

Chiari-1 malformation. On examination, her neurocutaneous markers suggested classical KTS-presence of distinct, linear bordered port-wine stains. She had lymphoedema of bilateral lower limbs and disproportionately enlarged feet with club feet deformity. Solid organ involvement and congenital heart disease were ruled out. Adequate blood products were arranged in view of anticipated blood loss. Standard anesthetic induction was performed. In view of Chiari malformation and anticipated soft tissue changes in the airway, intubation was performed using C-MAC videolaryngoscope. Patient was positioned carefully and surgery was performed uneventfully.

**Conclusion:** Patients with KTS pose challenges during vascular access necessitating use of ultrasonography to diagnose and avoid inadvertent injury to superficial arteriovenous fistulous malformations. Similar concerns exist during scalp block regarding inadvertent local anesthetic injection into occult subcutaneous scalp hemangiomas. Presence of associated Chiari-1 malformation and proneness for pathological fractures requires care during intubation and positioning. Oropharyngeal neurofibromatosis lesions warrant preoperative airway examination using indirect laryngoscopy to understand the potential airway difficulty and formulate intubation plan. Calvarial hyperostosis can result in difficulty during craniotomy. Proximity of the hemangioma to the superior sagittal sinus places the patient at risk of venous air embolism.

#### **A036 Role of NIRS in a Child with Moyamoya Disease for Encephaloduroarteriomyosynangiosis (EDAMS): A Case Report**

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**Background:** Moyamoya, “puff of smoke” disease (MMD), is a rare cerebrovascular disease with progressive stenosis of intracranial blood vessels. Anesthetic goal of revascularization surgery is to maintain the cerebral oxygen supply and demand. We wanted to report a case of NIRS-based anesthetic management of encephaloduroarteriomyosynangiosis (EDAMS).

**Case Description:** An 8-year-old boy weighing 24 kg presented with two episodes of transient ischemic attacks (TIAs), diagnosed with MMD, planned for EDAMS. Overnight intravenous fluid (IVF) was given to prevent dehydration and diazepam premedication was given for anxiolysis. In the operating room, with ECG, EtCO<sub>2</sub>, SPO<sub>2</sub>, NIRS, and NIBP monitoring were attached; induction and intubation were performed using propofol, fentanyl, and atracurium. Postintubation, arterial BP, temperature, and urine output monitoring was established. Regional scalp block with 0.2% ropivacaine was given for analgesia. Anesthesia was maintained using air, oxygen, and sevoflurane. Depth of anesthesia, brain oxygenation, and hemoglobin trends were monitored using the patient state index, NIRS, and noninvasive hemoglobin analyzer using SedLine, Masimo. MAP, CO<sub>2</sub>, temperature, and depth of anesthesia were tightly controlled to keep the cerebral oxygenation close to the baseline. Repeat

regional scalp block, fentanyl infusion was given for postoperative analgesia. He was discharged on the POD 4 without neurological deficit.

**Conclusion:** MMD has limited cerebrovascular reserve with propensity to develop cerebral ischemia during the perioperative period. In our case, the balance between the cerebral oxygen supply and demand was strictly maintained by monitoring the cerebral oxygenation using NIRS. Various factors, such as MAP, EtCO<sub>2</sub>, temperature, depth of anesthesia, and intraoperative hematocrit were controlled within normal limit to maintain the cerebral oxygenation close to baseline throughout surgery which aided for the successful outcome.

#### **A037 Utility of Compass 31 Questionnaire to Predict the Autonomic Dysfunction and Intraoperative Hemodynamic Fluctuations and Correlate it with CASS Score in Patients with Compressive Cervical Myelopathy**

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**Background:** To assess utility of COMPASS-31 questionnaire as screening tool for diagnosing autonomic dysfunction (AND) and correlate it with modified CASS score to predict the severity of AND, intraoperative hemodynamic fluctuations in patients undergoing surgery for compressive cervical myelopathy (CCM).

**Materials and Methods:** After obtaining IRB approval and informed consent, 42 ASA I-II patients, aged 18 to 70 years, who underwent decompression for CCM were recruited. In the preoperative period, COMPASS 31 questionnaire was given in the language they could comprehend, and the total score was calculated. They underwent autonomic function tests and modified CASS score was calculated. During intraoperative period, standard anesthesia protocol followed and hemodynamics were noted at regular intervals throughout the surgery. Ephedrine/phenylephrine boluses or noradrenaline infusion was given to maintain a target BP within 20% of baseline. Amount of vasopressor used was recorded.

**Results:** The mean age of the patients studied was 48.76 ± 10.69 years. Fifty percent of patients had Nurick's grades 2 and 3, and the rest had Nurick's grades 4 and 5. All patients had AND varying from mild (46%), moderate (12%) to severe (42.9%). The median COMPASS-31 score (IQR: 25–75%) was 19 (6–33). Receiver operating characteristic (ROC) analysis revealed COMPASS-31 had fair accuracy with area under the curve (AUC) = 0.738 ( $p = 0.009$ ). Total COMPASS-31 score of 30 had sensitivity of 52.2% and specificity of 89.5% to detect moderate to severe AND. The median (IQR: 25–75%) Modified CASS score was 3 (2–5). Moderately positive correlation 0.383 ( $p = 0.05$ ) found between CASS and COMPASS-31 score. Nurick's grade showed positive correlation with CASS/COMPASS-31 with correlation coefficient of 0.35 ( $p = 0.023$ ), 0.48 ( $p = 0.001$ ), respectively. In patients with severe AND had significant hemodynamic fluctuation compared with mild/moderate AND.

**Conclusion:** COMPASS-31 score of more than 30 correlated with moderate to severe AND. Patients with severe AND develops significant hemodynamic fluctuations during surgery more so in prone.

**A038 Analgesic Efficacy of Ultrasound-Guided Quadratus Lumborum Block (QLB) for Anterior Iliac Crest Graft Site Pain in Patients Undergoing Cervical Corpectomy with Iliac Bone Grafting: A Retrospective Case Control Study**

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**Background:** Pain after anterior iliac crest bone graft (AICBG) harvesting is severe enough to limit the postoperative ambulation and recovery and can also lead to chronic pain. Quadratus lumborum block (QLB) provides analgesia by depositing the local anesthetic in the thoracolumbar fascia which can spread from T9–L5 level and can thus provide effective analgesia.

**Materials and Methods:** All patients who underwent cervical corpectomy with AICBG from June 2017 to May 2019 were retrospectively studied. Necessary data were collected from computerized case records, inpatient hospital records and anesthesia records. QLB with catheter was placed in the beginning or at the end of surgery. Patients who did not

receive QLB served as controls and patients who received QLB were taken as cases.

**Results:** A total of 25 patients were studied. The baseline demographics, intraoperative variables (opioid consumption and duration of anesthesia), and postoperative variables (time of ambulation and discharge time) between the groups were compared. All patients received 30 to 40 mL of either 0.2% ropivacaine or 0.25% bupivacaine for intraoperative analgesia. During the postoperative period, 30 mL of 0.2% ropivacaine or 0.2% bupivacaine was given Q12H for 60 hours. There were no complications such as infection, hematoma or motor weakness noticed with QLB placement. Patients with QLB could be ambulated earlier compared with patients without block.

**Conclusion:** Administration of QLB decreased intraoperative opioid usage and helped in early ambulation and early discharge during the postoperative period.

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