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Background: Atlantoaxial dislocation (AAD) is highly unstable and usually fatal injury resulting from osseoligamentous disruption between the C1 and C2 vertebrae, it is at high risk of life-threatening neurological injury so cervical spine management is essential, manual in-line stabilisation is used to decrease cervical spine injury. The major difficulty encountered is that of airway management. Intraoperative management should focus on maintaining adequate perfusion pressure and oxygenation of spinal cord. This study is to provide an update on airway management, intraoperative haemodynamics and post-operative complications in patients of AAD. **Methodology:** After Ethics Committee approval, we retrospectively analysed 105 patients operated for AAD at Neurosurgery Department of K.E.M. Hospital, Mumbai from March 2012 to March 2015. Difficult intubations were evaluated on basis of all 3 = MPC-III or IV, sternomental distance = <12.5 cm, mouth opening = <3 fingers. AirTraq, McGrath, Macintosh, McCoy, intubating laryngeal mask airway (ILMA) were compared, intraoperative haemodynamics and post-operative complications were analysed. **Results:** After analysis of data, 38 (36.2%) patients were difficult and 67 (63.8%) were not difficult intubations. 7 (6.67%) patients were intubated with AirTraq, 2 (1.90%) McGrath, 69 (65.71%) Macintosh, 13 (12.38%) McCoy, 14 (13.33%) ILMA, respectively. Successful intubation in first attempt among total was = AirTraq 6 (85.7%), McGrath 2 (100%), Macintosh 35 (50.7%), McCoy 4 (30.8%), ILMA 7 (50%). Moreover, among difficult intubation were = AirTraq 2 (66.7%), McGrath 2 (100%), Macintosh 5 (22.7%), McCoy 0 (0%), ILMA 2 (40%). Intubation requiring more than two attempts = AirTraq 1 (33.3%), McGrath 0 (0%), Macintosh 13 (59.1%), McCoy 5 (83.3%), ILMA 1 (20%). Major blood loss (>1500 ml) was in 24 (22.86%) patients. Five patients had bradycardia and hypotension intraoperatively, 3 of them had major blood loss. Four were recurrent AAD, 3 with rheumatoid arthritis, 2 with Down's syndrome. Post-operatively, 4 patients were neurologically same and 2 were deteriorated. Post-operative mortality recorded in 5 patients, of which 3 had major blood loss and 2 were pre-operatively bad (power = 0). **Discussion:** Indirect laryngoscopy - McGrath and AirTraq were better than other intubation techniques. Major blood loss had higher incidence of post-operative ventilator support and mortality. No overall correlation between post-operative ventilatory support and neurological deterioration with intubation technique. Being retrospective, missing data are major limitation Awake fiberoptic bronchoscope was not used for intubation.

ISNACC-S-33

Effects of 20% mannitol and 3% hypertonic saline on intracranial pressure and systemic haemodynamics

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Background: Mannitol and different osmolar strengths of hypertonic saline (HTS) have been studied in patients with diverse brain pathologies for intraoperative brain relaxation. However, none of the study was carried out simultaneous measurement of intracranial pressure (ICP) and systemic haemodynamics with equiosmolar solution. **Methodology:** Forty adult patients scheduled to undergo elective craniotomy for supratentorial tumours were enrolled for a prospective, randomised, double-blinded study. After standard anaesthesia, cardiac indices were measured non-invasively using Vigileo monitor. The Codman catheter was inserted into the subdural space via first burr-hole. Patients were randomised to receive equiosmolar hypertonic solutions of either 20% mannitol (5 ml/kg) or 3% HTS (5.35 ml/kg) over a period of 15 min. The time of placement of ICP catheter was marked as T₀, and baseline ICP and systemic haemodynamic variables were noted; followed by recording every 5 min till 45 min. **Results:** Both mannitol and HTS showed significant but comparable reduction in ICP. Transient increase in sodium and chloride was seen in HTS group while decrease in sodium and chloride and increased potassium and blood lactate levels were noticed in mannitol group. Urine output was significantly higher in mannitol group. The perioperative complications, overall hospital stay and Glasgow outcome score at

Figure 1: Comparative trends of mean arterial pressure, intracranial pressure and cerebral perfusion pressure between the two groups

MAP: Mean arterial pressure, ICP: Intracranial pressure, CPP: Cerebral perfusion pressure, CPP=MAP - ICP; HS: Hypertonic saline group; M: Mannitol group. *Significant statistical difference ($P < 0.05$) in ICP values at 15 and 20 min; Fall in MAP in initial 15 min and rise in CPP after 15 min in both the groups.

discharge were comparable in between the two groups. **Conclusions:** Both mannitol and HTS had comparable effect on ICP. However, HTS was observed to be a better agent than mannitol as it maintained the systemic haemodynamics in a more acceptable way, caused less increase in blood lactate levels and prevented unnecessary increase in urine output.

ISNACC-S-34

Clinical evaluation of rocuronium in patients undergoing neurosurgeries based on body mass index

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Methods: This study was done in 111 consecutive patients undergoing neurosurgeries in Fortis hospitals, BG road, Bengaluru. These patients are divided into four groups based on body mass index (BMI), (Group I BMI <20, Group II BMI 20–25, Group III BMI 25–30 and Group IV BMI >30). All patients were induced with injection fentanyl and injection propofol, preservative-free injection xylocard. Patients received injection rocuronium bolus at 0.8 mg/kg for muscle relaxation. Anaesthesia maintained with O₂ + N₂O + sevoflurane + fentanyl. Tetralogy of fallot monitoring was performed throughout the surgery. Onset time for intubation, duration of action of bolus drug was noted. ANOVA test was applied. *Post hoc* analysis was done using Tukey honestly significant difference test. **Results:** It is observed that mean value for time for intubation decreased as the BMI increased, and $P < 0.05$ noted in Group II and Group IV. Similarly, longer duration of action was observed for bolus dose from Group I to Group IV and significance noted in Group III and Group IV ($P < 0.05$). **Conclusion:** Patients with higher BMI have shorter time for intubation and longer duration of action for bolus dose of rocuronium.

ISNACC-S-35

To compare thiopentone sodium and etomidate as induction agents during general anaesthesia in patients undergoing surgery for traumatic brain injury

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Introduction: Traumatic brain injury (TBI) is a major public health problem and leading cause of morbidity and mortality worldwide. Anaesthetic agents that produce rapid onset of hypnosis and rapid control of the airway without an increase in intracranial pressure

and providing haemodynamic stability are preferred. Sodium thiopental and etomidate are commonly used induction agents. Hence, we carried out this study to compare both these drugs with respect to haemodynamic parameters, intraocular pressure (IOP) and bispectral index (BIS) in patients undergoing surgery for TBI. **Aims and Objectives:** To assess and compare effects of induction of anaesthesia with etomidate and thiopentone sodium in TBI patients with respect to haemodynamic changes, IOP changes and BIS. **Material and Methods:** Seventy patients of either sex, belonging to American Society of Anesthesiologists I to III (age 18–60 years) posted for emergency craniotomy for TBI were included. The study population will be randomly divided into two groups of 35 patients each. (1) Group T: Patients will be induced with thiopentone 5 mg/kg. (2) Group E: Patients will be induced with etomidate 0.3 mg/kg. IOP will be measured after 1 min of induction agent administration and 5 min after orotracheal intubation. Intraoperative hypotension due to the induction agents will be managed by the use of intravenous ephedrine boluses of 3 mg. The patient will be followed up after 6 h, 24 h and 48 h and 7 days. Heart rate, systolic blood pressure, diastolic blood pressure, mean arterial blood pressure and BIS were observed and recorded pre-operatively, at the time of intubation, every 1 min for 5 min after intubation and every 5 min for next 15 min. **Results:** Haemodynamic parameters were found to be stable with etomidate than thiopentone. IOP decreased after etomidate administration. BIS was comparable in both the groups.

ISNACC-S-36

The comparative effects of 0.5 and 1.0 minimum alveolar concentration concentrations of sevoflurane and desflurane on middle cerebral artery flow parameters using transcranial Doppler in patients undergoing surgery for supratentorial tumours

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Introduction: This study was designed to assess the effect of clinically useful concentrations of sevoflurane and desflurane on cerebral blood flow parameters in patients with supratentorial mass lesions. **Methodology:** Forty patients with unilateral supratentorial tumours were randomised to two groups of 20 each - desflurane group and sevoflurane group. All patients with unilateral supratentorial tumours without any clinical features suggestive of raised intracranial pressure (ICP) in American Society of Anesthesiologists Class 1 and 2 between the age of 18 and 60 years with