

$p = 0.000$) and C1-C2 level (3.95 ± 7.51 vs. 7.53 ± 9.1 degrees, $p = 0.003$).

Conclusion: The use of ILMA-guided flexible bronchoscopic intubation is associated with significantly reduced craniocervical and upper cervical spine movement when compared with intubation aided by video laryngoscopy.

Keywords: flexible bronchoscopy-guided technique, video laryngoscopy-guided intubation, ILMA

References

1. Sawin PD, Todd MM, Traynelis VC, et al. Cervical spine motion with direct laryngoscopy and orotracheal intubation. An in vivo cinefluoroscopic study of subjects without cervical abnormality. *Anesthesiology* 1996;85(1):26-36
2. Turkstra TP, Craen RA, Pelz DM, Gelb AW. Cervical spine motion: a fluoroscopic comparison during intubation with lighted stylet, GlideScope, and Macintosh laryngoscope. *Anesth Analg* 2005;101(3):910-915

A023 A Case of Large Frontal Lobe Meningioma Complicated by Massive Intraoperative Hemorrhage

Harvleen K. Bhathal,¹ Mary Samuel¹

¹Department of Anesthesia, Dr. D. Y. Patil Medical College, Hospital and Research Center, Pimpri-Pune, Maharashtra, India

Introduction: A 65-year-old female patient complained of swelling over left side of forehead and scalp for 1 year and protrusion of eyeball since 6 months. She was diagnosed as meningioma in left frontal lobe, with mass effect and midline shift. Meningioma forms on the meninges, often slow growing; 90% are benign. They occur more in women than in men.

Methodology/Description: The swelling increased over 6 months, causing proptosis, ptosis, and squint of left eye. She developed headache and nausea (1 month). There was altered sensorium, irrelevant speech, and slow mentation for 2 weeks. Glasgow Coma Scale (GCS)—14/15 (E₄ V₄ M₆). She was preoxygenated and was premedicated. Induction—inj. thiopentone 250 mg, inj. rocuronium 40 mg. Intubated with flexometallic tube. Maintained on O₂ + N₂O (1:1) and sevoflurane (1-2%) using controlled ventilation on closed circuit volume control mode. Muscle relaxation bolus doses of inj. rocuronium 1 mg (for both surgeries). After first surgery, she was shifted to surgical intensive care unit (SICU), intubated in view of major blood loss, for 3 days on inotropes. Thereafter, she was weaned off ventilator, put on T-piece, and taken for external carotid artery ligation and excision of tumor (second surgery). At the end of second surgery, patient was reversed. She was obeying commands, eye opening was present, and tone and reflexes were normal. She was extubated on table. Phonation was present. Vitals were stable. Patient was shifted to SICU for observation. After 5 days in SICU, she was shifted to the general ward.

Conclusion: Meningioma is highly vascular brain neoplasms, associated with blood loss during resection. The anesthetic and perioperative care requires an understanding of pathophysiology of the tumor, effect of anesthetics, fluid therapy, and hemodynamics.

Keywords: meningioma, thiopentone, vascular

References

1. Hussain T, Shafat M, Bhat JA. Frontal lobe meningioma masquerading as depressive disorder. *J Psychiatr* 2015;18:328
2. Goma H. Anesthetic considerations of brain tumor surgery, diagnostic techniques and surgical management of brain tumors. Abujamra AL, ed. *InTech*; 2011: 366-384

A024 Intraoperative Hyperthermia: A Harbinger of Hypothalamic Injury?

C. S. Ranganatha Praveen,¹ Ajay P. Hrishy,¹ Karen R. Lionel¹

¹Division of Neuroanaesthesia, Department of Anaesthesia, Sree Chitra Tirunal Institute For Medical Science and Technology (SCTIMST), Trivandrum, Kerala, India

Introduction: Intraoperative hyperthermia portends some of the most dreaded anesthetic emergencies such as malignant hyperthermia, septicemia, neuroleptic malignant syndrome, thyroid storm, and transfusion reactions. However, hypothalamic injury as a central cause of fever should also be considered.

Methodology/Description: A 5-year-old boy with bifrontal headache, double vision, $7.6 \times 7.0 \times 5.2$ cm lesion in suprasellar brain (craniopharyngioma) on MRI with normal preoperative blood and hormone analysis underwent transcranial tumor excision under standard anesthesia care and monitoring. During surgical manipulation of base of tumor, sudden malignant rise of temperature from 36.2 to 39.4°C over 20 minutes and 41°C subsequently with tachycardia and hypertension was seen. All attempts including sevoflurane switchoff (from 0.8 MAC), cooling, intravenous paracetamol, and cold saline were in vain. Normal ABG, potassium, end-tidal CO₂ with serum sodium 150 mEq/L, urine output 25 mL/kg/h (from 2 mL/kg/h), increased serum osmolarity, decreased urine specific gravity pointed toward diabetes insipidus, which was managed with appropriate fluids. The child was extubated in ICU 4 hours after surgery with temperature 38°C and tachycardia and was discharged on seventh postoperative day on intranasal desmopressin. Normal ABG, CPK, thyroid profile, TLC, absent blood transfusion rule out other causes and correlation of hyperthermia to timing of surgery, and diabetes insipidus persisting after pharmacological therapy indicates hypothalamic injury as culprit due to altered control of homeostasis and temperature.

Conclusion: Intraoperative hyperthermia serves as harbinger of hypothalamic injury in suprasellar surgery, which should alert anesthetists regarding other associated ominous problems, such as autonomic dysfunction and diabetes insipidus, which needs urgent attention.

Keywords: intraoperative hyperthermia, hypothalamic injury, diabetes insipidus

References

1. Simon HB. Hyperthermia. *N Engl J Med* 1993;329(7):483-487
2. Herlich A. Perioperative temperature elevation: not all hyperthermia is malignant hyperthermia. *Paediatr Anaesth* 2013; 23(9):842-850