A027 Comparison of Airtraq and Fiberoptic-Guided Intubation in the Presence of Rigid Cervical Collar Simulating Cervical Immobilization in Cervical Spine Surgery

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Introduction: Fiberopticbronchoscopy (FOB)-guided tracheal intubation remains the gold standard for the management of difficult airway, but its use may be limited by availability, lack of expertise, and additional time for bronchoscopy. Airtraq videolaryngoscope provides view of glottis without aligning oral, pharyngeal, and laryngeal axes.

Aim: To test whether Airtraq provides better intubating conditions over FOB.

Methodology/Description: After approval from ethics committee and written informed consent, comparative randomized intervention study was conducted. Forty-four patients were randomly assigned to receive oral intubation by Airtraq or fiberoptic. In all these patients, neck was immobilized with rigid cervical collar. We compared two airway devices for time to intubate, success rate of intubation, glottis view using Cormack and Lehane scoring system, hemodynamic changes, and postoperative complications. Patients who were obese, at risk of gastric aspiration, Mallampati class 3 or 4, thyromental distance < 6 cm, interincisor gap < 3.5 cm were excluded.

Results: Airtraq-guided intubation in simulated cervical spine injury patients required significantly shorter time for laryngoscopy (14.64 +/− 8.38 vs. 23.45 +/− 7.998) and intubation as compared with fiberoptic-guided intubation (29.95 +/− 4.61 sec vs. 38.73 +/− 11.752 sec). Both the techniques were comparable in terms of success rate of intubation, glottis view, and hemodynamics.

Conclusion: Airtraq videolaryngoscope can be successfully used as alternative to FOB in cervical spine injury patients.

Keywords: videolaryngoscope, fiberoptic-guided intubation, bronchoscopy

References

1. Durga P, Sahu BP. Neurological deterioration during intubation in cervical spine disorders. Indian J Anaesth 2014;58(6):684–692
2. Hastings RH, Delson N. Balancing the force of direct laryngoscopy with manual in-line stabilization. Anesthesiology 2009;111(5):1158–1159, author reply 1159–1160

A028 Effect of Desflurane versus Propofol on ECoG Spikes in ECoG-Guided Intractable Epilepsy Surgery: Prospective Randomized Controlled Study

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Introduction: General anesthesia, routinely used in electrocorticography (ECoG)-guided resection of epileptic foci, requires more vigilance as intermittent period of lightened anesthesia is needed to elicit good ECoG waveforms. This is novel research to evaluate the efficacy of desflurane versus propofol in low sedating dose, having least interference with ECoG waveforms and outcome.

Methodology/Description: This is a randomized controlled study conducted with ethics committee permission and informed consent. Thirty-two patients with intractable epilepsy between 7 and 65 years and good neuropsychological assessment (IQ > 70) were included. Plane of anesthesia was lightened to facilitate ECoG recording with target MAC 0.3 to 0.4 in desflurane (D) group and propofol 25 to 75 µg/kg/min in propofol (P) group with bispectral index (BIS) of 50 to 70. ECoG recording is assessed by its onset and total duration. Withdrawal criteria were intraoperative seizures or no spikes with rescue being propofol bolus.

Results: Demographic data were comparable. ECoG onset was significantly early in P group being 3.25 minutes versus 7.67 minutes in D group ($p < 0.0001$). ECoG was satisfactory in all patients in P group, while two patients in D group were withdrawn due to no spike. Average total ECoG duration was higher in D group with 17.19 minutes versus 11.88 minutes in P group ($p < 0.001$). BIS was comparable in both groups ($p > 0.05$). Mean emergence time in P group was almost double that of D group (16 min). No postoperative recall was detected in any group when assessed by modified Brice questionnaire.

Conclusion: Optimal and early ECoG recording was better elicited with propofol as compared with desflurane.

Keywords: ECoG, anesthesia, intraoperative seizures

References

1. Bindra A, Chouhan RS, Prabhakar H, Dash HH, Chandra PS, Tripathi M. Comparison of the effects of different anesthetic techniques on electrocorticography in patients undergoing epilepsy surgery - a bispectral index guided study. Seizure 2012;21(7):501–507
2. Alcaraz G, Manninen P. Intraoperative electrocorticography. J Neuroanaesth Crit Care 2017;4(1):9–12

A029 Low Flow Techniques with Desflurane for Neurosurgical Procedures: A Randomized Comparative Study

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Introduction: With the advent of modern anesthesia workstations and monitoring system, it has been possible to:

1. Detect and prevent delivery of hypoxic gas mixture to the patient under anesthesia,
2. Assess adequacy of ventilation,
3. Hemodynamic stability, and
4. Emergence characteristics, using Low flow techniques.