

**Results:** A total of 50 patients were enrolled out of whom 31 (62%) were female. Mean age of these patients was  $47.3 \pm 9.31$  years (19–65 years). Forty-eight (96%) were H&H grades I–III while only 2 (4%) had a poor grade SAH (grade IV). Omnipaque 300 was administered in all the cases. The volume administered was  $123.2 \pm 53.08$  mL (60–190 mL). The average NGAL values at preoperative, 1 hour, 6 hours, 24 hours, and 48 hours were  $124.99 \pm 64.58$ ,  $148.40 \pm 77.90$ ,  $147.33 \pm 76.00$ ,  $125.49 \pm 64.44$ , and  $116.38 \pm 61.79$ , respectively. The mean creatinine values during the similar time period were  $0.629 \pm 0.23$ ,  $0.624 \pm 0.22$ ,  $0.612 \pm 0.21$ ,  $0.632 \pm 0.19$ , and  $0.577 \pm 0.22$ , respectively.

**Conclusions:** None of the patients showed any evidence of AKI. Newer nonionic contrast agents seem to be safe in aneurysmal SAH patients undergoing neuroradiological procedures, especially if preexisting risk factors are absent.

#### A0030 Evaluation of Respiratory Morbidity and Eventual Outcome in Traumatic Cervical Spinal Cord Injury: A Retrospective Study

**Deep Sengupta,<sup>1</sup> Ashish Bindra,<sup>1</sup> Arvind Chaturvedi,<sup>1</sup> Sunil Routray<sup>1</sup>**

<sup>1</sup>Department of Neuroanaesthesiology and Critical Care, All India Institute of Medical Sciences, New Delhi, India

**Background:** Traumatic cervical spinal cord injuries (CSIs) have social and economic implications with almost no standardized respiratory rehabilitation centers. This retrospective observational study is an endeavor to determine the impact of traumatic CSI on the respiratory morbidity and eventual outcome.

**Materials and Methods:** Fifty traumatic CSI patients admitted to JPNATC in the past 1 year were included. Primary objective was to determine the respiratory morbidity of patients in terms of ventilator dependency days (assist control ventilation/pressure support) and eventual outcome (discharge/death). Secondary objectives were to ascertain the patient demographics, total duration of ICU and hospital stay, and correlation between ASIA grade and eventual outcome.

**Results:** Of the 50 patients reviewed, median age was 35 years (17–74), 86% were males, 50% required inotropic support for 22 days (2–127), 88% underwent surgery, and 26% needed tracheostomy. Ventilator dependence was for 3 days (2–127), total duration of ICU stay was 4 days (1–118), and hospital stay was 18 days (1–127). Outcome-wise 66% patients were extubated, 16% were discharged with tracheostomy tube (TT) in situ and weaned off to room air, and 18% patients died. ASIA-A patients (30% of total) were in ICU for 8 days (3–118) and in hospital for 21.7 days (3–127), ventilator dependence was for 15 days (3–127), 21 extubated, 47.3% died, and 31.7% patients were discharged with TT in situ. ASIA-B patients (8%) were in ICU for 19.5 days (9–22), in hospital for 39 days (19–60), ventilator dependent for 27 days (2–57), 25% could be extubated, 25% discharged with TT in situ, and 50% died. ASIA-C, D, and E patients (62%) were in ICU for 3 days (1–14), and in hospital for 15 days (4–45), ventilator dependence was for 2 days (2–15), 93.5% were extubated, and 6.5% were discharged with TT in situ.

**Conclusion:** Traumatic CSIs have extensive respiratory morbidity correlating with the ASIA grade, which culminates in prolonged ICU and hospital stay and tremendous financial burden on the individual and society.

#### A0031 A Case of Anti-NMDA Receptor-Positive Autoimmune Encephalitis: Diagnostic Challenges and Treatment Hurdles

**Subhajit Guha,<sup>1</sup> Ayan Bannerjee,<sup>1</sup> Bibhukalyani Das,<sup>2</sup> Indranil Ghosh,<sup>1</sup> Dimple Shah<sup>1</sup>**

<sup>1</sup>Department of Neuro-critical care, Institute of Neurosciences, Kolkata, West Bengal, India

<sup>2</sup>AMRI (Salt Lake) Hospital, Kolkata, West Bengal, India

**Background:** Anti-NMDA receptor encephalitis is a relatively newly identified and potentially treatable cause of psychiatric symptoms in both adults and children. We present a case of autoimmune encephalitis admitted in our intensive care unit (ICU).

**Case Description:** A female patient with past history of ovarian cystectomy was admitted with signs of meningo-encephalitis and generalized rash. All investigations including CSF and MRI were normal. Autoimmune encephalitis panel was strongly positive for anti-NMDA ab/anti-glutamate ab. Reports of her sepsis panel were normal.

She received sequential dosage of methyl-prednisolone and immunoglobulin. She was tracheotomized and put on multiple antiepileptics for focal seizure. Tetrabenazine and Botox injection were tried for her perioral dyskinesia. Injection rituximab was administered due to unresponsiveness to immunoglobulin. After 1 month of treatment, she could be mobilized in a neurologically stable condition. However, after few days, she succumbed to massive pulmonary embolism.

**Conclusions:** Antibody-mediated encephalitis constitutes a group of inflammatory brain diseases that are characterized by prominent neuropsychiatric symptoms and are associated with antibodies against neuronal cell-surface proteins, ion channels, or receptors. Paraneoplastic immune-mediated encephalopathy is a newly described disease. Although there is no compelling evidence to suggest the superiority of any specific regimen, corticosteroids are frequently the first choice, followed by intravenous immunoglobulin and plasma exchange. Anti-NMDA receptor encephalitis is easily diagnosed using a blood or CSF test. There are wide range of presenting symptoms and signs (neurological and psychiatry). Early identification and treatment may have serious prognostic implications. Delay to treatment with immunosuppressive therapy probably results in worsened outcomes.

#### A0032 Anesthesia for Awake Craniotomy: SGPGIMS Experience

**Dona Saha,<sup>1</sup> Devendra Gupta,<sup>1</sup> Rudrashish Haldar,<sup>1</sup> Ruchi Verma,<sup>1</sup> Shashi Srivastava<sup>1</sup>**

<sup>1</sup>Department of Anaesthesia and critical care, SGPGIMS, Lucknow, Uttar Pradesh, India

**Background:** Awake-craniotomy is a special technique employed to limit the chances of iatrogenic

neurological deficits during tumor resection in eloquent brain regions. It has been linked with more radical resections to prolong survival in patients harboring brain tumors. We share the experience of awake-craniotomy at our center over the past 5 years.

**Materials and Methods:** It was a retrospective study from 2014 to 2018. We standardized the procedure (for patient selection, communication, theater preparation) and analyzed the demographics, tumor site and clinical symptomatology of the selected patients, anesthetic agents used, and intraoperative and postoperative complications. Results were analyzed using SPSS software.

**Results:** A total of 30 patients underwent awake-craniotomy during this period. Majority of the patients were males ( $n = 25$ ), literate ( $n = 24$ ) belonging to middle socioeconomic status ( $n = 22$ ). The mean age of patients was  $38 \pm 11.6$  years with an average weight of 61 kg. Frontal lobe tumors ( $n = 16$ ) were most commonly encountered without any side predilection. Patients mostly presented with convulsions ( $n = 17$ ). Average duration of anesthesia and surgery were 5.8 hours and 4.8 hours, respectively, with a mean awakening duration of  $37 \pm 7.7$  minutes. Dexmedetomidine plus fentanyl ( $n = 24$ ) was the preferred anesthetic agent along with scalp block. Incidence of intraoperative complications were low; however, postoperative transient neurological deficit was seen in 26.7% of patients ( $n = 8$ ).

**Conclusions:** Anesthesia for awake-craniotomy is challenging and anesthesiologists play a pivotal role. With careful patient selection it is well tolerated by them. Planning, coordination, and teamwork are essential for success.

#### **A0033 Use of Dexmedetomidine in Anesthetic Management of a Pregnant Patient with Posterior Fossa Tumor Posted for Ventriculoperitoneal Shunt**

**Roshan Andleeb,<sup>1</sup> Priyanka Gupta<sup>1</sup>**

<sup>1</sup>Department of Anaesthesiology, All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India

**Background:** Neurosurgery during pregnancy is considered a challenge for anesthesiologists due to fetomaternal effects of anesthetic agents. TIVA with adjunct like dexmedetomidine provides optimal condition for neurosurgery, decreases anesthetic requirement, and provides smooth recovery when used in nonpregnant patients although there is limited literature on its use in obstetric patients for neurosurgery.

**Case Description:** A 28-year-old multigravida with posterior fossa tumor was posted for immediate ventriculoperitoneal shunting at 27th week of gestation. CNS examination revealed no deficit except for drunken gait and past pointing. USG showed 29 weeks active single live fetus. Patient was shifted to OR and standard monitors were attached. Pre-induction patient's vitals and fetal activity were normal. Tocardiography revealed fetal heart rate of 120 breaths/min. Before induction, loading dose of dexmedetomidine ( $1 \mu\text{g}/\text{kg}$ )  $50 \mu\text{g}$  followed by maintenance dose at  $25 \mu\text{g}/\text{h}$  ( $0.5 \mu\text{g}/\text{kg}/\text{h}$ ) was started. After preoxygenation, RSI was performed by giving inj. fentanyl  $100 \mu\text{g}$ , inj. propofol

$70 \text{ mg}$ , and inj. rocuronium  $60 \text{ mg}$ , and intubation was done. Anesthesia was maintained with 50% oxygen-air mixture, propofol infusion at  $27 \mu\text{g}/\text{kg}/\text{min}$ , and inj. vecuronium  $1 \text{ mg}$  bolus as required.

During surgery, maternal hemodynamics were stable. Continuous intraoperative monitoring of fetal activity was done using Doppler. Fetal heart rate varied between 114 and 125 beats/min. Twenty minutes before the completion of surgery, all infusions were stopped and patient was extubated. In postoperative period, fetal activity was confirmed with USG by the obstetrician.

**Conclusions:** Our case report shows that dexmedetomidine can be used as an adjunct to TIVA for optimal operative condition in neurosurgical procedures with smooth recovery in parturient without any adverse effect on fetomaternal hemodynamics.

#### **A0034 Chin Necrosis during Prone Positioning as a Consequence of Transcranial Motor Evoked Potential Monitoring in Spine Surgery: A Case Report**

**Sunita Doley,<sup>1</sup> Priyanka Gupta,<sup>1</sup> Amiya K. Barik<sup>1</sup>**

<sup>1</sup>Department of Anaesthesiology, All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India

**Background:** Prone position is commonly used for surgeries of spine, posterior cranial fossa, retroperitoneal structures, gluteal region, and lower limbs. Incidence of iatrogenic neurological injuries is 23.8 to 65.4% for intramedullary spinal cord tumor resection without evoked potential monitoring. Transcranial motor evoked potential (TcMEP) monitoring is an important tool for intraoperative neurophysiological monitoring of corticospinal tract function during surgery.

**Case Description:** After taking written informed consent, a case of 40-year-old male, ASA I patient with D5–D7 intramedullary spinal cord tumor was posted for D5–D7 laminectomy and tumor excision. General anesthesia (GA) was induced, and after prone positioning was done with body supported on gel bolsters and head-on-head rest. Intraoperative TcMEP and SSEP monitoring was done, anesthesia was maintained with TIVA of propofol ( $100\text{--}200 \mu\text{g}/\text{kg}/\text{min}$ ) and intermittent IV fentanyl. No neuromuscular blocker was used except during intubation. After completion of surgery, patient was turned supine. Redness, swelling, and paresthesia were found over the left side of the chin. All other neurological examinations were within normal limits. On postoperative day 1, the patch became black and necrotic. Intravenous dexamethasone  $4 \text{ mg}$  every 8 hours and oral chymotrypsin were given, and hydroheal ointment was applied locally. The patient was followed up, necrosis healed with scar formation after 2 months.

**Conclusions:** Prolonged surgeries in prone position need meticulous planning of patient positioning. Intermittent careful survey of positioning is important to prevent pressure-related complications, especially when TcMEP monitoring is used. Maintenance of proper hemodynamics, metabolic status, and good coordination with surgeons help avoid position-related complications.