

A comparative study of effect of sevoflurane on intubating conditions with rocuronium in neurosurgical patients

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Background: Rocuronium may not be preferable for rapid sequence intubation due to its long intubation time compared to Succinylcholine. But, Rocuronium along with 2% Sevoflurane may produce comparable intubating time and conditions to that of Succinylcholine. This prospective, randomised, double-blind study was undertaken to compare the effect of Sevoflurane on intubation time and conditions with Rocuronium. **Materials and Methods:** 30 adult patients of ASA grade I and II of both sexes aged between 30 to 65 years undergoing neurosurgical operations were randomly allocated into 2 equal groups: one group received 0.8 mg/kg of Rocuronium and 2% Sevoflurane (Group – RS) and other received 0.8 mg/kg Rocuronium (Group – R). Onset time of intubation was assessed using Train of Four stimuli. The intubating conditions were compared by the Cooper scoring system and haemodynamic responses were compared between two groups. **Results:** The onset time of intubation was 60.4 ± 4.1 s in Group-RS and 101.73 ± 10.28 s in Group-R ($P < 0.001$), with excellent intubating conditions in both the groups and without any adverse effects. Significant differences in heart rate and mean arterial pressure were seen immediately after intubation, at 1 min, and at 3 mins ($P < 0.05$) between the two groups. **Conclusion:** Rocuronium with 2% Sevoflurane provides excellent intubating time and conditions comparable to Succinylcholine.

Correlation of invasive intracranial pressure with optic nerve sheath diameter measured by ultrasonography and magnetic resonance imaging

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Background: Bedside ultrasonographic measurement of optic nerve sheath diameter (ONSD) has been proposed as a method to detect raised intracranial pressure (ICP) in various clinical settings. We aimed to evaluate the use of ultrasonography in the case of

intracranial hypertension and to find out the cut-off point which predicts ICP accurately at different levels. We also aim to correlate the ONSD obtained from MRI and sonographic ONSD with each other and the intraventricular ICP. **Materials and Methods:** A prospective double blind study was carried out by performing 360 ocular ultrasounds in 30 adult patients with features of intracranial hypertension. The ONSD was measured by MRI and USG preoperatively and by USG under anaesthesia. It was compared with the intraventricular ICP and correlations were derived. The optimum cut-off of ONSD to predict ICP ≥ 20 mm Hg was sought. **Results:** There was a significant correlation of ONSD from MRI with the sonographic ONSD ($r = 0.909$, $P = 0.000$), the ONSD by MRI with ICP ($r = 0.564$, $P = 0.001$), the preanaesthesia ONSD with ONSD under anaesthesia ($r = 0.942$, $P = 0.000$) and the sonographic ONSD with ICP ($r = 0.0532$, $P = 0.002$). An ONSD threshold of 5.5 mm predicted ICP ≥ 20 mm Hg with high sensitivity (100%) and specificity (75%) (area under ROC curve = 0.904, $P = 0.01$). **Conclusion:** Our study confirms the utility of optic nerve ultrasound in the diagnostic evaluation of patients with known or suspected intracranial hypertension. We recommend an ONSD cut-off of 5.5 mm for predicting ICP ≥ 20 mm Hg.

Retrospective analysis of anaesthesia for posterior fossa surgery in the sitting position: A three year review of our institutional practice

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Background: Sitting position for neurosurgery offers many advantages which include optimum access to midline lesions, gravitational drainage of blood and cerebrospinal fluid. It is a physiological position that allows access to airway and improved ventilation. Its disadvantages are a high incidence of venous air embolism and cardiovascular instability. We present a retrospective analysis of anaesthesia for posterior fossa surgery performed in the sitting position from January 2011- December 2013. We have assessed patient safety and reviewed perioperative complications. **Materials and Methods:** 224 patients were reviewed over a 3 year period. Preoperative assessment included a 2DECHO to rule out patent foramen ovale. Anaesthesia was induced with propofol, sevoflurane, narcotic, muscle relaxant and