2. Kristiansson H, Nissborg E, Bartek J Jr, Andresen M, Reinstrup P, Romner B. Measuring elevated intracranial pressure through noninvasive methods: a review of the literature. J Neurosurg Anesthesiol 2013;25(4):372–385

A016 O-C1-C2 Dynamics during Flexible Fiberoptic Bronchoscopy and Video Laryngoscopy in Patients with Atlantoaxial Dislocation: A Preliminary Analysis

Sanket A. Agrawal,[1] Hemant Bhagat,[1] Nidhi Panda,[1] Kiran Jangra,[1] Pravin Salunke,[1] Shailesh Gupta,[1] Vivek Gupta[1]
[1]*Department of Anaesthesia and Intensive Care, Post Graduate Institute of Medical Education and Research, Chandigarh, Chandigarh, India*

Introduction: Until now fiberoptic bronchoscopy (FOB) is considered the gold standard for securing airway in atlantoaxial dislocation (AAD). Our aim is to compare the inter-relationship and dynamic change of bony landmark associated with FOB when compared with videolaryngoscopy (VL), which could be suggestive of possible worsening/improving cervical spinal canal diameter in patients with AAD.

Methodology/Description: After approval from Institutional Ethics Committee prospective, randomized, clinical trial was conducted in 49 patients, aged 12 to 65 years from April 2017 to September 2017. Patients were randomized for intubation with either VL or FOB and process was continuously recorded cinefluroscopically. The data were analyzed to calculate following distances:

Distance D1 = atlantodental interval (ADI)

Distance D2 = vertical (v), horizontal (h), and diagonal (d) distance between inferioposterior point on posterior atlas arch and superioanterior point at C2 spinolaminar junction.

Results: We analyzed 49 patients (26 in FOB, 23 in VL). ADI was calculated in 10/26 FOB group and 19/23 VL group. ADI was significantly reduced in VL group (84.20%) compared with FOB group (40%) with statistically significant *p* value of 0.032. The vertical (V), horizontal (H), and diagonal (D) distances were calculated in 25/26 FOB group and 22/23 VL group. We did not find any statistically significant difference in V, H, and D distances. None of the patients developed fresh neurologic deficit at 6 hour postoperatively and at discharge.

Conclusion: We conclude that VL is comparable to FOB in respect to dynamic changes of bony landmarks in patients with AAD and appears to be a good alternative technique to FOB for endotracheal intubation with advantage of improving spinal canal diameter.

Keywords: AAD, FOB, VL

References

1. Greenberg AD. Atlanto-axial dislocations. Brain 1968;91(4):655–684
2. Swain A, Sahu S, Swain BP. Cervical spine movement during intubation. J Neuroanaesth Crit Care 2017;4(Suppl S1): 76–80

A017 Perioperative Management of Pituitary Macroadenoma for Transcranial Resection

Amruta A. Ajgaonkar,[1] Vijay Shetty,[1] Hemalata Iyer[1]
[1]*Department of Anaesthesia, Fortis Hospital, Mulund, Maharashtra, India*

Introduction: Pituitary surgery presents challenges to anesthesiologists due to anatomic location and physiological function. Postoperative disorders of fluid and electrolyte balance are very common, requiring prompt diagnosis and treatment.

Methodology/Description: A 42-year-old obese, known diabetic man with subnormal mental development presented with headache for 6 months with fever. Examination revealed sparse facial hair, gynecomastia, and visual disturbances. MRI showed pituitary macroadenoma encasing bilateral cavernous internal carotid artery with mild hydrocephalus. Blood investigation showed hyperprolactinemia with hypothyroidism. After failure of medical management with cabergoline 0.5 mg twice a week, transcranial resection was planned. Anesthetic concerns were anticipated difficult airway, positioning, hemodynamic instability, and hormonal disturbances. Videolaryngoscope was used to secure airway. Balanced anesthesia technique with insulin infusion, anticonvulsants, and steroids was used for maintenance. Surgery lasted 7 hours with blood loss of 800 mL. Patient was extubated and monitored in ICU. On postoperative day 7, patient was put on ventilator due to decreased mentation. Patient had high urine output with hyponatremia, hypovolemia, natriuresis, low serum osmolality, and high urine osmolality, pointing toward diagnosis of cerebral salt wasting. Clinical condition improved with 3% sodium chloride at 10mL/hour and intravenous fluids. Patient was extubated on day 13 and discharged home on day 18.

Conclusion: Postoperative polyuria can be challenging due to life-threatening hyponatremia. Fluid and electrolyte balance is very important. Good knowledge, planning, preparation, and teamwork are fundamental to successful perioperative patient care.

Keywords: polyuria, pituitary surgery, macroadenoma

References

1. Abraham M. Perioperative management of patients with pituitary tumours. J Neuroanaesth Crit Care 2016;3:211–218
2. Smith M, Hirsch NP. Pituitary disease and anaesthesia. Br J Anaesth 2000;85(1):3–14

A018 Ictal Bradycardia: A Missed Etiology for Intraoperative Bradycardia

Nibedita Sahoo,[1] P. Unnikrishnan,[1] Smita Vimala,[1] Ajay P. Hrishi[1]
[1]*Department of Neuroanaesthesia, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India*

Introduction: Intraoperative bradycardia and asystole are the most dreaded anesthetic emergencies. We report a