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

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

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

A030 Pneumothorax: Do not Always Blame the Central Line

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

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

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

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

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

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

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

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

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

Case Description: A 19-year-old, male patient weighing 58 kg was scheduled for an elective D1–D2 laminectomy and excision of an arachnoid cyst under general anesthesia. Diagnosed with tricuspid atresia at birth, he underwent modified right Blalock–Taussig shunt as a neonate and a hemi-Fontan procedure at 8 months of age. He was NYHA class 2 until 1 month ago until he developed muscle weakness with grade-4 power. The ECHO done preoperatively showed functional hemi-Fontan's shunt, restrictive VSD 2 mm, small ASD, rudimentary RV, dilated LV, and a normal LV systolic function. After establishing standard ASA monitors, induction, and tracheal intubation were performed with intravenous fentanyl, ketamine, etomidate, and atracurium. Anesthesia was maintained with sevoflurane, MAC 0.5 and propofol infusion titrated with BIS. The patient was positioned carefully in prone with transcutaneous pacing pads and MEP was monitored intraoperatively to guide excision.

Conclusion: Understanding the Fontan physiology, the single ventricle physiology and pulmonary blood flow is critical to maintain hemodynamic stability. Anesthetic management, enabling intraoperative MEP monitoring, while maintaining cardiac function in the setting of altered cardiac physiology is essential for successful management.

A033 Craniotomy in a Case of Eisenmenger's Syndrome with Pulmonary Artery Hypertension: A Neuroanesthetic Challenge

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Background: The Eisenmenger syndrome is a form of cyanotic congenital heart disease not amenable to corrective surgery. It develops in patients with left-to-right shunts that results in concomitant pulmonary hypertension and right heart volume overload. The reported perioperative mortality of these critically ill patients is as high as 20 to 30%.

Case Description: An 18-year-old female patient presented to our institute for neurosurgical management of third ventricular colloid cyst. She was a diagnosed case of double-outlet right ventricle (DORV) with patent ductus arteriosus (*P*DA) with hypoplastic left aortic arch with pulmonary arterial hypertension (*P*AH) and Eisenmenger syndrome. She underwent right frontal craniotomy and tumor decompression under general anesthesia. She was managed with the hemodynamic goals to avoid any decrease in preload, decrease in systemic vascular resistance, increase in pulmonary vascular resistance, and decrease in myocardial contractility.

Conclusion: We would like to discuss the unique set of challenges encountered in perioperative management of these critically ill patients with reference to the present guidelines available and share how we managed this case.

A034 Anesthetic Management of a Patient of Pituitary Microadenoma with Low Ejection Fraction for Inferior Petrosal Sinus Sampling

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Background: Adrenocorticotropic hormone secreting pituitary adenoma is though quite rare yet associated with increased morbidity and mortality due to severe comorbidities associated with them. Inferior petrosal sinus sampling (IPSS) is the gold standard invasive procedure for the anatomical localization for Cushing's disease.

Case Description: We report two typical cases of Cushing's disease with low–ejection fraction who underwent IPSS and discuss the difficulties encountered and their management. Both of them were female patients of age 40 and 38 years, respectively. They presented with similar complaints of weight gain, facial hair, and body ache and after clinical examination and investigations, they were diagnosed to have Cushing's disease with pituitary microadenoma. Hypertension and diabetes mellitus were present with echo findings of ejection fraction of 30 and 35%, respectively. IPSS was performed under general anesthesia. Patients were hemodynamically stable throughout the procedure and we avoided any tachycardia, hypoxia, hypercarbia, hypothermia, and proper analgesia was ensured. Blood sugar levels were kept within normal limits.

Conclusion: Anesthetic implications due to Cushing's disease include hyperglycemia, hypertension, proximal muscle weakness, and skin thinning. Delicate skin and osteoporosis cause difficulty in venous access and increases risk of spontaneous fractures. A thorough understanding of preoperative assessment of airway, neurological, and endocrine status were helpful for our management.

A035 Craniotomy in Klippel–Trenaunay Syndrome: Concerns and Challenges

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Background: Klippel–Trenaunay Syndrome (KTS) is a rare congenital disorder characterized by cutaneous capillary malformations, soft tissue and bone hypertrophy, and venous varicosities. Multisystem involvement of this syndrome mandates adequate preparation and planning, with meticulous conduct of anesthesia, and surgery in these patients to achieve favorable outcomes.

Case Description: A 17-year-old girl presented for excision of right frontal calvarial hemangioma measuring 8 cm × 9 cm × 5 cm with intracranial extension and associated