noticed in Group A between T_{P_1} , T_{P_2} and T_{P_3} . However, in Group B decrease was noted. Further significant decrease was noticed in ONSD of both groups in between T_{ES} and T_{E30} . **Conclusion:** Reverse trendelenburg position of 10° attenuates the changes in the ONSD in prone position signifying decrease in ICP. Head up of 30° for 30 minutes further decreases the ONSD from post extubation supine position.

ISNACC-S-46

Anaesthetic management of a known case of Werner syndrome for excision of left frontal meningioma

D. Patel, J. Rodrigues, B. Thakore, Sunita

Department of Anaesthesia, P.D. Hinduja Hospital and Medical Research Centre, Mumbai, Maharashtra, India

Introduction: Progeria or premature ageing is a rare congenital abnormality in children, with a higher risk of complications during sedation or anaesthesia, due to their challenging airway anatomy and the potential for cardiovascular events. We report the successful anaesthetic management using general anaesthesia of a known case of Werner syndrome. **Case Summary:** A 34 year old, 37 kg, male presented with a history of numbness and tingling sensations in right upper and lower limb with blurred vision. Investigations revealed a meningioma in the left frontal region and patient was posted for craniotomy for tumor excision. Progeria was diagnosed during the preoperative work-up based on physical appearance and history of diabetes mellitus, hypertension, hypothyroidism, chronic kidney disease and early onset bilateral cataract. His GCS was 15 and vital parameters were normal. Airway assessment was normal. Routine investigation showed FBS: 210 mg/dl, creatinine: 2.7 mg/dl and potassium: 4.5 mEq/L. ECG showed ST segment elevation in V1 - V6 and LVH, baseline echo showed EF = 55% with global hypokinesia. Anticipating a difficult airway, difficult airway trolley was kept ready in OR. Preoxygenation preceded invasive monitoring. Standard intravenous induction with etomidate 0.3 mg/kg, and after confirming adequate mask ventilation, Atracurium 0.5 mg/kg was given and patient was intubated. Anaesthesia was maintained with oxygen: Air-50%, sevoflurane (MAC 0.5-0.6) and atracurium infusion. The patient was reversed, extubated and shifted to ICU. Procedure was uneventful. **Conclusion:** Anaesthetic problems encountered in a case of progeria include difficult airway and myocardial infarction. Prior IDL to rule out any airway abnormality and cardiac work up to rule out myocardial infarction helps one be better prepared. Anticipation of difficult airway and managing the patient like geriatric age group is a key to management of such patients.

ISNACC-S-47

A prospective randomized single blind study of a comparison between total intravenous anaesthesia with propofol and conventional sevoflurane (inhalational) anaesthesia for their effect on the brain bulk during elective craniotomy for supratentorial tumor

D. Patel, J. Rodrigues, B. Thakore, J. Monteiro

Department of Anaesthesia, P.D. Hinduja Hospital and Medical Research Centre, Mumbai, Maharashtra, India

Introduction: Inhalational agents cause a dose dependant cerebral vasodilation and increase intracranial pressure (ICP). Total intravenous anaesthesia (TIVA) has no cerebral vasodilatory effect, A combination technique of inhalational and intravenous anaesthesia combines the advantage of both. We conducted a study to compare brain relaxation in three groups: TIVA, inhalational and IV+ (IV plus inhalational). **Methods:** Following institutional ethics committee approval, 80 patients (n = 80, calculated by ClinCalc Sample Size Calculator), posted for elective neurosurgery were included in this study. After intubation, in Group TIVA, anaesthesia was maintained with propofol infusion. Group INH, anaesthesia was maintained with sevoflurane. Group IV+, anaesthesia was maintained with combination of propofol and sevoflurane upto 1 MAC, titrated to keep bispectral index (BIS) 40-50. The brain relaxation/bulge and surgical field was graded according to a subjective four point scale. **Results:** The brain relaxation score was significantly better (p = 0.033) in Group TIVA. Grade I relaxation was higher in Group TIVA n = 25 (62.5%) than in Group IV+ n = 14 (35%). Group INH was discontinued because in the 8 cases conducted, there was unacceptable brain bulge requiring intervention. **Conclusion:** We concluded that TIVA provide a better surgical field in view of brain relaxation as compared to the combination of IV+ Inhalational and the conventional Inhalational anaesthesia. Though the measurement of brain relaxation in our study was subjective, monitoring of ICP during first burr hole in the skull would have been objective and ideal.

ISNACC-S-48

Refusal of treatment: Using four box approach to guide decision-making

N. Pillay, T. K. Tan

Department of Anesthesiology, Singapore General Hospital, Singapore

Introduction: Four box Approach includes: (1) Medical Indications - High chance of fatal aneurysmal re-rupture

if untreated, high risk endovascular treatment, poor grade SAH indicated complex post treatment course (vasospasm and death). (2) Patient Autonomy - No capacity to make medical decisions, no advanced statement about extent of care, doctors should make healthcare decisions in her best interest. (3) Quality of Life - High chance of deteriorating to Modified Rankin 5 or 6 (death), best outcome, with or without treatment, would be a return to baseline Modified Rankin 4 - a state to be endured. (4) Contextual issues - Doctors recommended CT angiogram for definitive diagnosis. This strengthened the doctor's position against advocating treatment in view of complex lesion and poor prognosis. **Case Summary:** A 74 year old pre-morbidly poor female (modified Rankin 4 from multiple ischaemic strokes) presented with a poor grade (E2V1M3, Modified WFNS Grade V) subarachnoid haemorrhage. She was admitted to the NICU. Her family refused further investigations or treatment. Her GCS improved to E4V1M5. We used the 4 box approach (described by Jonsen AR et al) to guide decision-making. Her family agreed for a CT angiogram to facilitate this. This revealed a ruptured left vertebral artery aneurysm with tortuous and narrow vessel. Endovascular treatment was deemed difficult and risky. With this information, the family and doctors agreed for conservative management. She was extubated and discharged minimally communicative (E4V1M5) and modified Rankin 5 (fully dependent at all times). **Conclusion:** Four box approach clarified relevant patient medical and ethics issues, thereby guiding doctors in decision to accede to family's wish to withhold questionably beneficial treatment, in patient's best interest.

ISNACC-S-49

Effect of 0.45% sodium chloride and plasmalyte a used during intraoperative and postoperative period on serum osmolality in patients undergoing craniopharyngioma surgery

Pranshuta, N. B. Panda, K. K. Mukherjee¹, H. Bhagat, N. Sahni, P. Dutta²

Departments of Anaesthesia and Intensive Care,
¹Neurosurgery, ²Endocrinology, PGIMER, Chandigarh, India

Introduction: Electrolyte imbalance and acute diabetes insipidus (DI) are the most common complications in patients undergoing craniopharyngioma surgery. Data is sparse regarding the choice of fluid in patients undergoing craniopharyngioma excision. We compared the effects of iso-osmolar Plasmalyte A and hypo-osmolar 0.45% saline infused perioperatively on peri operative serum osmolality, serum sodium level and incidence of diabetes insipidus. **Methods:** A prospective randomised double blind study was conducted in 27 patients undergoing transcranial excision of craniopharyngioma. The

patients received either plasmalyte A or 0.45% normal saline intraoperatively and in postoperative period till patients were started exclusively on oral fluids. Serum and urine osmolality, serum and urine sodium, urine specific gravity, GCS and total dose of desmopressin required was measured in the peri operative period and postoperatively. **Results:** Demographic data were comparable. A statistically significant difference was found between the two groups in serum osmolality at 2nd hour ($p = 0.03$), 3rd hour ($p = 0.006$) and end of the surgery ($p = 0.034$), postoperative day 0 and 1 with $p = 0.03$, $p = 0.03$ respectively with 0.45% saline group having serum osmolality less than 300 mosm/kg as compared to plasmalyte group. We found intraoperatively, the difference in serum sodium levels was significant higher in patients receiving Plasmalyte A as compared to those receiving 0.45% sodium chloride at 3rd hour ($p = 0.009$) and at the end of surgery ($p = 0.009$) although the values in both the groups were within normal limits. **Conclusion:** Perioperative fluid is an important determinant of serum sodium and serum osmolality in patients undergoing craniopharyngioma surgery. 0.45% sodium chloride is preferred over Plasmalyte A as serum osmolality and serum sodium were maintained better with 0.45% sodium chloride infused in intraoperative and early postoperative period till patients were exclusively put on oral feed.

ISNACC-S-50

Effect of intraoperative aneurysm rupture on perioperative complications and neurological outcome in adult patients undergoing surgical clipping for aneurysmal subarachnoid haemorrhage

N. Radhakrishna, R. S. Chouhan, M. P. Pandia

Department of Neuroanaesthesiology and Critical Care,
AllIMS, New Delhi, India

Introduction: Management of ruptured intracranial cerebral aneurysms remains formidable challenge despite the remarkable advancements in neurosurgery and neuroanaesthesia. Intraoperative rupture (IAR) is a well-known complication occurring during surgical clipping. We undertook this retrospective study to look for an association of IAR with perioperative complications and neurological outcome in adult patients who underwent surgical clipping for ruptured intracranial aneurysm with SAH. **Methods:** Data of all adult (Age >18 yrs) patients who underwent surgical clipping for aneurysmal subarachnoid haemorrhage (aSAH) at our institute between January 2013 and December 2014 was collected. The patients were then divided into two groups based on occurrence of IAR. Intraoperative complications and postoperative complications were noted. Neurological outcome was