pressure at T30. Secondary outcome measures are peak airway pressure, cardiac index, Cdyn, PaO_2/FiO_2 ratio.

Results: Compared with VCV, PCV resulted in significant increase in mean airway pressure at T0 (7. 15.[1.34] vs. 5.87 [0.99]); at T30 (7.92 [1.97] vs. 6.47 [0.64]) and at Teos (7.96 [1.61] vs. 6.6 [0.91], $p = 0.03$) with significant decrease in peak airway pressure and no significant change in cardiac index. Other respiratory, oxygenation, and hemodynamic parameters were similar.

Conclusion: Pressure-controlled mode in prone position on bolsters provides higher mean airway pressure with no difference in cardiac output in comparison to volume-controlled mode.

Keywords: pressure-controlled ventilation, volume-controlled ventilation, spine surgery

References

1. Jo YY, Kim JY, Kwak YL, Kim YB, Kwak HJ. The effect of pressure-controlled ventilation on pulmonary mechanics in the prone position during posterior lumbar spine surgery: a comparison with volume-controlled ventilation. J Neurosurg Anesthesiol 2012;24(1):14–18
2. Schonauer C, Bocchetti A, Barbagallo G, Albanese V, Moraci A. Positioning on surgical table. Eur Spine J 2004;13(Suppl 1): S50–S55

A054 Hypoventilation in a Patient with Cervicovertebral Anomaly during Sedation for MRI

Smita Vimala[1]

[1]*Division of Neuroanesthesia, Department of Anesthesia, SCTIMST, Thiruvananthapuram, Kerala, India*

Introduction: Sedation for magnetic resonance imaging (MRI) in a patient with cervicovertebral anomaly can be challenging. We report a case where a patient with a craniovertebral junction anomaly was sedated for MRI and developed hypoventilation

Methodology/Description: A 42-year-old lady was diagnosed to have occipitalization of atlas with atlantoaxial subluxation, treated surgically with posterior occipital cervical fusion and skull traction at 16 years of age. She had improvement in upper and lower limb movement after surgery. A repeat MRI showed occipitalization of atlas with basilar invagination and severe compression of cervical cord. She currently presented with worsening of right upper limb weakness and gait instability due to sensory ataxia and was posted for an MRI. She refused MRI due to claustrophobia, hence was referred to us for MRI under sedation. Airway examination revealed a short neck with limited neck mobility with a breath holding time of more than 15 seconds. Echocardiographic study revealed a mild pulmonary stenosis but no regional wall motion abnormality. In view of the possibility of long term ventilation in case of intubation, we decided to sedate the patient with propofol. Toward the end of the bolus infusion, we noticed that the patient started hypoventilating with desaturation. This was managed by assisting the ventilation with 100% O_2, decreasing the propofol infusion rate, adding low-dose ketamine to the infusion. And the MRI proceeded without any mishaps.

Conclusion: Addition of ketamine to propofol resulted in less incidence of hypoventilation than use of propofol alone for deep sedation.

Keywords: hypoventilation, propofol, sedation

References

1. De Oliveira GS Jr, Fitzgerald PC, Hansen N, Ahmad S, McCarthy RJ. The effect of ketamine on hypoventilation during deep sedation with midazolam and propofol: a randomised, double-blind, placebo-controlled trial. Eur J Anaesthesiol 2014;31(12):654–662
2. Taylor DM, Bell A, Holdgate A, et al. Risk factors for sedation-related events during procedural sedation in the emergency department. Emerg Med Australas 2011;23(4):466–473

A055 Anesthetic Management of Bilateral Middle Cerebral Artery Aneurysm Clipping in a Case of Hypertrophic Obstructive Cardiomyopathy

Shalaka Nellore,[1] Hemangi Karnik,[1] Kamalesh Gotiwale,[1] Anila Malde[1]

[1]*Department of Anaesthesiology, Lokmanya Tilak Municipal Medical College and General Hospital, Mumbai, Maharashtra, India*

Introduction: Hypertrophic obstructive cardiomyopathy (HOCM) is associated with sudden unexpected death due to acute left ventricular outflow tract (LVOT) obstruction or cardiac dysrhythmia. To our knowledge, there is no published report of case of coexisting HOCM and intracranial aneurysm. We describe successful anesthetic management of bilateral MCA aneurysm clipping in patient with HOCM diagnosed preoperatively.

Methodology/Description: A 44-year-oldmalepatient complained of headache, vomiting, convulsions, loss of consciousness, weakness in left upper and lower limbs, slurred speech, and deviation of mouth to right side for 7 days. He had history of dyspnea grade II for 6 months. On examination, he was conscious, Glasgow Coma Scale-15 (GCS-15), with right facial palsy and power 4/5 on left-sided limbs. He was hypertensive, had cardiomegaly, ST-T changes on electrocardiogram, and diastolic dysfunction with normal systolic function on 2D ECHO. Resting LVOT gradient was 52 mm Hg. Difficult intubation was anticipated due to reduced mouth opening. CT angiography showed ruptured right MCA aneurysm (4.6 mm) and left unruptured MCA aneurysm (4.4 mm). The patient was anesthetized with midazolam, fentanyl 2 µg/kg, and etomidate 0.2 mg/kg. Esmolol was used to attenuate pressor response. Intubation was guided with bougie. Anesthesia was maintained on $O_2 + N_2O$ + isoflurane (MAC < 1.0), propofol, and PNS-guided vecuronium infusion. Fentanyl and local infiltration were given for analgesia. Invasive BP, HR, CVP, PPV, temperature, and end-tidalCO_2 were monitored. Burst suppression with thiopentone was used during temporary occlusion. Patient remained hemodynamically stable and was extubated on table.

Conclusion: Co-existing HOCM and aneurysm warrant vigilance to avoid factors increasing LVOT obstruction and to maintain the cerebral perfusion pressure.

Keywords: intracranial aneurysms, hypertrophic obstructive cardiomyopathy, LVOT

References

1. Sahoo RK, Dash SK, Raut PS, Badole UR, Upasani CB. Perioperative anesthetic management of patients with hypertrophic cardiomyopathy for noncardiac surgery: a case series. Ann Card Anaesth 2010;13(3):253–256
2. Kundra S, Mahendru V, Gupta V, Choudhary AK. Principles of neuroanesthesia in aneurysmal subarachnoid hemorrhage. J Anaesthesiol Clin Pharmacol 2014;30(3):328–337

A056 Postoperative Sialadenitis: A Rare Complication of Park Bench Positioning for Neurosurgery

Dona Saha,[1] Rudrashish Haldar,[1] Sashi Srivastava,[1] Devendra Gupta,[1] Anil Agarwal[1]

[1]*Department of Anaesthesiology, S.G.P.G.I.M.S., Lucknow, Uttar Pradesh, India*

Introduction: Neurosurgical procedures require specific and often unique positions to maximize anatomical exposure. Prolonged surgeries demand maintenance of these positions for long durations. Retrosigmoid–suboccipital craniotomy for cerebellopontine angle tumor is one such technique which requires placing the patient in Park Bench position. Various complications are attributed to this position.[1] A rare and serious complication is postoperative submandibular sialadenitis along with diffuse soft tissue swelling of the neck occurring following extreme degrees of head positioning.[2] This can cause severe respiratory distress postoperatively.

Methodology/Description: We report a case report of a 42-year-old, ASA-I, male patient diagnosed with right vestibular schwannoma, posted for retrosigmoid–suboccipital craniotomy and excision in a right Park Bench position. The surgery lasted for 8 hours and patient was extubated at the end of surgery uneventfully. After 4 hours, he started developing acute left sided hemi-facial swelling which was diagnosed as acute submandibular sialadenitis with diffuse soft tissue swelling of the same sided oropharyngeal mucosa. The patient consequently developed respiratory distress and stridor, requiring reintubation. The swelling gradually diminished and he could be extubated on the second postoperative day. Complete resolution took approximately 5 days with conservative treatment. Multitude of etiological factors, attributed to this occurrence, and the various remedial measures have been discussed.

Conclusion: Acute postoperative sialadenitis is a rare complication after Park Bench positioning in neurosurgery. Although it has a good prognosis with conservative management, utmost vigilance is required for possible development of respiratory compromise. Meticulous attention to preoperative oral hygiene and intraoperative positioning probably can prevent its development.

Keywords: sialadenitis, patient positioning, neurosurgery, craniotomy

References

1. Shimizu S, Sato K, Mabuchi I, et al. Brachial plexopathy due to massive swelling of the neck associated with craniotomy in the park bench position. Surg Neurol 2009;71(4):504–508; discussion 508–509
2. Lahkar D, Kedia R. Acute post operative unilateral submandibular gland swelling following acoustic schwannoma excision under general anesthesia. J Neurol Stroke 2016;5(3):00175

A057 Anesthesia Management of Clival Chordoma with Cervical Body Erosion and Brain Stem Compression

Pratima Kothare[1]

[1]*Department of Anaesthesiology, Bombay Hospital, Mumbai, Maharashtra, India*

Introduction: Chordomas are slow growing tumors arising from vestigial notochordal cells. Upto 25% occur at base of skull arising from clivus involving the cerebrovertebral junction (CVJ)

Methodology/Description: A 28-year-old woman, operated case of clival chordoma, presented 2 years later with tingling in both upper and lower limbs, imbalance while walking, and occasional headaches. On examination, assessment of airway was normal, X-ray of cervical spine showed erosion of C2 body, and MRI of brain showed erosion of clivus, extending in the posterior fossa with severe compression of brain stem. Surgical plan was in two stages. Posterior occipito cervical fusion followed by endoscopic endonasal skull base (EENSBS) approach for the excision of chordoma. Anesthesia plan: Awake fiberoptic intubation, with the management of anesthesia suitable for endoscopic skull base surgeries. She was further operated for cerebrospinal fluid (CSF) leak repair and tracheostomy in view of long-standing ventilation. She was discharged with no neurologic sequelae after 21 days.

Conclusion: Plan intubation extubation strategy. Anticipate difficult intubation. Use cervical collar and awake fiberoptic intubation for minimal disturbance at C V junction. Understand the location of tumor, its proximity to vessels and brain stem and be prepared for delayed recovery and ventilator dependency. EENSBS demands lax brain strategies and optimal mean blood pressures. Cater anesthesia for lower cranial nerves neuromonitoring.

Keywords: clival chordoma with cervical body erosion, brain stem compression, occipitocervical fixation, endoscopic endonasal skull base surgery

References

1. Stippler M, Gardner PA, Snyderman CH, Carrau RL, Prevedello DM, Kassam AB. Endoscopic endonasal approach for clival chordomas. Neurosurgery 2009;64(2):268–277; discussion 277–278