

for DSA within 2 hours of onset of symptoms under general anaesthesia which revealed complete stenosis of supraclinoid ICA. Patient underwent thrombolysis. Good collaterals achieved. Patient shifted to ICU on mechanical ventilation. No neurological deficit postoperatively. **Conclusion:** Anaesthesiologists not only play an integral part of the stroke team but also in maintaining optimum haemodynamics during intervention.

#### ISNACC-S-11

**Assessment of hemodynamic and cerebrovascular changes after administration of mannitol in postoperative neurosurgical patients: A combined transthoracic echo and transcranial Doppler study**

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**Introduction:** Mannitol is commonly used in neurosurgical units to reduce intracranial pressure. It has effects on both cardiovascular and cerebral hemodynamics. The temporal sequence of cardiovascular and cerebrovascular effects of mannitol has not been studied. This study assesses the hemodynamic and cerebrovascular changes using combined transthoracic and transesophageal echo after administration of mannitol in postoperative neurosurgical patients. **Methods:** The study was approved by ethics committee. Adult patients who were admitted in neurosurgical ICUs for surgical removal of intracranial tumors were included in the study. TCD and TTE findings were recorded on day 1 and day 2 following administration of 0.5 g/kg of mannitol. Comparison was made between operated and non operated side. Appropriate statistical analysis was done to assess the effects of mannitol on cardiovascular and mean flow velocity in middle cerebral artery blood flow. **Results:** HR, MAP, SPO2 showed no change after mannitol use. Mean flow velocity increased in both operated and non operated side but more in non operated side. Pulsatility index decreased from baseline but was not statistically significant. Resistance index also did not decrease in both sides. The estimated CPP was significantly increased at 5 mins on operated side upto 15 mins post mannitol use. There was no significant change in mean flow velocity, pulsatility index and resistance index ICP on second day. The ECHO variables like left ventricular dimensions, stroke volume and cardiac output did not change significantly following mannitol infusion. **Conclusion:** Administration of 0.5 g/kg of mannitol in immediate postoperative period was associated with increase in the mean flow velocity without change in cardiovascular variables. However the cerebrovascular effects was not seen significant change from baseline on second postoperative day. Our result

may have an impact on the management of these patients in the neurocritical care.

#### ISNACC-S-12

**Persistent hypertension after posterior fossa surgery: A case series**

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**Introduction:** Association between medullary compression and hypertension in posterior fossa tumors is well known. We report two unusual cases where patients developed hypertension following posterior fossa surgery requiring high dose antihypertensives. **Case Summary:** Case 1: A 4 year old male child, operated for medulloblastoma and ventriculoperitoneal shunt three months back, was readmitted. He was treated for bacterial meningitis and shunt was revised. He later developed seizures requiring tracheal intubation. He subsequently developed hypertension (SBP 150-180 mmHg, DBP 95-110 mmHg) which could not be controlled with intravenous labetalol and sodium nitroprusside. Head and spine MRI revealed leptomeningeal tumor spread involving midbrain, pons, medulla (lateral and dorsal region) and upper cervical spine and the patient died 6 days later. Case 2: A 2 years old male child, diagnosed with medulloblastoma, was posted for tumor excision. Ventriculoperitoneal shunt surgery was performed 15 days back. Preoperative vitals were stable with no history of hypertension. In immediate postoperative period, patient developed persistent hypertension (SBP 140-160 mmHg and DBP 90-110 mmHg) which was not controlled with labetalol infusion and enalapril. Head and spine MRI revealed residual tumor with oedema involving medulla and significant portion of spine. Child later had seizures, deteriorated neurologically and succumbed to death after one month. **Conclusion:** New onset postoperative hypertension is unusual and rare following medulloblastoma excision. Probable cause is medullary compression, due to residual tumor and edema in the early postoperative period or tumor spread in the later period. It is difficult to control even with multiple antihypertensive drugs and is a poor prognostic indicator.

#### ISNACC-S-13

**Description of a novel literature search methodology and its validation against PubMed**

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**Introduction:** This article describes a novel method of searching PubMed database using Google search algorithm. Google search operators “site:,” “intext:” and- “intitle” were used in the following fashion-*Site:https://ncbi.nlm.nih.gov/PubMed intext:Keywords -intitle:PubMed Results*. A survey was conducted to establish validity of this method by comparing it with PubMed Basic search. **Methods:** Single blinded survey of residents from three medical specialities was conducted to compare PubMed Basic search and Google search methodologies, using keywords dictated by participants. First 10 articles collected from both search methods were compiled and rated by participants on a scale of 0-10. **Results:** Google search method provided significantly higher overall mean relevance scores ( $6.14 \pm 1.56$  vs.  $4.85 \pm 2.06$ ) and higher number of useful articles per participant ( $7.32 \pm 1.97$  vs.  $5.12 \pm 2.55$ ) ( $P < 0.001$ ). **Conclusion:** The novel method described herein provides more sensitive and specific search results for same keyword string than PubMed Basic search. This method could prove useful for the average researcher providing both accurate and exhaustive coverage from a single search.

#### ISNACC-S-14

**Comparison of intravenous (propofol) and inhalational (sevoflurane) anaesthetic agent on cerebral oxygenation assessed by SjVO<sub>2</sub> in patient undergoing surgery for traumatic brain injury**

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**Introduction:** Anaesthetic agents may produce deleterious effects on the compromised brain. There is lack of clinical data regarding the superiority of one anaesthetic agent over the other. The levels of serum Interleukin-6 serves as pro-inflammatory marker are increased with severity of brain injury. This study was conducted to evaluate the effects of propofol and sevoflurane on cerebral oxygenation, brain relaxation, systemic hemodynamic parameters and levels of IL-6 in patients with Traumatic brain injury. **Methods:** A prospective randomized comparative study was conducted on forty-two patients undergoing surgery for Traumatic brain injury. Patients were randomized into 2 groups, patients in Group Preceived Propofol while patients in Group S received Sevoflurane as agent for maintenance of anaesthesia. In all, anesthesia was induced with propofol, intubation was facilitated by vecurorium and analgesia was maintained with Fentanyl. Anaesthesia was maintained with propofol or sevoflurane keeping entropy 40-60. Effect of these agents on cerebral oxygenation was assessed by

jugular venous oxygen saturation (SjVO<sub>2</sub>) and various parameters derived from SjVO<sub>2</sub> and ABG values. Intra and postoperative hemodynamic changes and quality of intraoperative brain relaxation were assessed. The effect on level of serum biomarker IL-6 (a pro-inflammatory cytokine) at the end of surgery compared to baseline value. **Results:** In both the groups SjVO<sub>2</sub> values were comparable and on higher normal level. Mean arterial pressure (MAP) was found to be significantly lower in Group P compared to those in Group S ( $P < 0.05$ ). Brain relaxation score were comparable between the groups. A significant difference was found between the baseline value and value at the end of surgery in group S ( $P = 0.040$ ). **Conclusion:** Cerebral oxygenation measured by SjVO<sub>2</sub> and brain relaxation was comparable when anaesthesia was maintained with propofol or sevoflurane. Significant reduction in MAP by propofol needs attention in patients with TBI. Decrease in level of IL-6 at the end of surgery compared to baseline value may suggest neuroprotective potential of sevoflurane.

#### ISNACC-S-15

**Anaesthetic management of intracranial aneurysm in patient with coarctation of aorta**

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**Introduction:** Intracranial aneurysms are more often found in patients with coarctation of aorta (COA) than in general population. Aneurysm rupture occurs much earlier in these patients. Here, two cases of ruptured cerebral aneurysms associated with COA are presented. The aneurysms were successfully clipped in acute stage prior to correction of coarctation. Patients with COA should have screening for early diagnosis of cerebral aneurysms. Ruptured aneurysm should be treated as early as possible. Unruptured aneurysm should also be treated before aortic repair, if general condition of patient allows. **Case Summary:** Case 1: 14 year old boy presented with sudden onset headache followed by loss of consciousness. BP was 210/100 mm of Hg, very feeble femoral pulses. Contrast CT scan brain revealed ruptured distal anterior communicating artery aneurysm. Aortogram revealed total obstruction in descending thoracic aorta distal to origin of left subclavian artery. Clipping of aneurysm was planned first, followed by COA repair. Patient was discharged after complete recovery. Case 2: 15 year old boy presented with sudden onset headache, vomiting, one GTCS episode. BP was 180/130 mm of Hg. Cerebral CT angiography revealed saccular aneurysm from anterior