Our aim is to compare the efficacy and safety profile of drugs escitalopram and alprazolam as preoperative medication.

Methodology/Description: Forty patients aged between18 and 60, scheduled for elective craniotomy surgery were included in this comparative study. Patients were randomly allocated into two groups of 20 each. Patients received tab. 5 mg escitalopram in Group E and tab. 0.5 mg alprazolam in Group A orally, 8 hours and 2 hours prior to surgery. Assessment of efficacy variables: anxiety, hemodynamic variables, sedation, postoperative pain, and anterograde amnesia. Anxiety was assessed using Amsterdam Preoperative Anxiety and Information Scale (APAIS). Pain was assessed using Visual Analog Scale (VAS).

Results: It was found that there was a significant difference in mean anxiety levels pre- and postoperative periods in both groups. Immediately before taking to operation theater, that is, 2 hours after drug administration, 5 patients in Group E were more anxious as compared with nine patients in Group A. Patients in Group E were more sedated in the postoperative period with better anterograde amnesia. There was no significant difference in pain scores in both the groups.

Conclusion: The inference drawn by the present study is that orally administered escitalopram produced superior anxiolysis, sedation, and anterograde amnesia compared with orally administered alprazolam.

Keywords: alprazolam, escitalopram, anterograde amnesia

References

1. Baldwin DS, Reines EH, Guiton C, Weiller E. Escitalopram therapy for major depression and anxiety disorders. Ann Pharmacother 2007;41(10):1583–1592
2. Choi JC, Park SK, Kim SY, et al. Oral alprazolam attenuates preoperative stress responses to regional anesthesia. Korean J Anesthesiol 2007;52:132–137

A052 Anesthetic Techniques for Awake Craniotomy: A Retrospective Review

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Introduction: Awake craniotomy facilitates excision of brain tumors near the eloquent area and requires an awake, cooperative patient. Aim was to review the management for the awake craniotomy patients, perioperative complications, and compare the hemodynamics, neurological monitoring, and complications observed with intravenous infusions, that is, propofol and dexmedetomidine.

Methodology/Description: We retrospectively reviewed the charts of 51 patients who underwent awake craniotomy for tumor excision over past 6 years. Anesthesia management mainly the IV drug infusions and scalp block techniques, perioperative complications, and postoperative course was noted.

Results: Anesthesia was by propofol and dexmedetomidine infusion with scalp block. Hemodynamics were maintained better with dexmedetomidine infusion; only one had severe bradycardia which resolved with atropine. Propofol-induced desaturation was seen transiently in one patient for which jaw thrust was sufficient. Scalp block was either with bupivacaine 0.25% or inj. ropivacaine 0.2%.None of the patients required the conversion to general anesthesia. Brain bulge was seen only in one patient for which mannitol was administered. Three (5.8%) patients had intraoperative seizures with less incidence in propofol. Forty-two patients had positive localization on cortical stimulation, 23.5% had motor deficits, and 5.8% had aphasia intraoperatively. In one patient, there was propofol-induced neurological deficit which disappeared after stopping the infusion.

Conclusion: MAC with fentanyl, propofol, and dexmedetomidine is the technique of choice in our institute. Patients receiving dexmedetomidine had better hemodynamics but higher incidence of seizures. Propofol can help in the unmasking of the neurological deficits. Mapping of motor and language areas can alert the surgeon for proximity to the eloquent cortex and hence aid in careful tumor resection.

Keywords: awake craniotomy, propofol, hemodynamics

References

1. Sinha PK, Koshy T, Gayatri P, Smitha V, Abraham M, Rathod RC. Anesthesia for awake craniotomy: a retrospective study. Neurol India 2007;55(4):376–381
2. Chacko AG, Thomas SG, Babu KS, et al. Awake craniotomy and electrophysiological mapping for eloquent area tumours. Clin Neurol Neurosurg 2013;115(3):329–334

A053 Comparison of Pressure-Controlled with Volume Controlled-Ventilation in Prone Position in Spine Surgery Patients

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Introduction: Pressure-controlled ventilation (PCV) in comparison to volume-controlled ventilation (VCV) in prone position has shown improvement in lung mechanics in a few studies using frames. However, the effect of ventilation modes on airway pressures and cardiac output in prone position on bolsters which is commonly used in various centers to perform dorsolumbar spine surgery has not been studied. We thus aimed to compare the effect of PCV versus VCV in prone position on lung mechanics, oxygenation, and hemodynamics.

Methodology/Description: Sixty ASA grade I and II patients between age 18 and 65 years, BMI < 30 kg/m^2 scheduled for lower dorsal, or lumbar spine surgery in prone position on chest rolls were allocated to receive mechanical ventilation using either PCV (n = 30) or VCV (n = 30) mode. We measured these variables 15 minutes after induction (T0), 30 minutes after prone position (T30), and at the end of surgery (Teos). Primary outcome variable was mean airway

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

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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

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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.