MEDICALLY CHALLENGING CASES
PEDiatric anesthesia

Saturday, October 13, 2012
8:00 AM - 9:30 AM
MC73
**Infant With Face and Neck Lymphangioma, Tracheostomy Presenting for Excision of Lymphangioma**

*Franklin B. Chiao, M.D., M.S., Francesco Resta-Flarer, M.D., St. Luke’s Roosevelt Hospital Center, New York, NY.*

An eleven month-old infant with tracheostomy, tracheomalacia, and left neck and face lymphangioma presented for excision of lymphangioma. The infant had a history of a six month NICU stay with mechanical ventilation, tracheomalacia and chylothorax. The patient underwent an inhalational induction, and then had an intravenous line placed. The shiley trache was then replaced with an endotracheal tube. Videolaryngoscopy proved helpful in recognizing the malformation of the airway in anticipation of early decannulation in the patient with tracheostomy.

Saturday, October 13, 2012
8:00 AM - 9:30 AM
MC74
**Neonate With Giant Lymphatic Malformation of the Face, Neck and Upper Body**

*Franklin B. Chiao, M.D., M.S., Francesco Resta-Flarer, M.D., Anesthesiology, St. Luke’s Roosevelt Hospital Center, New York, NY.*

A 33 week gestation neonate presented with a large face, neck and upper body malformation. At birth, the patient had airway obstruction, respiratory distress and was intubated. After a NICU stay with mechanical ventilation, extensive surgical excision was performed. Subsequently, the patient had mediport placement, and endovascular sclerotherapy. The patient’s case was followed from birth to one year of age.

Saturday, October 13, 2012
8:00 AM - 9:30 AM
MC75
**Perioperative Management of a 2 Year-Old Following Traumatic Amputation of Right Upper and Lower Extremities**

*Adam P. Childers, M.D., Neal F. Campbell, M.D., Department of Anesthesiology, Children’s Hospital of Pittsburgh of UPMC, Pittsburgh, PA.*

2 year-old female Life-Flighted to ED after traumatic dual extremity amputation of right upper arm and thigh by riding lawnmower. Arriving intubated with preexisting 18G PIV and IO access, weak peripheral pulses necessitated resuscitation for hemorrhagic shock. NIBP readings were unobtainable; central
pulses were palpable; femoral venous access by attending trauma surgeon unsuccessful. To OR where GA was induced with midazolam, rocuronium, and low-dose sevoflurane. Unable to cannulate radial artery and right IJ due to shock state. IO line became non-functional. Still no NIBP. Help called. Subclavian venous and femoral arterial lines eventually obtained. Resuscitation ensued ultimately resulting in survival.

Saturday, October 13, 2012
8:00 AM - 9:30 AM
MC76
Case Scenario: Anesthesia for the Ex Utero Intrapartum Therapy (EXIT) Procedure
Deeksha Chopra, M.D., Joaquin Cortiella, M.D., M.P.H., Sheetu Jain, M.D., Lee Woodson, M.D., Ph.D., Jeffrey S. Richards, M.D., Anesthesiology, UTMB, Galveston, TX.
We present a case of a parturient at 37 weeks gestation with an ultrasound suggestive of a giant fetal neck mass. Due to its size, the parturient underwent the EXIT procedure for fetal airway access. The mother received general endotracheal anesthesia for maximal uterine relaxation and maintenance of uteroplacental blood flow to maximize the ability to maintain neonatal oxygenation. Under optimal conditions, successful intubation of the fetus was accomplished, leading to delivery of the fetus. No complications were noted with the mother or neonate following delivery. The neonate eventually had removal of the neck mass on day 7.

Saturday, October 13, 2012
8:00 AM - 9:30 AM
MC77
Anesthetic Management for Off-Site Sclerotherapy in a Pediatric Patient With an Aggressive C2 Aneurysmal Bone Cyst Who Failed C1-3 Cervical Fusion and Has Susceptibility to Malignant Hyperthermia
Chien-Hsiang Chow, M.D., Mary Landrigan-Ossar, M.D., Ph.D., Anesthesiology, Perioperative, and Pain Medicine, Children’s Hospital Boston, Boston, MA.
We present the challenging anesthetic and surgical care for a pediatric patient with a family history of malignant hyperthermia who has a rapidly expanding cervical aneurysmal bone cyst (ABC) causing spinal cord impingement. He presented for C2 curettage, posterior C1-3 spinal fusion and instrumentation, subsequent embolization and sclerotherapy, and eventual occiput to C5 posterior spinal fusion.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC207
Anesthesia in a Pediatric Patient With Systemic Mastocytosis
Brian Schloss, Tarun Bhalla, M.D., Joseph Tobias, M.D., Nationwide Children's Hospital, Columbus, OH.
We present the case of a 10 year-old girl with systemic mastocytosis who required general anesthesia for reduction of a dislocated elbow. The perioperative care of such patients will be reviewed and strategies for intraoperative anesthesia will be discussed.
Routine Ultrasound Use for Caudal Block Placement Reveals a Significant Abnormal Finding in a Child With a Chromosomal Abnormality

Donald A. Schwartz, M.D., Anesthesiology, Baystate Medical Center, Springfield, MA.

A one year-old child with a sacral dimple presented for a circumcision and orchiopexy. General anesthesia with a caudal block was planned. Ultrasound examination over the sacrum revealed a hypoechoic cyst on the dural sac at the S3 spinal level. A successful caudal block was performed, taking care to minimally advance the needle to avoid puncturing the cyst. Following surgery, the child was sent for spinal imaging including ultrasound and MRI, which confirmed the presence of the cyst. This along with abnormal neurologic findings has raised the possibility of spinal dysraphism for which the child is now being followed.

Thoracic Epidural Blood Patch Therapy for Spontaneous Intracranial Hypotension in an Adolescent

Mohanad Shukry, M.D., Garrett D. Scott, B.S., Department of Anesthesiology, University of Oklahoma College of Medicine, Oklahoma City, OK.

Spontaneous intracranial hypotension is an infrequently encountered headache etiology. It is typically characterized by a dull, throbbing headache that may be global or localized to the occipital or frontal regions. Its most distinguishing feature is its positional dependence, exacerbated when sitting or standing and relieved when recumbent. While reports of spontaneous intracranial hypotension in adults have been increasingly documented, with an incidence of 5/100,000 adults per year, it is still uncommonly seen in children and adolescents. Here, we report a case of spontaneous intracranial hypotension in an otherwise-healthy 15-year-old boy, who was successfully treated with thoracic epidural blood patch therapy.

Anaphylactic Shock to Thymoglobulin in a Pediatric Renal Transplant Recipient

Joseph Seboo, Omar Ezziddin, M.D., James B. Eisenkraft, M.D., Anesthesiology, Mount Sinai Hospital, New York, NY.

Intraoperative anaphylaxis presents great challenges to the anaesthetist, from the initial clinical suspicion, to diagnosis, to successful management and possible need for resuscitation. A variety of agents and substances have been identified as causes of these reactions, with latex and neuromuscular blocking agents being the etiologies most reported in the literature. We describe the first reported anaphylaxis to thymoglobulin during living-related renal transplantation in a pediatric patient.

A Case of Costello Syndrome

Mehul Shah, D.O., Stanlies D'Souza, Anesthesiology, Baystate Medical Center, Tufts University School of Medicine, Springfield, MA.
An eight year-old boy with Costello syndrome, a rare genetic disorder presented for heel cord lengthening for bilateral clubfeet. Costello syndrome is associated with facial, skeletal, developmental and cardiac abnormalities. He had moderate hypertrophic, hyperdynamic left ventricular outflow tract obstruction. Presenting with a DDD pacemaker for complete AV block following left ventricular outflow tract myectomy and ablation of intracardiac anomalous pathway. Following mask inhalation, IV line was obtained, direct laryngoscopy showed grade 4 Cormack-Lehane view. The airway was secured with an endotracheal tube using a fiberoptic bronchoscope. He had an uneventful general anesthesia course with no perioperative complications.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC212
Anesthetic Management of a Neonate With Tetralogy of Fallot Scheduled for Omphalocele Repair
Kenneth T. Shelton, M.D., Tony Anderson, M.D., Ph.D., Anesthesiology, MGH, Boston, MA, MGH, Boston, MA.
A 1.29 kg six day old baby girl born at 29 weeks gestational age with Tetralogy of Fallot (TOF) presenting to the operating room for omphalocele repair. The mother received one dose of betamethasone in preterm labor and was fully dilated on arrival to the hospital prior to delivering vaginally without complications (Apgars 6 and 9 at 1 and 5 minutes, respectively. The preoperative transthoracic echocardiogram was significant for a large misalignment ventricular septal defect with an overriding aorta and mild subvalvar, valvar, and supravalvar pulmonary stenosis with normal biventricular systolic function and a tortuous patent ductus arteriosus.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC213
Severe Bronchospasm in a Four-Month-Old With Mastocytosis
Dilip Sidhu, M.D., Manuel Corripio, M.D., Jason Brown, M.D., Anesthesiology, NYU Medical Center, New York, NY.
Patient was a four month old baby girl with history of acid reflux and maculopapular lesion in her left upper extremity which was confirmed to be a mastocytoma. Pt underwent a uncomplicated excision of the lesion under general anesthesia. Upon emergence pt's developed severe bronchospasm that was refractory to b-agonist therapy and deepening of the anesthetic. However, patient responded favorably to epinephrine and was extubated and transported to the PICU without further complications.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC214
Anesthetic Management of Pediatric Patients With Posterior Laryngeal Cleft
Germana L. Silva, M.D., Susan R. Staudt, M.D., Anesthesiology, Medical College of Wisconsin/Children's Hospital of Wisconsin, Wauwatosa, WI.
Laryngeal cleft is a rare congenital malformation, which is potentially lethal due to recurrent aspiration, pneumonia, and progressive lung disease. Laryngeal clefts are classified into types I-IV, with types III and IV extending far into the trachea. Undiagnosed severe clefts make ventilation via an ETT difficult. We present a term infant with Opitz G/BBB syndrome, cleft lip and palate, and type III posterior laryngeal cleft. We utilize images from initial bronchoscopy and the surgical repair, in addition to other figures, to illustrate the types of laryngeal clefts and the anesthetic considerations for both the repair and any pre-repair procedures.

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Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC215
**General Anesthesia for a Child With Mitochondrial Disease**

*Paul Sloan, M.D., Joseph Iocono, M.D., Anesthesiology, Department of Surgery, University of Kentucky, Lexington, KY.*

A 6 year-old boy presented for an elective inguinal herniorrhaphy. Previous medical history was significant for the rare genetic disorder, mitochondrial disease (MD). He did not have a history of any general anesthetic. His symptoms were mild leg muscle pain and “migraine” headaches. Due to anesthetic concerns regarding MD, local anesthetics including caudal regional block, propofol and succinylcholine were avoided. Inhalational anesthesia with sevoflurane/oxygen, and IV fentanyl was given. Surgery was completed without adverse event. Temperature was monitored closely for 24 hours postoperatively in hospital. The patient tolerated general anesthesia without event and without any obvious complication.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC216
**Perioperative Airway Management of Premature Infant With a Large Cystic Tongue Mass: A Case Rept**

*Iris E. Soliman, M.D., Sherif El -Hadi, M.B., B.Ch., Sameh M. Shehata, M.B., B.Ch., Anesthesiology, Bethesda, MD, Anesthesiology, Surgery, Alexandria University School of Medicine, Alexandria, Egypt.*

This is a case report of a 1720 gm., premature female born by Cesarian Section for premature rupture of membranes and placenta previa. A huge tongue swelling was immediately noted at birth which resulted in difficulty in maintaining adequate respiratory effort. Despite O2 supplementation via nasal cannula (L/min), the child experienced apneic spells and episodes of desaturation (SaO2 =85%). Amongst several therapeutic options which were considered preoperatively aspiration and excision or marsupialization under GA was performed. After postoperative airway evaluation and administration of dexamethasone, the child was successfully extubated and weaned off oxygen after 24 hours.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC217
**Liver Kidney Transplant in a Pediatric Patient With Methylmalonic Acidemia (MMA)**

*Lauren Sparks, M.D., Julia Rygaard, M.D., Kamilah Shy, M.D., Anesthesiology, University of Oklahoma, Oklahoma City, OK.*

Liver-kidney transplantation in an MMA patient warrants thorough preoperative collaboration. A geneticist, nephrologist, hepatologist, transplant surgeon, psychologist and anesthesiologist met to discuss management. Although preoperative hemodialysis is controversial, it was scheduled to determine tolerance of electrolyte, lactic acidosis and MMA correction. This “trial run” was beneficial, thus hemodialysis was performed preoperatively. Strict instructions were given for nutrition, supplements, and maintenance fluids. Intraoperatively, frequent blood gases were obtained for prompt correction. Transplantation was successful, and the patient continues to do well. This demonstrates careful preoperative planning in complex patients can minimize unanticipated and adverse events, and thus promote successful surgical outcomes.
Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC218
Persistently Elevated Superior Vena Cava Pressures and Widened Transpulmonary Gradient Following Bilateral Bidirectional Glenn Anastomoses in a Five Month-Old Female
Susan P. Taylor, Michael M. Collins, M.D., Pediatric Anesthesiology, Children's Hospital of Wisconsin, Medical College of Wisconsin, Milwaukee, WI.
A 5 month-old female with Shone’s complex who underwent Stage I palliation utilizing a 3.5 Blalock Taussig shunt as a neonate presented for bilateral bidirectional Glenn anastomoses. Following cardiopulmonary bypass, the patient had persistently elevated superior vena cava pressures and a wide transpulmonary gradient that failed to respond to medical management, including adjustments in inspired oxygen concentration and ventilation, inhaled nitric oxide, inotropic support and transfusion therapy. Cardiac catheterization the following day demonstrated bilateral obstructions of the Glenn anastomoses. The patient returned to the operating room for emergent revision of the superior vena cavae to pulmonary artery anastomoses.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC219
Post Sedation-MRI Fever, Tachycardia and Tachypnea in a Child With Core Muscle Weakness
Thomas W. Thomas, Jr., M.D., Pamela Bland, M.D., Jamey Eklund, M.D., Anesthesiology, Walter Reed National Military Medical Center, Bethesda, MD.
A 23 month-old former 34-week gestation male with core muscle weakness and rash required a sedation MRI to identify biopsy sites for a dermatomyositis evaluation. Past surgical history was significant for an uneventful general anesthetic for circumcision at age 4 months. Shortly after a total intravenous anesthetic with propofol, the child developed fever, tachycardia and tachypnea, necessitating a PICU admission. Chest x-ray showed right upper lobe opacities. This case illustrates the challenging choice between volatile anesthetic or propofol infusion in a child with undiagnosed Central Core Disease versus mitochondrial disorder, and how an unrecognized viral illness can further complicate the situation.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC220
Surgical Partial Removal of Papillomatosis for Endotracheal Intubation as a Rescue Strategy for a Completely Occluded Airway
Yiru Tong, Xiying Zhang, Zhen Du, Yun Li, Henry Liu, Anesthesiology, Otolaryngology, Hunan Children's Hospital, Changsha, China, Anesthesiology, Tulane University Medical Center, New Orleans, LA.
A 10 month-old girl was scheduled for surgical removal of papillomatosis, after induction of general anesthesia, mask ventilation became increasingly more difficult and patient’s glottis was found completely filled with papillomatous masses and no opening for endotracheal tube insertion. Surgical partial removal of papillomatosis was performed to create an opening for a successful endotracheal intubation.
Anesthetic Management of a Pediatric Patient Undergoing the Creation of a Spit Fistula
Michael T. Tran, D.O., Shelly-Anne Rodriguez, M.D., Anesthesia, Pediatrics, Cleveland Clinic Foundation, Cleveland, OH.

A 14 year-old male with yeast erosive esophagitis s/p esophageal dilation complicated by an iatrogenic perforation with large amount of retroperitoneal air presents for the creation of a spit fistula. He had a complicated past medical history significant for traumatic brain injury in 2005 s/p static encephalopathy, cerebral palsy, seizure disorder, chronic abdominal pain, atypical cyclic vomiting, GERD, gastroparesis with jejunostomy tube. The anesthetic management of a pediatric patient undergoing creation of a spit fistula presents a unique opportunity to monitor the specific function and viability of the vocal cords’ nerve innervation via a NIM EMG Endotracheal Tube.

Anesthetic Management of a Child With Rapid Onset Obesity, Hypothalamic Dysfunction, Hypoventilation, and Autonomic Dysfunction (ROHHAD) Syndrome
Puja Trivedi, D.O., Anthony Romo, M.D., Hiral Patel, D.O., Anesthesiology, Riverside County Regional Medical Center, Moreno Valley, CA, Children's Hospital Los Angeles, Los Angeles, CA.

Rapid-Onset Obesity Hypothalamic Dysfunction and Autonomic Dysregulation (ROHHAD) syndrome is a rare yet potentially fatal condition with only 75 confirmed cases worldwide since it was first recognized in 1965. A 7 year-old girl with ROHHAD syndrome presented to our facility for laparoscopic resection of a retroperitoneal mass suspicious for neural crest tumor. Children with ROHHAD Syndrome develop normally the first 2-4 years of life, followed by the sudden onset of rapid obesity, hypothalamic abnormalities, autonomic abnormalities, and eventually hypoventilation. The risk of cardiopulmonary arrest, associated sleep disorders, endocrinopathies, electrolyte imbalances, and autonomic instability all pose challenges to the anesthesiologist.

Anesthetic Challenges in a Pediatric Patient With McCune-Albright Syndrome
Angela Truong, Dam-Thuy Truong, M.D., Anesthesiology and Perioperative Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX.

A 6 year-old female with McCune-Albright Syndrome presented for mandibulectomy. Clinical features included precocious puberty, acromegaly, and mandibular polyostotic fibrous dysplasia with massive craniofacial distortion. Perioperative challenges included difficulties with ventilation and intubation, positioning due to brittle bones and previous long bone fractures, multiple endocrine abnormalities, and psychological issues caused by facial disfigurement. Endocrine status was optimized preoperatively. A preoperative head/neck CT scan with 3-D reconstruction was reviewed to assess the feasibility of using a laryngeal mask airway (LMA) for ventilation. After ventilation was assured by LMA, oral intubation was successfully performed by flexible bronchoscopy. After careful positioning, surgery proceeded uneventfully.
Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC224

**Consumptive Coagulopathy and Epiglottitis in an Infant With Kassabach Merritt Phenomenon**

Jay B. Tuchman, Antonio Cassara, M.D., James Cain, M.D., Pediatric Anesthesiology, Children's Hospital of Pittsburgh, Pittsburgh, PA.

9 month-old infant, ex-29 week preterm gestation, congenital pulmonary lymphangiectasia, tracheostomy dependent and Kassabach merritt phenomenon (platelet trapping lesions) presents to the OR with severe anemia, thrombocytopenia and hypofibrinogenemia for biopsies of occipital and truncal lesions to facilitate treatment of her disease, as well as direct laryngoscopy and bronchoscopy to evaluate the extent of her airway disease. Management of patient's coagulopathy and airway findings of epiglottitis ensued and the patient returned uneventfully to the PICU.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC225

**Goldenhar Syndrome and the AirQ Intubating LMA**

Jay B. Tuchman, M.D., James Cain, M.D., Antonio Cassara, M.D., Pediatric Anesthesiology, Children's Hospital of Pittsburgh, Pittsburgh, PA.

14 year-old with Goldenhar's syndrome and Klippel Feil deformity s/p previous VEPTR expansions and progressively more difficult history of intubation attempts presented for VEPTR expansion. Upon prior anesthetics, intubation attempts via direct laryngoscopy, Glidescope, oral and nasal flexible fiberoptic had been unsuccessful. In this scenario, the AirQ ILA was utilized to quickly and uneventfully secure the airway via fiberoptic guidance.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC226

**Intramuscular Dexmedetomidine for Preoperative Sedation**

Giorgio Veneziano, M.D., Anna Clebone, M.D., Franklyn Cladis, M.D., Department of Anesthesiology, Children's Hospital of Pittsburgh, Pittsburgh, PA.

We describe the use of intramuscular dexmedetomidine for preoperative sedation in three adolescents with severe hospital-related anxiety and developmental delay. Each of these patients refused oral premedication and had previously had tumultuous inductions and emergences requiring restraint by several providers. Using a combination of intramuscular dexmedetomidine (2 mcg/kg) and midazolam (0.1 mg/kg), we recorded Ramsay scale prior to injection and at regular intervals until induction of anesthesia. Qualitatively, we compared the induction and emergence of these patients with previous anesthetics. All patients went from Ramsay scale of 1 prior to premedication to score of 5 with induction. None required restraint.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC227

**Implications of Endovascular Sclerotherapy of Lymphatic Malformation Involving the Airway**

Silvia Villa-Royval, M.D., Franco Resta-Flarer, M.D., Johnathan Lesser, M.D., Anesthesiology, St. Luke's Roosevelt Hospital, New York, NY.

2 month-old boy s/p tracheostomy with bilateral maxillofacial and airway lymphatic malformations presented for MRI, suspension laryngoscopy and endovascular sclerotherapy. The child was intubated at
birth for acute respiratory failure and subsequently received a tracheostomy in anticipation of staged treatments of his lymphatic malformation. Bilateral “fullness” in the submental area was observed. DL revealed an enlarged epiglottis and vallecula infiltrated by the malformation and both were injected with bleomycin; the submental area was treated with doxycycline. The procedure was repeated at 6 months and video laryngoscopy was performed showing marked improvement and a patent airway. We are anticipating decannulation soon.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC228
A 5 Month-Old With Unpalliated Tetralogy of Fallot for Bronchoscopy and Cardiac Catheterization After an Apparent Life Threatening Event
Kathryn K. Walker, M.D., Nishanthi Kandiah, M.D., Anesthesiology, Yale-New Haven Hospital, New Haven, CT.
A 5 month-old female with history unpalliated Tetralogy of Fallot with minimal LVOT obstruction and apparent life threatening events (ALTEs) presents for diagnostic cardiac catheterization and bronchoscopy. Anesthetic concerns were provocation of pulmonary hypertensive crisis or “tet spell” and arrhythmia. She was found to have a bronchus sui (pig’s bronchus), extrinsic compression of the left mainstem bronchus, and pulmonary hypertension. She subsequently underwent VSD repair and left PA imbrication, however suffered two subsequent ALTEs, determined to be caused by her bronchus sui and tracheo-bronchomalacia. She is now maintained 1L home O2, bronchodilators, and inhaled corticosteroids with no further ALTEs.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC229
Inhalational Sevoflurane in Severe Bronchial Obstruction Unresponsive to Multi-Pharmacologic Therapy
Thomas Weber, M.D., Engelbert Deusch, M.D., Anesthesiology, Donaupital Hospital, Wien, Austria, Anesthesiology, Otto-Wagner-Spital, Wien, Austria.
We present a case of severe respiratory acidosis and bilateral pupil dilation in a ventilated child suffering from asthma unresponsive to multipharmacologic broncholytic therapy. Only initiation of sevoflurane inhalation resolved severe bronchoconstriction and dynamic hyperinflation. Maximal arterial paCO2 was 34 kPa and minimal pH 6.79. The patient recovered uneventfully after severe respiratory acidosis lasting for 24 hours. Furthermore bilateral fixed pupil dilation was noted after 18 hours which remained unclear as a cerebral CT-scan showed no abnormalities. Inhalational anaesthetics must be considered as an early treatment option in ventilated asthmatic patients with bronchial obstruction unresponsive to conventional therapy.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC230
Post-Dural Puncture Headache in a 4 Year-Old Child
Ammar N. Yamani, M.D., Stanlies D’Souza, M.D., Anesthesiology, Tufts Baystate Medical Center, Springfield, MA.
A 4 year-old boy with a history of prematurity and pseudotumor cerebri causing seizures, speech delay, and papilldema requiring multiple therapeutic lumbar punctures (LP) and acetazolamide, presents with symptoms consistent with post dural puncture headache after recent LP. His symptoms included
postural headaches and vomiting relieved by lying down. The acute pain service was consulted by the primary team regarding potential epidural blood patch. Conservative therapy with intravenous fluids and bed rest with acetaminophen and morphine improved symptoms. Patient did not require epidural blood patch.

Saturday, October 13, 2012
2:30 PM - 4:00 PM
MC231
A Case of a Child With Glutaric Acid Urea Type 1 Undergoing Laparoscopic Fundoplication
Hiroyuki Yamasaki, M.D., Tokuhiro Yamada, Ph.D., Taku Hamada, M.D., Kiyonobu Nishikawa, Osaka City University Graduate School of Medicine, Osaka, Japan.
We report a case of 2 year-old boy with glutaric aciduria type 1: mitochondrial disorders which caused severe brain damage and nerve symptoms. He was scheduled for laparoscopic fundoplication for gastroesophageal reflux disease. Complications such as perioperative malignant hyperthermia, propofol infusion syndrome (PIS), aspiration and respiratory dysfunction may be associated with these patients. However, the anesthetic procedure has not been established due to a rare disease. In this case, we selected to organize a stress-free anesthetic management using thiopental, remifentanil, sevoflurane, rocuronium and sugammadex considering a higher possibility of PIS. The surgery was safely performed over with no perioperative complications.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC406
Efficacy of the Masimo RainbowSET Co-Oximeter to Measure Hemoglobin for a Massive Blood Transfusion in a Pediatric Solid Organ Transplant
Ankit Agrawal, B.S., James N. Sullivan, M.D., Amy L. Duhachek-Stampel, R.N., Sheila J. Ellis, M.D., Jennifer J. Adams, M.D., Anesthesiology, University of Nebraska Medical Center, Omaha, NE.
A 25 kilogram 10 year-old girl was admitted for a repeat liver, small bowel, pancreas, and kidney multivisceral transplant after having intestinal and liver failure after being a formerly conjoined twin at the heart, diaphragm, liver, duodenum, bile ducts and intestine. A Masimo® Rainbow SET Radical-7 Pulse CO-OximeterTM Sensor was placed on the patient to evaluate for real-time continuous hemoglobin monitoring compared to blood-gas monitoring. Intraoperatively, the patient had excessive bleeding, coagulopathy, and acidosis. Throughout the procedure the hemoglobin levels on the Masimo® RainbowSET did not mimic the blood-gas analysis of hemoglobin and failed to adequately present real-time hemoglobin monitoring.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC407
Spinal Anesthesia for Laparoscopic Pyloromyotomy
Titilopemi Aina, Norman Carvalho, M.D., Anesthesiology, University of Florida, Gainesville, FL.
Three infants between 26 and 36 days of age underwent spinal anesthesia for laparoscopic pyloromyotomy. Gastric aspiration was performed prior to lateral decubitus positioning. In each a dose of 1 mg/kg of hyperbaric 0.75% bupivacaine was administered intrathecally at the L3-4 or L4-5 interspace. All infants received 0.05 to 0.1 mg/kg of midazolam to induce sleep and halt upper extremity movements. Abdominal insufflation (8-10 mm Hg) as well as umbilical port and upper abdominal incisional wounds were well tolerated and all infants continued to breathe spontaneously throughout the procedure without apparent discomfort.
Anesthetic Challenges in Two Neonates With Vein of Galen Malformation

Anita Akbar Ali, M.D., Jesus Apuya, M.D., Sarah Tariq, M.D., Edwin Abraham, M.D., M. Saif Siddiqui, M.D., Anesthesiology, University of Arkansas for Medical Sciences, Little Rock, AR.

Vein of Galen malformation is a rare intracranial vascular lesion. Patients with the disease develop life-threatening complications if not treated in a timely manner. Case 1: A neonate diagnosed with Vein of Galen malformation prenatally required emergent embolization. She was on vasopressor support and inhaled nitric oxide. Case 2: A neonate was transferred from an outside facility with severe respiratory distress after birth. He was eventually diagnosed with Vein of Galen malformation. He was intubated and started on vasopressor support secondary to deteriorating cardiopulmonary status. He required urgent embolization. Complications and anesthetic challenges of the disease will be discussed.

The Utility of Video Laryngoscopy in the Identification and Management of Post-Extubation Airway Obstruction Following Pharyngoplasty

Matthew Andersen, M.D., M.B.A., Cheryl Gooden, M.D., Mount Sinai, New York, NY.

A 6 year-old 25kg male with a history of velocardiofacial syndrome presented for pharyngoplasty. The patient underwent inhalation induction with subsequent IV insertion and intubation. The surgery proceeded uneventfully. Hemostasis was obtained at the end of surgery. After extubation, the patient experienced several episodes of partial laryngospasm and required frequent suctioning of bloody secretions. Direct laryngoscopy was unsuccessful. Visualization with the video laryngoscope revealed a mass partially obstructing the glottis and allowed successful intubation. The obstruction was revealed to be a large clot. The patient was transported to the PICU and successfully extubated the following morning and discharged home.

Marquio Syndrome: Anesthetic Considerations and Implications

Gadi Arzanipour, D.O., Jeffrey Widelitz, M.D., Mary Theroux, M.D., William G. Mackenzie, M.D., Anesthesiology, Thomas Jefferson University Hospital, Philadelphia, PA, Anesthesiology, Orthopedic Surgery, A.I. duPont Hospital for Children, Wilmington, DE.

Marquio's Syndrome is a mucopolysaccharidosis condition leading to significant anatomical abnormalities that pose unique and serious anesthetic challenges. Children present with short stature, abnormal airway anatomy, cervical spine instability, pulmonary and cardiac abnormalities and pectus carinatum, to name a few. Predominant among them are abnormalities related to the airway. Mask ventilation can be difficult and the redundant and tortuous trachea makes Morquio patients uniquely prone to tracheal collapse/obstruction, particularly with neck flexion. Head and neck positioning must be neutral or partially extended following cervical fusion. We present the case of two siblings ages 10yo and 13yo undergoing occipital/cervical fixation.
Anesthetic Difficulties and Peri-Operative Considerations for Two Neonates With Holoprosencephaly
Ahmed F. Attaallah, M.D., Ph.D., Eric Henrickson, M.D., Anesthesiology, West Virginia University, Morgantown, WV.
We present two holoprosencephalic neonates who required general anesthesia for cranio-facial reconstructive procedures. Holoprosencephaly is a congenital malformation characterized by median deformities of the facial bones and brain. These patients have mental retardation, difficult airway, apneic episodes, temperature instability, seizures, hormonal abnormalities (hypothyroidism, adrenal insufficiency, and diabetes insipidus), cardiac defects, autonomic nervous system dysfunction, and failure to thrive. We would like to discuss the numerous potential challenges of holoprosencephaly; and share our anesthetic techniques resulting in successful management of both patients. We will also review the strategies utilized to avoid and/or treat possible peri-operative compromises and minimize adverse outcomes.

Anesthetic Management of a Pediatric Patient With Vascular Malformations of the Airway, Brain, Head and Neck
A 2 month-old female with multiple vascular malformations of the brain, head, neck and airway presented for MRI/MRA and YAG laser treatment of face, oropharynx and airway. The patient was mask induced in the OR and a diagnostic laryngoscopy with the Glidescope was performed. Several supraglottic vascular anomalies extending to the vallecula were observed and no attempts were made to intubate. The patient was intubated with a zero degree bronchoscope and had YAG laser treatment. MRI revealed multiple strokes secondary to intracranial venous malformations. The patient was extubated in the OR and transported to PICU.

Undiagnosed Tracheal Mass Requiring ECMO on a Newborn Immediately After Repair of Double Outlet Right Ventricle With Type B Interrupted Aortic Arch: The Ball Valve Effect
Angelina Bhandari, M.D., Department of Anesthesia, Driscoll's Children Hospital, Corpus Christi, TX.
Newborn with DORV, Type B interrupted aortic arch, subaortic VSD. Preoperative CXR revealed R upper lobe hyperinflation. Patient underwent a modified Norwood with Sano shunt. During bypass, patient noted to have bleeding in the trachea which subsided after separation from CPB. The surgeon felt ETT would be filled with dried blood and cause postoperative ventilation issues in the PICU: it was decided to change the ETT in the OR under controlled settings. After initial CO2 confirmation, patient became difficult to ventilate, hypoxic and ACLS ensued followed by ECMO. Flexible bronchoscopy by the anesthesiologist and confirmed by ENT revealed redundant tracheal tissue.
Just Another Scoliosis? Or a Posterior Mediastinal Mass?
Alison Britton, M.D., Ann Bailey, M.D., Anesthesiology, University of North Carolina, Chapel Hill, NC.
A 17 year-old with thoracic lordosis presented for a posterior spine fusion. PFT's were 50% predicted for obstructive and restrictive disease. Cardiac arrest occurred with prone positioning. Surgery was cancelled. The patient was eventually extubated following supine resuscitation. TEE in the PACU showed atrial compression. CT scan demonstrated an AP diameter of 3.6 cm and a slit-like left mainstem bronchus. Subsequent surgery was done as a 2 step process. Anterior release with partial T6-T9 vertebrectomy was performed in the right lateral position followed by a T2-L2 posterior spinal fusion in the prone position.

Clonidine Patch Ingestion in a Young Man With Cerebral Palsy and Developmental Delay
Megan A. Brockel, M.D., Pediatric Anesthesiology, Children’s Hospital Colorado, Aurora, CO.
A 20 year-old male with cerebral palsy, developmental delay, and Crohn's disease presented with a five-day history of vomiting, diarrhea, and fevers for upper endoscopy. Prior to induction of general anesthesia, his heart rate was in the thirties. His bradycardia was treated with glycopyrrolate and induction was smooth. On endoscopy, a clonidine patch was removed from his stomach. Clonidine is used in children with autism-spectrum disorders to treat hyperactivity, impulsivity, and attention deficits. Clonidine patches contain high doses of drug that can be toxic when ingested. As anesthesiologists, we must recognize and manage signs and symptoms of clonidine toxicity.

Epidural Catheter Placement Under Fluoroscopy in a Patient With Osteoporosis Pseudoglioma Undergoing Bilateral Femoral Osteotomies
Aaron Broman, M.D., Humphrey Lam, M.D., Drew Franklin, M.D., Anesthesia, Vanderbilt University, Nashville, TN.
Osteoporosis pseudoglioma (OPG) is an autosomal recessive disorder that is extremely rare. Patients afflicted with the disorder experience juvenile onset blindness and osteoporosis. The osteoporosis is manifested as long bone fractures and vertebral compression fractures. Patients afflicted with the disorder are most likely on pain medication because of recurrent fractures requiring frequent surgeries. Because of chronic exposure to opioids, pain control perioperatively and postoperatively is challenging. In this case, we describe the safe and successful placement of an epidural catheter in a patient with OPG.
Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC417
Sedation for CT Guided Biopsy in a Pediatric Patient With a Large Anterior Mediastinal Mass

Dominic S. Carollo, M.D., Sophie Pesiteau, M.D., Anesthesia and Pain Management, Ochsner Clinic Foundation, New Orleans, LA, USA, Department of Anesthesiology and Pain Management, Children’s National Medical Center, Washington, DC.

A 8.7 kg 23 month-old who was found to have a large AMM. The family noted that the patient was able to lay flat at home but was now agitated pre-operatively for her sedated, CT-guided biopsy. Ketamine 1 mg/kg and midazolam 1mg, slowly titrated in to effect. A dexmedetomidine infusion was started at 0.7 mcg/kg/hr and raised to 1 mcg/kg/hr to induce unconsciousness before local anesthesia infiltration(1% lidocaine). The patient did not move during the needle placement or after she developed a large pneumothorax post-biopsy. No hemodynamic changes were noted and the patient tolerated the procedure well.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC418
Anesthetic Complications Associated With Larsen’s Syndrome

Cameron C. Cartier, D.O., Anesthesiology, Riverside County Regional Medical Center, Moreno Valley, CA.

A 28 year-old female with Larsen’s Syndrome presented for ORIF of a right femur fracture. Larsen’s Syndrome is a congenital defect of collagen formation that can result in several anesthetic complications, such as cervical instability, perioperative pulmonary compromise, and congenital cardiac abnormalities that could result in hemodynamic instability. A thorough anesthetic plan was formulated, including video-assisted laryngoscopy, vigilant dosing of muscle relaxants and monitoring of hemodynamic status, all of which allowed the surgery to be performed without complication. Presenting the potential anesthetic complications in detail associated with Larsen’s Syndrome would be beneficial for all anesthesia providers.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC419
Compromised Ventilation During Esophagogastroduodenoscopy Caused by Esophageal Foreign Body and Acquired Tracheoesophageal Fistula

M. Megan Chacon, M.D., Marika Stone, M.D., Anesthesiology, University of Nebraska, Omaha, NE, Anesthesiology, Children’s Hospital, Omaha, NE.

A 17 month-old female with a four month history of stridor presented for an elective microlaryngoscopy, bronchoscopy and esophagoduodenoscopy. MLB showed an area of granulation tissue in the posterior trachea. CT scan revealed an esophageal foreign body at the level of the thoracic inlet. The patient was returned to the OR, and upon insertion of a rigid esophagoscope, ventilation was severely compromised. The esophagoscope was removed and ventilation resumed normally. No foreign body was visualized. A left neck dissection revealed a grossly inflamed esophagus; a longitudinal myotomy was performed and a small plastic flower was removed.
Use of Dexmedetomidine and Remifentanil as an alternative to Propofol During Laryngotracheal Reconstruction in a Child With Severe Egg Allergy
Anuradha Patel, Chaitanya Challa, UMDNJ-Newark, Newark, NJ.
A seventeen month-old presented for laryngotracheal reconstruction. Previous medical history consisted of prematurity, subglottic stenosis, tracheostomy and a strongly positive skin prick test to egg white and yolk. Due to a general lack of agreement regarding propofol and anaphylaxis in patients with egg allergy, we elected to avoid propofol in this patient. Sevoflurane was discontinued during airway repair with rib graft and Dexmedetomidine was infused at a range of 0.2 to 1 mcg/kg/hr with remifentanil at 0.05 to 0.1 mcg/kg/min. Spontaneous respiration and hemodynamic stability were maintained. Pulse oximeter readings were maintained above ninety two percent with this technique.

Laparoscopic Nissen and G-Tube Placement in an Infant With Hypoplastic Left Heart Syndrome After a Norwood Operation
Destiny Chau, M.D., Arundathi Reddy, M.D., University of Kentucky Medical Center, Lexington, KY.
A 2 month-old, 3.3 kg infant is scheduled for a laparoscopic Nissen and G-tube placement due to severe gastroesophageal reflux and failure to thrive. This patient was born with hypoplastic left heart syndrome and has now recovered from a prolonged postoperative course after the Norwood operation with a modified Blalock-Taussig shunt at age 7 days. The infant’s preoperative vital signs are: 77% saturation on room air, BP 65/30, RR 45, afebrile. His hematocrit is 42%. The cardiac team and the pediatric surgeon have decided for the laparoscopic approach because of the quicker postoperative recovery and hopefully faster discharge to home.

Deliberate Hypotension Management in a Newborn With Pulmonary HTN
Lito Chen, M.D., Jonathan Lesser, M.D., Franco Resta-Flarer, M.D., Jinh Kim, M.D., Patricia Brous, M.D., Anesthesiology, St. Luke's Roosevelt Hospital Center, New York, NY.
7 day old born at 37wks via c-section for vein of Galen and high output cardiac failure with pulmonary hypertension requiring dobutamine and milrinone. Umbilical arterial line was placed. Day 2 underwent cerebral angiogram with persistent suprasystemic RV pressures despite multiple embolizations. Day 7 repeat procedure. Anesthesia maintained with sevoflurane and fentanyl. Continuous cardiac output monitored using LidCo device. Deliberate hypotension required for each embolization to prevent distal migration of glue. The fourth embolization showed a sustained increase in SVR and decrease in CO. Postoperative TTE showed normal RV pressures and reversal of right to left PFO shunt.
Anesthetic Management of Bilateral Pheochromocytoma Resection in a Pediatric Patient With Severe Dilated Cardiomyopathy

Humphrey Lam, M.D., Scott Watkins, M.D., Jason Cowan, Pediatric Anesthesia, Anesthesiology, Vanderbilt University Medical Center, Nashville, TN.

Pheochromocytoma is a rare tumor in the pediatric population. They secrete a combination of norepinephrine and epinephrine in varying amounts. In 10% of patients, the tumor is part of a familial disorder: the MEN syndromes, von Recklinghausen disease, or von Hippel-Lindau syndrome. The peri-operative management of pheochromocytomas in children can be a difficult task. It becomes more challenging when the patient has cardiomyopathy, which is associated with a higher risk of morbidity and mortality. We describe the successful peri-operative management of bilateral pheochromocytoma resection in a pediatric patient with severe catecholamine induced cardiomyopathy refractory to medical therapy.

Dexmedetomidine: A Diagnostic Tool for Central Sleep Apnea?

Edward A. Czinn, M.D., Edward Punzalan, C.R.N.A., George J. Crystal, Ph.D., Department of Anesthesiology, Broward Health Medical Center, Fort Lauderdale, FL, Advocate Illinois Masonic Medical Center, Chicago, IL.

The ability of dexmedetomidine to maintain airway patency makes it an effective sedating agent for children with diagnosed obstructive sleep apnea (OSA). This case report describes the use of dexmedetomidine for sedation in 4-year old girl previously diagnosed with central sleep apnea (CSA), who was undergoing an MRI exam. Dexmedetomidine infusion produced reversible, dose-related apneic episodes which were similar to those observed during her original diagnostic sleep study. Since dexmedetomidine has the ability to both maintain airway patency and promote CNS induced apneic episodes, it may be a useful diagnostic tool for differentiating OSA from CSA in children.

Propofol and Remifentanil for Rapid Sequence Intubation in a Pediatric Patient at Risk for Aspiration With Elevated Intracranial Pressure

Elisabeth Dewhirst, M.B.,B.S., Joseph D. Tobias, M.D., David P. Martin, M.D., Anesthesiology, Anesthesiology and Pain Medicine, Nationwide Children’s Hospital, Columbus, OH.

We present an 11 year-old male with vomiting, papilledema, and a history concerning for an undiagnosed neuromuscular disorder, who required anesthesia for an emergent lumbar puncture. This patient was at high risk of aspiration, a significant cause of anesthetic morbidity, necessitating a rapid sequence intubation (RSI) technique. However, the use of traditional RSI drugs succinylcholine or rocuronium was undesirable due to his comorbid conditions. RSI was performed with propofol and remifentanil without the use of a NMBA. This provided optimal intubating conditions and is a useful technique to consider when traditional RSI drugs are contraindicated.
Plastic Bronchitis in a Case With TGA: A Case Report
Vipul Dhumak, Cleveland Clinic, Cleveland, OH.
Plastic Bronchitis is a rare but life threatening condition. In this condition rubbery casts occlude the bronchial airways, resulting in respiratory failure. Plastic bronchitis can be associated with congenital or acquired cardiomyopathies, lymphatic abnormalities, mucus hypersecretion and bronchopulmonary bacterial infections. We report a case of plastic bronchitis in a 4 years old male undergoing double switch operation for congenitally corrected TGA, closure of VSD and left ventricular outflow tract resection. With history of BT shunt being done at 1 year of age.

The Use of Near-Infrared Spectroscopy as a Substitute for Blood Pressure Monitoring in a Patient With Osteogenesis Imperfecta
Joshua Dilley, M.D., Edwin Abraham, M.D., Taranjit Sangari, M.D., Anesthesiology, University of Arkansas for Medical Sciences, Little Rock, AR, Anesthesiology, Arkansas Children’s Hospital, Little Rock, AR.
This is a medically challenging case where near-infrared spectroscopy was utilized, with good results, to monitor organ perfusion. Blood pressure monitoring intraoperatively was unable to be performed as a result of difficult arterial access and an extremely fragile skeletal system.

A Neonate With Trisomy 21 Manifests Acute Pulmonary HTN During Repair of Duodenal Atresia
Ashleigh E. Dixon, M.D., Lindsey Loveland-Baptist, M.D., William Clarke, M.D., Anesthesiology, Medical College of Wisconsin, Wauwatosa, WI, Anesthesiology, Children’s Hospital of Wisconsin, Milwaukee, WI.
A two day-old, full term female with Trisomy 21 presented for repair of her duodenal atresia. The pregnancy and birth were uncomplicated. After a direct admission to the NICU, she was noted to have an ASD (L-&gt;R), PDA, and transverse aortic arch hypoplasia. In the OR, induction and intubation were uneventful. Twice during the procedure, she became acutely hypoxic and hypotensive necessitating pausing the procedure and resuscitating her; the surgeon noted descent of her liver. The patient showed an acute manifestation of pulmonary hypertension requiring epinephrine and milrinone for CV support and respiratory compromise. She recovered completely.

Oculo-Dental-Digital Dysplasia (ODDD): Pediatric Airway and Anesthetic Implications
Gregory M. Dodson, D.O., Erin Pukenas, M.D., Anesthesia, Cooper University Hospital, Camden, NJ.
A 7 year-old female with history of ODDD, central sleep apnea (CSA), and difficult airway presented for dental extractions. ODDD characteristics include craniofacial dysmorphism, mandibular overgrowth, cleft palate, vision defects/increased intra-ocular pressures, weakened enamel, neurodegeneration, seizures, limb deformities and cardiac abnormalities. Literature addressing key anesthetic concerns of this rare syndrome with high phenotypic variability is sparse. No prior association of ODDD and CSA was
reported. The patient underwent a successful general anesthetic with Glidescope®-assisted intubation and extubation to CPAP. This case highlights the paucity of literature addressing the anesthetic challenges to ODDD and identifies a novel case of associated CSA.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC430

**Laryngotracheal Separation to Alleviate Intractable Pulmonary Aspiration**

TeSha M. English, M.D., Kirk Lalwani, M.D., F.R.C.A, Henry A. Milczuk, M.D., Anesthesiology and Perioperative Medicine, Department of Otolaryngology-Head and Neck Surgery, Oregon Health and Science University, Portland, OR.

Laryngotracheal separation (LTS), is a division at the second or third tracheal ring to create a proximal tracheal pouch and distal tracheostoma, shown to be effective in the management of intractable aspiration. We describe a 14-year-old patient with cerebral palsy and chronic aspiration refractory to medical management who underwent laryngotracheal separation. Her perioperative course was complicated by neck edema, subcutaneous emphysema, pneumomediastinum, and infection with Pseudomonas aeruginosa, which posed a challenge for airway management.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC431

**Anesthetic Implications During Surgery on Neonates With Complicated NEC**

Ibrahim S. Farid, M.D., Elizabeth Kendrick, M.S.N., Anesthesiology and Pain Medicine, Akron Children's Hospital, Akron, OH.

This MCC involves a neonate born 35 weeks gestation with repaired gastroschisis presenting for emergency exploratory laparotomy for complicated NEC. T-lectin test was positive. On three occasions intraoperatively, blood loss required transfusion. The initial transfusion of washed PRBCs was tolerated, but two subsequent transfusions of non-washed PRBCs were followed immediately by extreme difficulty in ventilation and diminished air entry bilaterally with scattered wheezes. The neonate required treatment for severe bronchospasm following both exposures to unwashed PRBCs. No signs of anaphylaxis or hemolytic reaction were demonstrated. Could exposure of the TFC-cryptantigen to unwashed blood cause severe bronchspatic reaction with difficulty ventilating?

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC432

**Continuous Intraoperative TEE Monitoring for a Child With Fontan Pathway Undergoing Posterior Spinal Fusion**

Ibrahim S. Farid, Elizabeth Kendrick, M.S.N., Anesthesiology and Pain Medicine, Akron Children’s Hospital, Akron, OH.

Intraoperative, continuous TEE monitoring in a 15-year-old, 25kg girl undergoing posterior spinal fusion, with history of hypoplastic left heart syndrome corrected with fenestrated Fontan procedure at 3 years of age. TEE monitoring allowed continuous assessment of hemodynamic stability and immediate response to hypotension and bradycardia through real time evaluation of preload, contractility, AV valve function, and cardiac output. During blood loss, dynamic visualization of cardiac function and venous return enabled maintenance of adequate intravascular volume to maintain pulmonary blood flow and cardiac output. TEE enabled monitoring of hemodynamic tolerance of positive pressure ventilation, administration of volatile agents and prone positioning.
Bowel Resection for NEC in a Child With a BT Shunt

Megan M. Freestone-Bernd, M.D., Carolyn Barbieri, M.D., Anesthesiology, Penn State Milton S. Hershey Medical Center, Hershey, PA.

A 39-0/7 week neonate was born with malposition of the great arteries, double outlet right ventricle, ventricular septal defect and pulmonary stenosis requiring palliation with a Blalock-Taussig shunt. Postoperatively the patient developed pulmonary overcirculation resulting in cardiac arrest requiring cardiopulmonary resuscitation, pulmonary artery banding and ultimately extracorporeal membrane oxygenation. Following these events, the patient later developed necrotizing enterocolitis which was managed medically initially until bowel perforation two weeks later. Anesthetic management of this patient was complex and required careful planning due to the nature of her cardiac status as well as her metabolic acidosis from perforated viscous.

Perioperative Management of Glutaric Aciduria Type I

Jacqueline E. Geier, M.D., J inu Kim, M.D., Franco Resta-Flarer, M.D., Anesthesiology, St. Luke’s Roosevelt Hospital Center, New York, NY.

A 10 year-old female with Glutaric Aciduria Type I, an inherited metabolic disorder leading to severe dystonia, muscle spasms, and loss of purposeful movement, presents for craniotomy and placement of an intraventricular catheter with a baclofen pump. General anesthesia was induced with fentanyl, propofol, and rocuronium followed by endotracheal intubation. Anesthesia was maintained with desflurane, remifentanil, and hydromorphone. Ondansetron and dexamethasone were administered for PONV prophylaxis. 150 ml of normal saline and 250 mg of IV levocarnitine were administered. The patient was extubated at the conclusion of the case and transferred to the PICU where she successfully recovered.

A Hairy Situation in a Seven Year-Old With Sickle Cell and Beta Thalassemia

Tammara Goldschmidt, M.D., Evelyn Hofferica, M.D., Candice Burrier, M.D., Anesthesiology, University of Illinois, Chicago, IL.

7 year-old girl admitted with abdominal pain and inability to tolerate food without vomiting. She had h/o sickle cell disease, beta thalassemia, and open gastrostomy at 2yo to remove a bezoar of mostly hair, stuffed animal fur, and carpet fibers. Her trichotillomania had since been mild according to her mother and she was lost to follow up with psychiatry for several years. Now, mother reports seeing hair in her stool and has become concerned that the disease has recurred. Patient presenting to OR for removal of the bezoar with EGD and possibly open gastrostomy after Hematology preparation overnight.
Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC436
Three Month-Old With Factor IX Deficiency Presents With Massive Intracranial Hemorrhage and Uncal Herniation for Emergent Clot Evacuation
Christal L. Greene, M.D., Silvio Sitarich, M.D., Department of Anesthesiology, Department of Pediatric Anesthesiology, University of Tennessee, Knoxville, TN.
A three month-old male infant with Factor IX deficiency presented to an outside facility with 3 day history of vomiting, fever, and diarrhea and was discharged. Upon initial exam at our facility, he had irregular respirations and his right pupil was dilated and minimally reactive. Head CT showed large IPH likely secondary to right MCA aneurysm rupture. Labs revealed HCT 17. Perioperative management included hypertonic saline, mannitol, recombinant Factor IX, blood products, and mild permissive hypothermia. Hemostasis was obtained surgically. Postoperatively, the patient was extubated on POD#2 neurologically intact, interactive, and appropriate.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC437
Complex Spinal Surgery in a Patient With Duchenne's Muscular Dystrophy: A Clear Link to Malignant Hyperthermia?
Genaro Gutierrez, M.D., Teresa Roberts, M.D., Anesthesiology and Critical Care Medicine, The George Washington University School of Medicine and Health Sciences, Washington, DC, USA, Anesthesiology and Pain Medicine, Anesthesiology and Critical Care Medicine, Children’s National Medical Center, The George Washington University School of Medicine and Health Sciences, Washington, DC.
A 15 year-old male with Duchenne’s Muscular Dystrophy and scoliosis presented for posterior spinal fusion. Our wheelchair bound patient also had a history of restrictive lung disease, and asthma. We chose to administer trigger agent free anesthetic. After flushing the anesthesia machine with 100% O2 and placing carbon filters on our circuit, we induced general anesthesia using nitrous oxide and an induction dose of propofol. Anesthesia was maintained with a low dose ketamine infusion, a remifentanil infusion and 50% nitrous oxide. After being asked to discontinue nitrous oxide due to interference with neurophysiology monitoring, a dexmedetomidine infusion was started.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC438
Postoperative Tension Pneumothorax in a Premature Infant With TEF Requiring Emergent Needle Decompression
Jenna Helmer Sobey, M.D., Elisabeth Hughes, M.D., Anesthesiology, Division of Pediatrics, Vanderbilt University Hospital, Nashville, TN.
33.5 week premie, now DOL 14, with VACTERL, including esophageal atresia and TEF, presented POD 13 from initial TEF repair for closure of esophageal stumps and G-tube placement. Surgeons unable to create anastomosis due to large gap between stumps, so stumps clipped, right sided chest tube replaced and G-tube placed. Prior to NICU transport, sats decreased to low 60’s on 100% FiO2 w/ rapid hypotension, tachycardia and high PIPS. Auscultation revealed absent right sided breath sounds. STAT CXR demonstrated right tension pneumothorax requiring emergent needle decompression with immediate improvement in hemodynamics. Pigtail catheter placed. Repeat CXR demonstrated resolution of pneumothorax.
SVT During Tracheoesophageal Fistula Repair
Gregory Jackson, M.D., Robert Craft, M.D., Anesthesiology, University of Tennessee, Knoxville, TN.
8 day-old for TEF repair. Anomalies included large PDA, ASD, renal agenesis, anal atresia, duodenal atresia and annular pancreas. Intubated with 3-0ETT. Induction without incident and new 24gauge IV placed. 90 minutes into procedure patient developed re-entrant SVT to rate of 300, confirmed by EKG, pulse ox and arterial line. Esmolol 1mg and 20cc of 5% albumin given and heart rate returned to 150s NSR. Remainder of case proceeded without incident and patient was transported back to NICU intubated. Later extubated and discharged home.

Anesthetic Challenges and Hazards of Pediatric Post Tonsillectomy Hemorrhage
Ranu R. Jain, M.D., Nitin Wadhwa, M.D., Leanne Foster, M.D., Anesthesia, University of Texas Health Science Center at Houston, Houston, TX.
7 year-old with Down’s syndrome had repeat tonsillectomy for sleep apnea. On postoperative day 7, she hemorrhaged from left tonsillar bed, leading to shock, cardiac arrest, and CPR. Mask ventilation was adequate. However, multiple intubation attempts by the code team were unsuccessful as active hemorrhage did not allow laryngoscopic view despite suction. Ventilation with an LMA placed by pediatric anesthesiologist was suboptimal. The anesthesiologist then intubated the trachea blindly using direct laryngoscopy and following air bubbles generated from the airway during CPR. Patient was then resuscitated, emergently brought to OR for control of hemorrhage, and transferred to ICU for further care.

Ethical and Anesthetic Considerations of Minor Not Emancipated Mother
Ranu R. Jain, M.D., Sara Guzman-Reyes, M.D., Sylvia Skucha, A.A., Anesthesia, University of Texas Health Science Center at Houston, Houston, TX, USA, Anesthesia, Case Western Reserve University, Cleveland, OH.
15 year anemic mother, not emancipated, Jehovah’s Witness came to our hospital for oozing infected with pseudomonas AVM of gluteal vessels. Coiling was scheduled of the AVM in IR suite. Her hemoglobin was 5.3. She and her family refused blood products. Cell saver was acceptable but could not be used due to Pseudomonas infection. She had signs of failure including Pleural/pericardial effusion. When the case was discussed, some anesthesiologists and CRNA did not feel comfortable to provide the service. She underwent 4 different procedures. The patient is still anemic, septic and critical. They still believe in their values.
Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC442
Ventilatory Challenges in VACTERL Patient Presenting for Neurosurgical Procedure
Norah R. Janosy, M.D., Megan A. Brockel, M.D., Pediatric Anesthesiology, Children’s Hospital Colorado, Aurora, CO.
A four year-old girl with VACTERL syndrome and a history of pulmonary sequestration and left lower lobe resection presented for spinal cord detethering. After intubation, left breath sounds were absent and no left chest rise was noted. A bronchoscopy was performed which revealed left bronchomalacia with total compression of the airway that did not change with PEEP or prone positioning. Incidentally, she was also found to have a bronchus intermedius. The procedure was cancelled, patient was awoken and spontaneous ventilation returned with bilateral aeration. The procedure was later successfully completed with single-lung ventilation and various interventions to optimize left lung ventilation.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC443
Use of Video GlideScope and Airway Management in a Pediatric Patient With Lymphatic Malformations of the Airway
Monique Jones, Franco Resta-Flarer, M.D., Jonathan Lesser, M.D., Vaclav Hrdlicka, M.D., Anesthesiology, St. Luke’s-Roosevelt Hospital, New York, NY.
A 9 month male with lymphatic malformation of the floor of the mouth, status post EXIT procedure tracheostomy had received multiple sclerotherapy treatments through 8 months of age. Scheduled for laser treatment and consideration for decannulation. Following induction, the video GlideScope was used to assess the lymphatic malformation and extent of airway involvement. Laryngoscopy revealed reduced but persistent lymphatic malformation obstructing full view of the airway with limited visualization of the glottis and epiglottis. With further treatment, we anticipate an improved GlideScope view suggesting the viability of decannulation. The serial video laryngoscopy recordings facilitate disease monitoring and determination of therapeutic strategies.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC444
Use of Video GlideScope and Airway Management in a Pediatric Patient With PHACES Syndrome Involving the Airway
Monique Jones, Franco Resta-Flarer, M.D., Jonathan Lesser, M.D., Vaclav Hrdlicka, M.D., Anesthesiology, St. Luke’s-Roosevelt Hospital, New York, NY.
A 6-year old with history of beard distribution and subglottic hemangiomas, recently diagnosed with PHACES syndrome, was scheduled for laser treatment of possible hemangiomas involving the airway and tonsillectomy. Additional workup revealed significantly enlarged tonsils and significantly obstructive sleep apnea requiring CPAP. Following inhalational induction, video GlideScope was used to visualize the airway prior to intubation since PHACES is associated with multiple hemangiomas affecting the airway. Laryngoscopy revealed numerous hemangiomas of the epiglottis and glottis but grade 1 view with little difficulty in intubation.
Anesthesia for Tonsillectomy and Adenoidectomy in a Child with Ebstein's Anomaly: A Case Report
Jaime Karmin, M.D., Aarti Sharma, NYP - Cornell, New York, NY.
An 8 year-old male with Ebstein’s anomaly, pulmonary atresia, and a hypoplastic right ventricle was scheduled for tonsillectomy and adenoidectomy. At age 18 months, he underwent bilateral pulmonary arterioplasty with placement of a central aorta to pulmonary artery shunt. Two years later he was cyanotic, and cardiac catheterization revealed a shunt with flow to the right pulmonary artery only. He underwent repeat pulmonary arterioplasty and replacement of the shunt, but was lost to follow-up until he presented complaining of recurrent throat infections. He remained cyanotic with an SpO2 of 85% on room air. After evaluation by ENT, surgery was scheduled.

Anesthetic Management of a 5 year-old With Restrictive Cardiomyopathy and Bidirectional PFO due to Pectus Excavatum
Lauren R. Kelly Ugarte, Amy Vinson, M.D., Anesthesiology, Children's Hospital Boston, Boston, MA, Beth Israel Deaconess Medical Center, Boston, MA.
Pectus excavatum is one of the most common chest wall deformities in children. When severe, it may cause cardiorespiratory compromise and require surgical correction. In addition, patients must not twist or logroll in order to maintain the position of the bar in the immediate postoperative period. Careful perioperative planning is imperative for a safe anesthetic. We describe the anesthetic management of a 5 year-old with a history of emergence delirium who underwent endoscopic pectus excavatum repair to improve right ventricular restrictive cardiomyopathy and bidirectional PFO shunting.

Horner Syndrome in a 10 Month Old With Bilateral Nephroblastomas After Thoracic Epidural Placement
Lori Kiefer, M.D., Elisabeth Hughes, M.D., Stephen Hays, M.D., Anesthesia, Vanderbilt University Medical Center, Nashville, TN.
A 10 month-old male diagnosed with bilateral nephroblastomas underwent right partial and left total nephrectomies. A thoracic epidural was placed preprocedure after induction of anesthesia without complications. The infusion was held for a period of hypotension during the procedure but was restarted near the end of the case. After transport to the PACU the patient had a right sided Horner syndrome and bilateral upper extremity weakness secondary to a high block and partial right decubitus positioning. The infusion was held temporarily and the rate was lowered to compensate for the 1.1 kg decrease in body weight after tumor resection.
Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC448

Combined Video Laryngoscopy and Fiberoptic Technique to Intubate a Pediatric Patient With Facial Trauma Following a Car Bombing At 9 Months of Age in Iraq
Malikah Latmore, M.D., Franco Resta-Flarer, M.D., Jonathan Lesser, M.D., Anesthesiology, St. Luke’s-Roosevelt Hospital Center, New York, NY.
At nine months of age, patient sustained severe maxillofacial trauma in the field requiring emergent tracheostomy and cardiac resuscitation presents for facial reconstruction. One week following accidental decannulation at 5 years of age, patient presented with significant oral contractures, no nasal passages, and upper airway narrowing disallowing direct laryngoscopy. With multidisciplinary team present and pediatric Lindholm scope available, inhalational induction was begun and a reusable 2.5 GVL video GlideScope blade was able to be inserted into the posterior pharynx. Under direct visualization, a fiberoptic intubation was performed and a preloaded 4.5 cuffed ETT was passed uneventfully into the trachea.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC449

A Newly Developed Paroxysmal Atrial Fibrillation During Perioperative Period in an Adolescent: A Case Report
Byung Gun Lim, Ph.D., Jea Yeun Lee, M.D., Young Min Kim, M.D., Mi Kyoung Lee, Ph.D., Il Ok Lee, Ph.D., Department of Anesthesiology and Pain Medicine, Korea University Guro Hospital, Seoul, Korea, Republic of.
Although the development of arrhythmias is common during anesthesia and surgery, for the 1 episode of atrial fibrillation(AF) to happen during this period is less common. Moreover, most instances of AF are associated with old age, cardiopulmonary diseases as well as metabolic, endocrine, or genetic abnormalities. The occurrence of paroxysmal AF in the perioperative period in an adolescent without any underlying disease has never been reported. Herein, we report a case of a 16-year-old adolescent whose paroxysmal AF was discovered before induction of anesthesia for strabismus surgery, and was managed successfully with esmolol infusion during and after the surgery.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC450

Awake Craniotomy: Anesthetic Management in a 9 Year-Old
Elizabeth B. Malinzak, H. Mayumi Homi, M.D., Duke University Medical Center, Durham, NC, Duke Children’s Hospital and Health Center, Durham, NC.

Awake craniotomy remains a useful technique that allows excision of brain lesions near eloquent areas. A variety of anesthetic techniques to produce a non-tight brain, to permit functional mapping of speech/motor areas, and to allow craniotomy closure have been described. Most of the techniques were depicted in adult population with variable outcomes. However, the management in a pediatric patient might be more troublesome due to the nature of the challenges of having an awake, cooperative child in this environment. We describe a successful asleep-awake-asleep anesthetic in a 9 year-old who underwent a left fronto-temporo-parietal craniotomy with speech mapping.
Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC451
**Congenital Hydrocephalus and the Pediatric Airway**

_Elizabeth B. Malinzak, M.D., Brad M. Taicher, D.O., Duke University Medical Center, Durham, NC, Duke Children's Hospital and Health Center, Durham, NC._

Anatomic and physiologic differences in the pediatric versus adult airway can make management more challenging, but neonatal airways can also be complicated by the presence of other pathology. In this case, we review the anesthetic challenges presented by a 1 day old, full-term gestation female with a head circumference of 52.5 cm (≥ 99th percentile) undergoing insertion of ventriculo-peritoneal shunt for ventriculomegaly and massive hydrocephalus. Perioperative management included consideration of the presence of unknown congenital anomalies, anatomic airway abnormalities secondary to her hydrocephalus and the risk of a difficult airway, and the need for adequate positioning.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC452
**Complications of Broviac Placement in a Coagulopathic Pediatric Patient**

_Gregory McHugh, M.D., Neal Campbell, M.D., Anesthesiology, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA._

A 2 year-old male with PMH of anal atresia, incarcerated hernia, short gut syndrome, and TPN induced liver failure presented for replacement of Broviac catheter under general anesthesia. Surgical difficulty was encountered and multiple, bilateral attempts were made to gain subclavian access. Hours postoperatively, the patient demonstrated respiratory distress, which quickly progressed to cardiopulmonary arrest. Resuscitation was begun and CXR showed left hemothorax. Emergent thoracotomy revealed primary pulmonary parenchymal hemorrhage. The patient required extensive monitoring, massive transfusion, and multiple vasoactive medications intraoperatively. He was unable to be weaned from cardiopulmonary support in the ICU, and care was withdrawn.

Sunday, October 14, 2012
2:30 PM - 4:00 PM
MC453
**Perioperative Management of the Failing Fontan Patient for Orthotopic Heart Transplant (OHT)**

_Evelyn C. Monoico, M.D., Manchula Navaratnam, M.D., Department of Anesthesia, Lucile Packard Children’s Hospital at Stanford, Palo Alto, CA._

Fontan failure is a growing indication for heart transplantation making heart transplant a "fourth stage" towards serial circulation or an alternate option to high-risk Fontan procedures. Here we present the case of a pacemaker-dependant 17 year-old boy with right heart failure and associated multi organ dysfunction after Fontan palliation for hypoplastic left heart syndrome. His intraoperative course was complicated by pre-bypass cardiac arrest during surgical dissection necessitating 12 minutes of successful resuscitation, difficult pre-bypass cannulation and significant pre-bypass hemorrhaging. We use this case to illustrate the anesthetic considerations of a failing fontan in patients with decompensated ventricular failure.
Anesthetic Management of Two Children Undergoing Cardiac Surgery With Suspected Mitochondrial Disease
Shivani G. Mukkamala, M.D., Teeda Pinyavat, M.D., Caleb Ing, M.D., Pediatric Anesthesiology, Columbia University, New York, NY.
Two cases are described. Both pediatric patients had cardiac surgery with cardiopulmonary bypass. The first case is a patient with no significant medical history who had unmasking of mitochondrial disease with surgery resulting in persistent lactic acidosis, encephalopathy, residual left sided hemiparesis and dystonia. A biochemical assay of her muscle tissue showed a decrease in the absolute function of complex I of the respiratory chain. The second case is a child with presumed mitochondrial disease with neurologic and motor delay, hypotonia, chronic lactic acidemia followed by Genetics who had a smooth perioperative course with no negative sequelae.

Emergency Appendectomy in a Pediatric Patient With Von Willebrand Disease Type III
Harika Nagavelli, M.D., Anesthesiology, Yale New Haven Hospital, New Haven, CT.
A 14 year-old male with Von Willebrand disease Type III presented with symptoms suspicious for acute appendicitis. Prior history included multiple bleeding episodes, notably bleeding tonsils after eating french fries, requiring treatment with Humate P for hemostasis. In the setting of his bleeding disorder, there was potential for hemorrhage if progressed to perforation. After receiving Humate P, the patient was taken to the OR for an emergency appendectomy. The challenge of this case was obtaining adequate coagulation prior to incision and taking the preparatory steps in case of increased intraoperative bleeding.

Incidental Discovery of a Foreign Body on VPS Scan for Increasing Seizures
Bijan Navidi, Anesthesiology, LAC & USC Medical Center, Los Angeles, CA.
16 year-old boy presents with 3 weeks of increasing GTC seizure frequency with PMH of MR from chromosome 6p-deletion, VP shunt-dependent congenital hydrocephalus, and symptomatic generalized epilepsy. Despite a normal routine VPS radiologic series, a radiopaque foreign body resembling Mardi-Gras beads were incidentally discovered in the patient’s stomach. Patient was scheduled for diagnostic EGD and foreign body removal with GA and ETT under IV induction and inhalational anesthetic maintenance. The foreign body was determined to be 46 slowly eroding Magnetix magnets attached together in like a bunched-up necklace in the patient’s stomach creating increased difficulty for the surgeons.
Monday, October 15, 2012
2:30 PM - 4:00 PM
MC658
Kissing Tonsils: The Management of a Difficult Airway in a Pediatric Patient with Grossly Hypertrophied Tonsils and Facial Venous Malformation
Jessica L. Ng, M.D., Franco Resta-Flarer, Jinu Kim, Jonathan Lesser, M.D., Anesthesiology, St. Luke’s-Roosevelt Hospital Center, New York, NY.
A 7 year-old girl presented to the neuroangiography suite for endovascular sclerotherapy of a right maxillofacial venous malformation. PMHx was significant for tracheostomy secondary to the anatomical mass causing airway compromise, obesity and multiple bleomycin sclerotherapy treatments.
Glidescope-assisted laryngoscopy revealed severely hypertrophied juxtaposed tonsils. Fiberoptic guidance allowed us to successfully intubate the anticipated difficult airway. Due to the potential for airway obstruction post-extubation, an ENT surgeon was consulted intraoperatively and we decided to immediately follow the sclerotherapy with adenotonsillectomy. The patient was extubated without complication and brought to the PICU for overnight observation, where she was discharged from the following day.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC659
Single Lung Ventilation in an 8 Month Old Infant With Metastatic Rhabdoid Tumor
Fallon H. Ngo, D.O., Anesthesiology Institute, Cleveland Clinic Foundation, Cleveland, OH.
Method’s of single lung ventilation in pediatric patient’s include: main stem intubation of single lumen ETT, balloon tipped bronchial blockers, and Univent Tubes, and DLT for older children. This case presents an 8 month old female infant who was diagnosed preoperatively with presumably Wilm’s tumor and metastatic pulmonary disease refractory to chemotherapy. She was scheduled for a Right VATS surgery for a RLL segment lung biopsy for a definitive diagnosis of her primary tumor. We present our experience in the use of an 4.0 uncuffed ETT along with a 5.0 F Arndt bronchial blocker under fiberoptic bronchoscope guidance for single lung ventilation.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC660
Anesthetic Considerations and Pain Control in a Patient With Cockayne Syndrome Presenting for Hip Replacement
John T. Nguyen, M.D., Donald Bohannon, M.D., Rene Przkora, M.D., Ph.D., Anesthesiology, University of Texas Medical Branch, Galveston, TX, Anesthesiology, University of Florida, Gainesville, FL.
Introduction: Cockayne Syndrome (CS) is a rare autosomal recessive disorder with a variable presentation including accelerated aging, growth retardation, cachexia, neurodegeneration and vasculopathy. CS is part of the progeroid syndromes whose mechanism is due to impaired DNA repair.
Case Report: Our patient is a 20 years old male with CS who underwent a hip replacement under general anesthesia. A lumbar epidural catheter was placed for post-operative analgesia. No complications were noted. Conclusion: Patients with CS present a challenge to anesthesia providers secondary to potential difficult airway, unreliability in predicting proper airway devices, atherosclerosis, neurodegeneration, renal disease and diabetes mellitus.
Monday, October 15, 2012
2:30 PM - 4:00 PM
MC661
Uncontrolled Lingual Tonsillar Bleed Requiring Embolization in a Patient With Down Syndrome
Thanh Nguyen, M.D., Silvio Sitarch, M.D., Anesthesiology, Vanderbilt University, Nashville, TN.
Tonsillectomy and adenoidectomy is a very common procedure performed in the United States. It is estimated that over 200,000 tonsillectomies are performed each year. We present a case presentation of a lingual tonsillectomy bleed that was refractory to conservative surgical intervention. The patient required neurosurgical intervention to embolize the lingual artery with Onyx. Although there are other case reports of endovascular embolization for hemorrhage after tonsillectomy with coils, we believe this is one of the first case report of successful embolization with Onyx in a patient with a post-tonsillectomy hemorrhage.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC662
Child With Ectopia Cordis in a Third-World Setting
Honorato F. Nicodemus, M.D., Hector F. Nicodemus, M.D., Anesthesia, Walter Reed National Military Medical Center, Rockville, MD, Anesthesia, Holy Cross Hospital, Silver Spring, MD.
A 6 year-old female with ectopic heart and suspected PDA had cheiloplasty under general anesthesia. Coughing instantly shrunk the heart to half normal size, HR dropped from 88 to 40 bpm. Marked cyanosis ensued. With no clear diagnosis, to avoid further cardiac depression iv succinyl choline was given to stop the coughing. Dramatically, the heart regained normal size in a few beats. Heart rate and O2 saturation recovered shortly and the operation was completed. We deduced that valsalva prevented normal cardiac filling and reduced the cardiac output. A year later, we repaired her cleft palate with no untoward events.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC663
Utility of Video Laryngoscopy in Management of Airway Lymphatic Malformations
14 year-old with lymphatic malformation of the airway and tongue s/p tracheostomy at 15 months, presenting for laryngoscopy and CO2 laser. History significant for asthma, morbid obesity and multiple laser/excisions. The patient had a large protuberant tongue and a tracheostomy. Following inhalational induction with sevoflurane, nitrous oxide/oxygen via tracheostomy tube. Video laryngoscopy was performed. The Glidescope enabled real time visualization of epiglottis with significant lymphatic infiltration and the vocal cords. An ETT was successfully placed. This case highlights the importance of video-assisted direct laryngoscopy in securing difficult airways and its utility in planning for decannulation in patients with airway malformations.
Monday, October 15, 2012  
2:30 PM - 4:00 PM  
MC664  
13 Year-Old for Diagnostic Lumbar Puncture and Immediate Prophylactic Blood Patch  
Sarah Oswald, Anesthesiology, University of Illinois at Chicago, Chicago, IL.  
A thirteen year-old girl with a history of chronic headaches is listed on the offsite schedule for lumbar puncture and epidural blood patch. On chart review, you note that she underwent a previous lumbar puncture a month ago that was inconclusive for pseudotumor cerebri. After contacting the neurologist, you realize that he wants you to both sedate the child for the procedure as well as perform a prophylactic epidural blood patch immediately after the lumbar puncture. He is frustrated by your attempts to elucidate the reasons behind this plan because he “already cleared this” with a different attending anesthesiologist.

Monday, October 15, 2012  
2:30 PM - 4:00 PM  
MC665  
Glycogen Storage Disease Ia and NPO Status: A Case Report and Perioperative Considerations  
Jeff Owens, M.D., Joy Allee, M.D., David Weinstein, M.D., M.S., Anesthesiology, University of Florida, Gainesville, FL.  
A 4 year-old, 24 kg male with a diagnosis of Glycogen Storage Disease Ia presented for surgical closure gastrostomy tube removal. He was maintained on cornstarch every 2-3 since the age of eight months. Fasting began at midnight and IV dextrose was started with hourly glucose and lactate checks. Preoperatively, the patient had a lactate of 4 mmol/L and glucose of 64 mg/dL. IV dextrose administration was continuously adjusted accordingly and blood glucose improved. The case proceeded with frequent glucose and lactate monitoring without incident.

Monday, October 15, 2012  
2:30 PM - 4:00 PM  
MC666  
Non-Sustained Ventricular Tachycardia Resolving Under General Anesthesia  
Lance Patak, M.D., M.B.A., David Bradley, M.D., Bishr Haydar, M.D., Anesthesiology, University of Michigan, Ann Arbor, MI, Pediatric Cardiology, University of Michigan, Ann Arbor, MI.  
A 14 year-old competitive gymnast presented for a left distal femur epiphysiodesis. She had previously sustained a right femur fracture and was noted to have asymptomatic NSVT perioperatively, which improved while under general anesthesia (GA). Holter monitor showed NSR with uniform ventricular ectopy occurring 30% of the time, including during sleep. Echocardiography was normal and exercise testing was negative. While under GA with isoflurane, her NSVT terminated and resumed on emergence. She returned eleven months later for a right distal femoral osteotomy. Her baseline NSVT again improved after induction, and returned five minutes after emergence.

Monday, October 15, 2012  
2:30 PM - 4:00 PM  
MC667  
Arytenoid Prolapse and Cannot Ventilate Trap  
Mario Patino, M.D., Lisa Francis, M.D., Mohamed Mahmoud, M.D., Anesthesia, Cincinnati Children's Hospital Medical Center, Cincinnati, OH.  
A 4 year-old with history of a complex craniofacial syndrome, torticollis, and complete tracheal rings s/p tracheoplasty presented for a microlaryngoscopy and bronchoscopy. Upon inhalation induction we were
unable to ventilate even after LMA placement. A direct laryngoscopy showed a grade IV view. Intubation was successful with the use of a rigid scope. The airway evaluation revealed bilateral arytenoid prolapse. A partial resection of both arytenoids accomplished a more patent airway. Awareness of the risk of inability to ventilate with supraglottic devices in patients who had laryngotracheoplasty is essential to prevent airway catastrophe.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC668
Traumatic Hangman’s Fracture in an 11-Month Old Infant
Cecilia Peña, M.D., Bettina Schmitz, M.D., Ph.D., Lazlo Nagy, M.D., Anesthesiology, Pediatric Neurosurgery, Texas Tech University Health Sciences Center, Lubbock, TX.
A healthy eleven-month old female was transported as a level 1 trauma activation, following high impact motor vehicle collision. Upon arrival, the infant’s cervical spine was cleared by x-ray; however, subsequent CT scan demonstrated a dens fracture with C1-C2 distraction and narrowing of the spinal canal. The anesthesia team was consulted to secure her airway and provide anesthesia for the placement of traction weights. Following IV induction, intubation was performed with video laryngoscope while utilizing in-line stabilization. She successfully underwent open reduction and fusion of C1-C2 on the following day, and was discharged on day five.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC669
From Tracheostomy to Decannulation: A Staged Approach to Macrocystic Lymphatic Malformation
Gendai J. Peak, M.D., Franco Resta-Flarer, M.D., Jonathan Lesser, M.D., Anesthesiology, St. Luke’s-Roosevelt Hospital, New York, NY.
4 year-old female with macrocystic lymphatic malformation of the face and airway, s/p tracheostomy in the newborn period, history of prolonged neonatal seizures, bronchopulmonary dysplasia, asthma, and pharyngeal inlet stenosis, s/p tongue reduction surgery presents for direct laryngoscopy, epiglottoplasty, and laser treatment of airway and palate. Plan was for multiple staged procedures eventually allowing for decannulation. A series of Glidescope video laryngoscopies were used to monitor disease remission and dynamic airway function. Following epiglottopexy, the airway was visualized and we anticipate decannulation in the near future.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC670
Endotracheal Tube Exchange Assisted by Glidescope in the Difficult Airway Infant With Severe Pulmonary Disease
Leroy Phillips, M.D., Johnathan Lesser, M.D., Franco Resta-Flarer, M.D., Department of Anesthesiology, St. Luke’s - Roosevelt Hospital Center, New York, NY.
6 mos, former 27 week premie, ventilator dependent secondary to bronchopulmonary dysplasia, and pulmonary hypertension, right vocal cord paresis with prior history of difficult intubation scheduled for ET tube exchange. A 7.5F Cook tube exchanger was passed through the 3.5 ET tube subsequent to performing direct videolaryngoscopy (Glidescope). The initial attempt to pass a 4.5 ETT was unsuccessful and under direct visualization it could be seen that the tube was too large. Despite severe pulmonary disease, the infant was successfully ventilated via the tube exchanger until the second attempt at reintubation with a 4.0 ETT under direct videolaryngoscopy was successful.
Monday, October 15, 2012
2:30 PM - 4:00 PM
MC671
Neurosurgeical Anesthetic Management for Hydrocephalus Congenital of a 23 Month Old With Severe Osteogenesis Imperfecta and Generalized Arterial Calcification of Infancy
Huy Phun, Sanjiv Ghogale, M.D., NMCSD, San Diego, CA.
Osteogenesis Imperfecta is an inherited disorder of connective tissue stemming from gross abnormalities in collagen formation and structure. This 23 month old had symptoms of easily fractured bones, skeletal deformities, aortic calcifications and genetic mutations consistent with severe Type II and III and possible GACI. He presented to neurosurgery with HCG requiring EVT to relieve hydrocephalus. This case illustrated extensive preparation and planning of GETA necessary in OI patients with associated craniofacial abnormalities, brittle bones and cardiovascular pathology. Our technique addressed potential complications that may arise from monitoring, positioning, difficult airway, cardiac and metabolic anomalies stemming from his disease states.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC672
Refractory Post-Operative Hypokalemia in a Twelve year-old Female Following Posterior Spinal Fusion for Scoliosis: A Case of Undiagnosed Gitelman Syndrome
Justin M. Poltak, M.D., Anesthesiology, Maine Medical Center, Portland, ME.
A 12 year-old female with severe scoliosis presented for T2-T12 posterior spinal fusion. During her uncomplicated surgery, general anesthesia was maintained with propofol, remifentanil, low dose isoflurane, with epidurals placed at T5 and T9. Post-operatively, the patient was noted to have high urine output, with generalized weakness and hypertonicity in the muscles of her hands. Symptoms were initially attributed to her epidurals, however labs later revealed a serum potassium of 1.7 in the setting of metabolic alkalosis. The patient was diagnosed with Gitelman syndrome and required aggressive potassium supplementation with spironolactone therapy to maintain potassium levels.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC673
Dilemmas in the Anesthetic Management of an Adult With Single Ventricle Physiology Undergoing Hepatic Resection
Zoe A. Quinonez, M.D., Gabriela A. Monico, B.S., Wendy Yan, M.D., Michael Leeman, M.D., Pediatric Anesthesia, Lucile Packard Children’s Hospital at Stanford University, Palo Alto, CA, Anesthesiology and Pain Medicine, UC Davis Health System, Sacramento, CA.
We discuss the successful management of 30 year-old pacemaker-dependent man with Fontan physiology undergoing hepatic resection for hepatocellular carcinoma. We use the case to highlight the conflicting goals of management in these particular patients. Among these dilemmas is the desire to maintain low central venous pressure before hepatic resection versus maintaining an adequate preload in patients with single ventricle physiology, as well as balancing spontaneous ventilation with relaxation and narcotic-based anesthetic techniques. We also discuss the process of properly planning for possible complications.

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Monday, October 15, 2012
2:30 PM - 4:00 PM
MC674

Chest Wall Reconstruction in a Child With Poland's Syndrome: Understanding the Challenges During Anesthesia

Luis I. Rodriguez, M.D., Stephan Klumpp, M.D., Anesthesiology, University of Miami Medical Group, Miami, FL.

Here we present a case of a 4 week-old female, ex-32 week premie, with diagnosis of Poland’s Syndrome, presenting with left diaphragmatic eventration, absence of chest wall for chest wall reconstruction with Titanium mesh. Poland’s Syndrome is a rare congenital disorder characterized by unilateral hypoplasia or aplasia of the chest wall structures, cutaneous syndactyly of the ipsilateral hand. There is an estimated incidence between 1:30,000-40,000 live births. The cause is unknown, but it has been suggested that an interruption of blood supply to the subclavian, vertebral arteries or their branches during early embryologic development could explain the syndrome.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC675

Laryngeal Cleft Repair in an Infant: Benefits of Remifentanil infusion

Luis I. Rodriguez, M.D., Lydia Jorge, M.D., Anesthesia, University of Miami Medical Group, Miami, FL.

For both, Surgeons and Anesthesiologists, laryngeal surgery poses a challenge due to the different pathologies and implications of each case on the airway. Adequate communications between both providers is critical to obtain optimal operational conditions while ensuring adequate spontaneous ventilation. We present a case of a 9 week-old, 3.5Kg infant with tracheobronchomalacia and type 1 laryngeal cleft scheduled for repair. Optimal surgical conditions were obtained with Remifentanil infusion and propofol boluses. Patient maintained spontaneous ventilation and oxygen supplementation was given via Parson’s laryngoscope during the case. No episodes of desaturation, and patient was extubated at the end of surgery.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC676

Multivisceral Transplant in a Patient With Wolcott-Rallison Syndrome

Luis I. Rodriguez, Stephan Klumpp, M.D., Anesthesiology, University of Miami Medical Group, Miami, FL.

Wolcott-Rallison Syndrome is a rare autosomal recessive disease that presents as neonatal/early-onset non-autoimmune insulin-dependent diabetes, associated with skeletal dysplasia and growth retardation. Less than 70 cases are described in the literature and the majority of cases come from families with consanguineous marriages. Patients typically present with hepatic dysfunction and recurrent liver failure, with poor prognosis due to multi-organ failure. We present a case of a 6 year-old with Wolcott-Rallison Syndrome who succesfully received one of the first described multivisceral organ transplant after recovering from an episode of acute multi-organ failure. Prolonged ICU stay with multiple complications should be expected.
Monday, October 15, 2012
2:30 PM - 4:00 PM
MC677
Anesthetic Management of Posterior Spinal Fusion in Sotos Syndrome
Kathryn Rosenblatt, M.D., Venkata Sampathi, M.D., Reza Gorgji, M.D., Anesthesiology, SUNY Upstate Medical University, Syracuse, NY.
Sotos Syndrome is a genetic disorder characterized by excessive physical growth in the first three years of life, accompanied by autism, developmental delays and macrocephaly. We present a 13 year-old patient with Sotos Syndrome who underwent posterior spinal fusion with sensory and motor neuromonitoring one year after failed and aborted corrective spine surgery. TcMEPs were lost during the initial procedure, with confirmation “wake-up” test revealing no movement of the left lower extremity. The second surgery was uneventful. A “wake-up” test in these patients undergoing corrective spine surgery is a relative contraindication and may not be necessary when multi-modality neuromonitoring is available.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC678
General Anesthesia in a Child With Ohtahara Syndrome
Puja Roy, M.D., Vaclav Hrdlicka, M.D., Lita Chen, M.D., Anesthesiology, St. Luke’s-Roosevelt Hospital, NY, NY.
Ohtahara syndrome is a progressive epileptic encephalopathy that manifests in infancy with seizures refractory to anticonvulsants leading to mental retardation. This case report describes the anesthetic management of a 3 year-old boy with Ohtahara syndrome presenting for MRI of the brain. The patient had history of seizures since birth, developmental delays, hypotonia, and periods of apnea during sleep which required mask ventilatory support. MRI was performed under GA using sevoflurane and propofol infusion. No complications or seizures occurred, however during emergence, he exhibited a long apneic episode followed by shallow breathing requiring ventilatory assistance before successfully being extubated.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC679
Combination of Glide Scope and Fibreoptic Intubation - Airway Management in a 3 Month-Old Scheduled for a Congenital Cardiac Repair
Venkata Sampathi, M.D., Muhammad Sarwar, M.D., Nurudin Cemer, M.D., Anesthesiology, Upstate University, Syracuse, NY.
We report a case of glide scope assisted fibreoptic intubation in a 3 month old child scheduled for cardiac repair with unanticipated difficult airway. The mask ventilation was good throughout airway management, but quickly desaturating. We failed to intubate with direct laryngoscopy. With the Glidescope we were able to see the partial glottic opening, but difficult to intubate. We were unsuccessful in threading the endotracheal tube with LMA assisted fibreoptic intubation and fibreoptic scope alone. As a last resort we used glide scope assisted fibreoptic intubation to overcome the difficulty in threading the endotracheal tube.

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Monday, October 15, 2012
2:30 PM - 4:00 PM
MC680

Distraction Techniques Used in Children for Placement of Pigtail Catheter Placement in Chest

Venkata Sampathi, M.D., Ruba Elmaoued, M.D., Bettina Smallman, M.D., Anesthesiology, Upstate University, Syracuse, NY.

We present a series of case reports which were done under regional anesthesia with the usage of distraction techniques in sick children. In order to avoid the general anesthesia complications in sick patients who were manifested with midline shift of trachea and massive pleural effusion. We used EMLA cream, Intercostal block and Distraction techniques. We applied EMLA cream on the chest 45 min prior to the procedure. Intercostal block was performed in sitting position while child was playing the I-pad games. After the block, Pig tail catheter insertion was done with minimal discomfort and uneventfully.

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Monday, October 15, 2012
2:30 PM - 4:00 PM
MC681

Pediatric Patient With Severe Congenital Glaucoma Secondary to Hennekam Syndrome

Gabriel E. Sarah, M.D., Luis Rodriguez, M.D., Norman Halliday, M.D., Department of Anesthesiology, Perioperative Medicine & Pain Management, Jackson Memorial Hospital/University of Miami, Miami, FL.

Hennekam syndrome is an extremely rare, autosomal recessive disorder with moderate levels of growth and mental retardation coupled with facial anomalies, peripheral lymphedema, and intestinal lymphangiectasia. We present a case of a 4-year-old male with Hennekam Syndrome requiring general anesthesia for trabeculectomy secondary to congenital glaucoma. Patient receives weekly albumin injections secondary to protein-losing enteropathy and monthly IVIG therapy. Due to extended length of surgery (8 hours), unique facial characteristics, and edema, an endotracheal tube was indicated. The patient was intubated with albumin infused throughout the procedure, subsequently extubated and taken to PACU without complication.

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Monday, October 15, 2012
2:30 PM - 4:00 PM
MC682

Urgent Airway Management in a Pediatric Patient With Rosai-Dorfman Disease

Gabriel E. Sarah, M.D., Krishnaprasad Deepika, M.D., Richard Silverman, M.D., Department of Anesthesiology, Perioperative Medicine & Pain Management, Jackson Memorial Hospital/University of Miami Miller School of Medicine, Miami, FL.

Notification from the PICU revealed a 15 year-old male with Rosai-Dorfman disease with worsening respiratory distress requiring urgent placement of an endotracheal tube. Subglottic narrowing with multiple lymph nodes were identified by CT. Inhalational induction was completed and the patient had three failed attempts at intubation through direct laryngoscopy by one CA2 resident and two attending anesthesiologists. An LMA was attempted but would not sit properly. At this point it was determined that a surgical airway would be the safest way to proceed and the patient was maintained on Sevoflurane by mask while the ENT completed the tracheostomy procedure.
Monday, October 15, 2012
2:30 PM - 4:00 PM
MC683
Anesthetic Management for a 22 Month Old Undergoing Resection of a Large Mediastinal Mass / Malignant External Cardiac Germ Cell Tumor With Cardiopulmonary Bypass and ECMO Support
Anne M. Savarese, M.D., Teresa Niemiec, D.O., Anesthesiology, University of Maryland School of Medicine, Baltimore, MD.
We present the challenging anesthetic management of a 22 mo. old previously healthy girl with a brief h/o respiratory distress and fever. Diagnostic imaging and echocardiography revealed complete opacification of her left lung and a large complex, likely neoplastic, intra-pericardial mass causing extensive invasion and compression of both atria, SVC, and aortic root, as well as pericardial effusion and collapse of the left main stem bronchus. In the ICU she suffered acute respiratory failure and cardiac arrest. She then came urgently to the OR for chest exploration and de-bulking of an unusual tumor using cardio-pulmonary bypass and ECMO support post-op.

Monday, October 15, 2012
2:30 PM - 4:00 PM
MC684
Anesthetic Considerations for the Resection of a Cervical Teratoma in a Newborn
Krystal Scherrer, M.D., Tatyana Demidovich, M.D., Saint Louis University, St. Louis, MO.
Cervical teratomas of the newborn are rare congenital tumors associated with airway and cardiovascular compromise. We report the case of a 3 4day-old newborn who presented for the resection of the teratoma and was required to be placed on extracorporeal membrane oxygenation (ECMO). There are few reports of the hemodynamic considerations associated with the resection of the mass. Cardiopulmonary compromise must be discussed and planned for prior to excision of the mass. Selective use of ECMO proved to a valuable tool in the management of this case and should be considered prior to attempted excision.