsia, except for a BP of 150/90mmHg. She was admitted to the OB ward for observation. Ten-hours after admission, she started having diffuse headache, her BP soon reached 180/110 mmHg, and her condition progressed to a sudden focal seizure, followed by generalized tonic-clonic seizure. After treatment with MgSO₄, the OB team performed emergent CS. Since, the patient remained unresponsive after CS, a non-contrast CT scan was ordered, which revealed an intracerebral hematoma, and craniotomy was performed.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC459

Perioperative Stroke Due to Undiagnosed Protein S Deficiency

Ramsis F. Ghaly, M.D., Shannon Vargas, M.D., Richard Stephenson, M.D., N. Nick Knezevic, Kenneth D. Candido, M.D., Anesthesiology, Advocate Illinois Masonic Medical Center, Chicago, IL.

A 51-year-old healthy male presented with acute lower abdominal pain likely secondary to food poisoning. CT-abdomen showed a right lower lobe lung mass of 3.2cm. A right thoracotomy and right lower lobe resection was performed without complications. Several hours later, the patient displayed dysarthria, left sided facial and right sided upper extremity weakness. A CT-head was negative but subsequent MRI showed a left sided infarct in the MCA distribution. Diagnostic workup identified a cause as protein-S deficiency. Protein-S deficiency may be a risk factor for ischemic stroke in younger, while age, hypertension, arrhythmias and coagulopathies are in elderly population.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC460

Ankylosing Spondylitis With Unstable Cervical Spine Fracture and Dislocation

Matthew J. Gilbert, M.D., M.P.H., Charles E. Smith, M.D., Anesthesiology, Case Western Reserve University Metrohealth Medical Center, Cleveland, OH.

A 59 year-old male with ankylosing spondylitis slipped in a hot tub sustaining a C4-5 fracture dislocation. He was neurologically intact and scheduled for posterior cervical spine fusion with prone positioning and sensory evoked potential monitoring. Wake up tests were required after intubation, before, and after prone positioning. Awake fiberoptic intubation sedation was with dexmedetomidine and midazolam. Airway anesthesia was with aerosolized 4% lidocaine and topical 2% lidocaine via bronchoscope. General anesthesia was with isoflurane, fentanyl and dexmedetomidine. Wake up tests were uneventful. Patient was extubated and discharged on postoperative day one and three respectively with no neurological deficits.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC461

Precordial Percussion Pacing for Asystole During Endoscopic Transphenoidal Tumor Resection

Andrea Hages, D.O., Stephen E. McNulty, D.O., Anesthesiology, Thomas Jefferson University Hospital, Philadelphia, PA.

Precordial percussion pacing is a technique providing low velocity external mechanical energy to the heart to trigger an electrical impulse. In the setting of symptomatic bradyarrhythmias, complete heart block or asystole, the goal is to elicit ventricular contractions at 50-70 beats per minute until definitive treatment is achieved. The trigemino-cardiac reflex is a phenomenon of bradycardia and hypotension and is associated with endoscopic neurosurgical procedures. Here we describe a case of ventricular asystole in an otherwise healthy male during endoscopic transphenoidal surgery in which percussion pacing was employed as a bridge to restoration of the patient's own native cardiac rhythm.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC462

Therapeutic Options for Refractory Bleeding in the Neurosurgical Patient

Carrie Hamby, M.D., Adiba Shamsi, M.D., Anesthesiology, Mount Sinai Medical Center, New York, NY.

A 76 year-old male with hypertension and coronary artery disease s/p CABG and PCI with bare metal stents 2 years ago presented for urgent resection of a 4 cerebral ventricle mass. Aspirin and Clopidogrel were held for 2 days. Preoperative hematocrit is 44%, INR 1.3, and PTT 33.9. Intraoperatively excessive bleeding obscures the surgical field. Anesthesia and surgical teams discuss the possible etiology of bleeding and risks and benefits of administering DDAVP, Platelets, FFP, and recombinant Factor VII. Bleeding continues despite initial treatment with DDAVP and platelets. FFP and recombinant Factor VII are administered and adequate hemostasis is achieved.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC463

Massive Invasive Meningioma Involving Bilateral Frontal Lobes

Mark W. Haney, Vladimir Zelman, M.D., Anesthesiology, University of Southern California, Los Angeles, CA.

Patient is a sixty-two year-old woman who presented with upper extremity weakness and was found to have a bilateral invasive meningioma. The intra-operative course was complicated with cushinoid responses during induction and tumor resection and with the need for massive transfusion. Patient had an uneventful post-operative course and was discharged home.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC464

Implantation of Phrenic Nerve Stimulator for Respiratory Failure in a Post Operative Case of Arnold Chiari Malformation

Rajnish K. Jain, Sr., M.D., Swaminathan Srinivasan, M.D., Anurag Yadava, M.D., Laxmikant Banabakode, M.D., Anesthesiology & Critical Care, BMHRC, Bhopal, India.

A 29 year-old male, a known case of Arnold Chiari malformation, had frequent respiratory infection and respiratory distress and was admitted in neurosurgery. He underwent foramen magnum decompression and posterior fixation. During the postoperative period, there was difficulty in weaning from ventilatory support due to poor respiratory efforts and intermittent apnoeic spells. Patient underwent tracheostomy and had to be maintained on ventilator support for 3 months. Phrenic nerve stimulator implantation was done. Anaesthetic management was tailored to facilitate phrenic nerve stimulation. After the implantation, patient had adequate diaphragmatic contractions and respiratory efforts and could be weaned from the respiratory support and discharged.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC465

Perioperative Management for Excision of Frontal Introsseous Haemangioma in a Patient With Bidirectional Glenn Shunt

Rajnish K. Jain, M.D., Swaminathan Srinivasan, M.D., Anurag Yadava, M.D., Mangu Hanumantha Rao, M.D., Anesthesiology & Critical Care, BMHRC, Bhopal, India, Anesthesiology & Critical Care, S.V.I.M.S., Tirupati, India.

A 16 years female presented with swelling in fore head with cyanosis. Because of Congenital heart disease, cardiac evaluation was done. Cardiac catheterisation revealed situs inversus with single ventricle (Holmes heart). Patient underwent surgery and bidirectional Glenn shunt with pulmonary artery banding was performed on veno-venous bypass. Six months later craniotomy & excision of introsseous haemangioma was performed under General Anesthesia and invasive hemodynamic monitoring. Central Venous Catheterisation was done through right femoral vein to avoid iatrogenic complications to shunt. Steps were taken to avoid significant hypovolemia, hypoxia and pulmonary hypertension.

Monday, October 15, 2012

8:00 AM - 9:30 AM

MC466

Airway Management in Patient With Hunter Syndrome Presenting for Cervical Spine Fusion

Reza Gorji, M.D., Fenghua Li, M.D., Zhong-Jin Yang, M.D., Eric Deshaies, M.D., Fatoumata Kromah. Anesthesiology, Neurosurgery, SUNY Upstate Medical University Hospital, Syracuse, NY.

Patients with Hunter Syndrome are reaching adulthood with increased frequency. We report a case of a 35-year old male with Hunter's syndrome and a past history of multiple failed and difficult intubations who presented for cervical spine decompression and fusion. The patient's airway examination revealed significant deformities of the head, neck, oral cavity and impaired neck mobility. An awake intubation was planned with an ENT surgeon on standby. Multiple attempts at oral and nasal intubation were unsuccessful secondary to aminoglycoside depositions in airway structures. The trachea was intubated with significant difficulty requiring ENT assistance.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC857

Management of Craniotomy for Intracranial Mass in a Patient With a Mediastinal Mass

Michael Misbin, Kathleen Kwiatt, D.O., Anesthesiology, Cooper University Hospital, Camden, NJ.

A 73 year-old male presented with deteriorating mental status, aphasia, weakness and confusion. He was found to have an intracranial mass requiring craniotomy for resection. On the morning of surgery the anesthesia team was informed that the chest CT identified a large anterior mediastinal mass. Because the patient was asymptomatic by history and physical exam, and because CT identified the mass was distal without cardiopulmonary compromise, it was determined the potential benefits of surgery outweighed the risks of general anesthesia. The patient tolerated general anesthesia without complication and had postoperative resolution of neurological symptoms.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC858

The Anesthetic Management for Laparoscopic Surgery in a Patient With Stiff Person Syndrome

Natalie Maida, D.O., Steven Dunn, M.D., Anesthesiology, Baystate Medical Center, Springfield, MA.

Stiff Person Syndrome is a rare but debilitating neurological disease which is often misdiagnosed and therefore inappropriately treated. This case describes a 53 yo female with Stiff Person Syndrome in need of a laparoscopic salpingo-ooverectomy for an ovarian cyst. Many case reports revealed prolonged intubation times due to poor respiratory effort post operatively. In this case we used inhalational anesthesia and nondepolarizing muscle relaxation and were able to successful extubate the patient at the end of the case in the OR. This case adds to the limited literature a successful technique used in caring for patients with this rare disease.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC859

Craniotomy for Foreign Body Removal

Jordan R. Martin, M.D., Anesthesiology, Yale University, New Haven, CT.

This case discusses a patient who presented with a foreign body traversing through the right orbit and extending into the cranium. Due to the positioning of the foreign body, pre-oxygenation and airway

manipulation were of particular concern. The steps taken to improve oxygenation and minimize manipulation of the cranium and airway are discussed.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC860

Awake Craniotomy in an Adolescent Male

Nehdia Mumuni, M.D., Kalyani Govindan, M.D., Anesthesiology, Pediatric Anesthesiology, Baylor College of Medicine, Houston, TX.

A 17 year-old boy with history of seizures was scheduled for craniotomy and excision of seizure focus. The surgeon requested intraoperative awakening and communication with the patient to facilitate mapping of the language area. After preparing the patient and family for intraoperative wake up, we formulated an anesthetic plan that consisted of total intravenous anesthetic infusions with patient spontaneously breathing oxygen through nasal canula. Infusions were titrated carefully to enable the language mapping which required the patient to be awake and communicate by recognizing pictures and repeating words. He was hemodynamically stable and the surgery was completed uneventfully.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC861

Management of Refractory Status Epilepticus With Desflurane

Blake W. Perkins, B.S., James Priepot, M.D., University of Illinois College of Medicine, Peoria, IL.

A previously healthy 6 year-old girl with refractory seizures for 3 weeks secondary to mycoplasma encephalitis was treated with approximately 1 MAC of desflurane to achieve complete suppression of electrical burst activity for 48 hours. Previous to administration of desflurane, the patient had failed to achieve burst suppression with maximum dosages of lidocaine, propofol, and anti-seizure medications. In this case, a dose dependent administration of desflurane was titrated to an end-tidal concentration of 5.1% which lead to maintenance of burst suppression on EEG. This case study highlights the use of inhalational anesthetics for use in refractory status epilepticus (RFE).

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC862

Anesthesia Management of Minimally Invasive Stereotactic Temporal Lobe Ablation for Intractable Epilepsy in Multiple Remote Anesthetic Locations

Eric C. Peters, M.D., Peter R. Lichtenthal, M.D., University of Arizona Medical Center, Tucson, AZ.

Minimally invasive diagnostic and therapeutic procedures in remote anesthesia locations have rapidly become routine practice for anesthesiologists. We present a case report of a new technique involving stereotactic ablation of a temporal lobe for intractable epilepsy. What made the procedure unique was that it required multiple location changes, various patient positions and different anesthetic techniques. The procedure required us to go from the operating room, to the CAT scanner, back to the OR and finally to the MRI suite. These locations involved both local and general anesthetics, supine and sitting positions, with the appropriate monitoring.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC863

Unplanned Airway Management of Seizing Patient During Awake Craniotomy

Jessica Quinlan, M.D., Doug Hester, M.D., Anesthesiology, Vanderbilt University Medical Center, Nashville, TN.

We describe a healthy 32 year-old male presenting for awake craniotomy for tumor resection. Upon initial manipulation of tumor, the patient exhibited a generalized seizure. We will discuss the anesthetic and airway management options for a patient immobilized in a head pinning system and with an open dura mater. We will discuss the decisions made in this cases as well as other available options. We will also review specific risks of awake craniotomy and discuss Crisis Resource Management issues (Planning, Communication, Leadership, Situational Awareness, and Workload Distribution).

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC864

Hemodynamic Collapse in a 16 year-old Male With Panhypopituitarism

Sauman Rafii, M.D., New York University, New York, NY.

Patient with panhypopituitarism scheduled for transphenoidal resection of craniopharyngioma. Nasal pledges were placed, patient became tachycardic (140s). Hypotensive (50s/30s) and hypoxic. Patient goes pulseless and ACLS initiated. Hydrocortisone given. Pulse returns. Case is rescheduled. The second time, patient given hydrocortisone before entering the OR. Again, patient becomes light during surgical prep & tachycardic, hypotensive, hypoxic. Boluses of epinephrine and fluid resuscitation results in improvement. TEE reveals hypovolemia. Meanwhile, the patient is diuresing dilute urine (2 liters). The patient is bolused DDAVP and resuscitated. Surgery is again rescheduled. Third time, he is brought to OR stable on vasopressin drip. The case proceeds uneventfully.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC865

Anesthetic Considerations for Intra Operative MRI in Prone Position

Shilpa Rao, M.D., Rafi Avitsian, M.D., Anesthesiology, Cleveland Clinic Foundation, OH.

A 37 year-old patient was scheduled for resection of a large posterior fossa mass with C1 decompression in prone position under intra operative MRI guidance. Airway examination revealed a potential difficult airway and popping of the temporomandibular joint. Patient was intubated awake in induction room. Anesthesia was induced with propofol and maintained with remifentanyl and isoflurane. Muscle relaxants were avoided to facilitate monitoring of cranial nerves. The patient was shifted to the IMRI suite next to the induction room and positioned prone. Satisfactory resection of the tumor was achieved. Patient was turned supine, anesthesia was discontinued and was extubated awake with no neurological deficits.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC866

Pseudohypoxemia in a Patient With Leukocytosis

Dmitry Roberman, M.D., Manish Purohit, M.D., Mona Pokharel, M.D., Nickhil Chawla, M.D., Vincent Odenigbo, M.D., Anesthesiology, Drexel University Hospital, Philadelphia, PA.

Patients with extremely high leukocyte counts may have spurious hypoxemia on arterial blood gas analysis which does not correlate with the pulse oximeter findings. This is due to the rapid consumption

of oxygen by the leukocytes producing a falsely low oxygen tension, a phenomenon called Leukocyte Larceny. This factitious hypoxemia has also been reported in patients with thrombocytosis and reticulocytosis.

Tuesday, October 16, 2012

2:30 PM - 4:00 PM

MC867

Transient Visual Loss After Anterior Spine Surgery

Kathryn Rosenblatt, M.D., Fenghua Li, M.D., Zhong-Jin Yang, M.D., William Lavelle, M.D., Reza Gorji, M.D., Anesthesiology, Orthopedic Surgery, SUNY Upstate Medical University, Syracuse, NY.

Post-operative visual loss (POVL) is a rare and devastating complication occurring more frequently after spine (especially prone position) and cardiac surgeries. We present a 43-year-old with headache and visual loss immediately following anterior cervical discectomy and fusion with tcMEP, SSEP and EEG monitoring. His symptoms completely resolved over a 6-hour span, after a rigorous but inconclusive work-up was performed including neurology and ophthalmology consults, head and neck CTA and brain MRI with diffusion-weighted imaging. This is the first documented case of POVL after spine surgery to have resolved completely within 24 hours.