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

Table 1: Comparison of desflurane and sevoflurane groups (normal side)

	Normal side		P
	Desflurane	Sevoflurane	
VMCA			
Baseline	40.8 (10.1)	42.9 (11.8)	0.548
0.5 MAC	38.0 (13.8)	38.9 (11.3)	0.820
1 MAC	37.9 (13.6)	32.8 (9.6)	0.185
THRR			
Baseline	1.32 (0.26)	1.26 (0.12)	0.367
0.5 MAC	1.25 (0.17)	1.25 (0.10)	0.980
1 MAC	1.18 (0.27)	1.21 (0.08)	0.692

VMCA: Velocity in the middle cerebral artery, MAC: Minimum alveolar concentration

Table 2: Comparison of desflurane and sevoflurane groups (tumour side)

	Tumour side		P
	Desflurane	Sevoflurane	
VMCA			
Baseline	43.3 (13.0)	47.5 (19.1)	0.425
0.5 MAC	36.8 (13.2)	39.4 (14.3)	0.554
1 MAC	36.6 (12.3)	35.7 (10.8)	0.802
THRR			
Baseline	1.16 (0.18)	1.26 (0.20)	0.125
0.5 MAC	1.20 (0.27)	1.22 (0.17)	0.742
1 MAC	1.19 (0.19)	1.18 (0.12)	0.850

VMCA: Velocity in the middle cerebral artery, MAC: Minimum alveolar concentration

pre-operative Glasgow coma scale of 15 coming for elective surgery were included in the study. After a steady state of flow velocity (FV) recording, transient hyperaemic response testing was done on both sides. The patient was intubated, and inhalational anaesthesia (sevoflurane or desflurane) was introduced. FV and THRR measurements were repeated at 0.5 and 1.0 minimum alveolar concentration (MAC) concentrations. **Results:** Comparison from baseline to 0.5 MAC and 1 MAC in each group – There was a significant decrease in mean FV (mFV) from baseline to 1.0 MAC in both groups. Comparison between tumour side and normal side – A comparison of velocity in the middle cerebral artery between the tumour side and normal side showed no significant differences at baseline, 0.5 MAC and 1 MAC in both desflurane and sevoflurane groups. The THRR showed a statistically significant reduction on the normal side of the desflurane group ($P=0.49$) but was not significantly different on the tumour side. In the sevoflurane group, THRR was not significantly different

on tumour side and normal side. **Comparison Between the Desflurane Group and Sevoflurane Group:** The middle cerebral artery mFVs and THRR were not significantly different between desflurane group and sevoflurane group. **Summary:** There were no clinically significant differences in cerebral haemodynamic effects of desflurane and sevoflurane at 0.5 MAC and 1 MAC in patients with supratentorial tumours, without features of raised ICP at normocapnia.

ISNACC-S-37

Effect of tranexamic acid on blood loss and transfusion requirements in lumbar spine fixation

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Introduction: Lumbar spine surgery in adults is associated with significant blood loss, often requiring allogeneic blood transfusion. The objective of this study was to evaluate the efficacy of tranexamic acid (TXA) in reducing perioperative blood loss and transfusion requirements in patients undergoing lumbar spine fixation. **Methodology:** Sixty adult patients were randomised to receive either a bolus of 10 mg/kg intravenous of TXA after induction followed by a maintenance infusion of 1 mg/kg/h of TXA up to closure of skin or an equivalent volume of normal saline. Outcome measures included perioperative blood loss, amount of blood transfusion, as well as post-operative haemoglobin, and haematocrit levels. The data were analysed by means of Statistical Package for Social Science version 12.0. The results were presented as mean $\pm$ standard deviation. Independent Student's *t*-test was used to compare the two groups and differences were considered statistically significant if the *P* value was <0.05 . **Results:** The mean intraoperative blood loss and the amount of blood in the drains post-operatively were less in the TXA group compared to the placebo group ($P=0.0001$). The blood transfusions received in both the groups was not statistically significant ($P=0.362$). However, clinically there was reduction of transfusion requirement in the TXA group. The drop in post-operative haemoglobin levels was statistically significant in the control group as compared to TXA group ($P=0.002$). The mean duration of surgery was less in TXA group compared to the control group ($P=0.008$). **Conclusion:** Thus, TXA is effective in reducing peri-operative blood loss and transfusion requirements. Furthermore, TXA administration was not associated with any significant complication including DVT.