

hypertension in brain death is associated with cardiac dysfunction; when such a heart is transplanted, cardiac dysfunction often resolves. This scenario offers insight into the mechanisms of reversible forms of cardiac injury and suggests that treatment of the extracardiac milieu can result in the recovery of cardiac function. Thus, we hypothesized that if the milieu of raised ICP is removed by neurosurgical procedures, the cardiac dysfunction in such conditions may resolve. The objective was to evaluate our hypothesis whether normalization of ICP after neurosurgery will revert the effects of intracranial hypertension on hemodynamics and cardiac mechanical function.

**Materials and Methods:** This pilot prospective observational study included 50 patients; 25 patients with raised intracranial pressure (ICP) and 25 patients without raised ICP for whom transthoracic echocardiography was performed before and after neurosurgery. Hemodynamic and echocardiographic parameters were collected during pre-, intra-, and postoperative periods and used for statistical analysis.

**Results:** An increased incidence of markers of diastolic dysfunction (40%) and systolic dysfunction (20%), which was statistically significant ( $p < 0.001$ ) was found in the raised ICP group. Though markers of systolic dysfunction improved, diastolic dysfunction did not revert with neurosurgery.

**Conclusions:** Our study suggests that raised ICP might contribute to the pathophysiology of sympathetic overactivity and sympathetically driven cardiac dysfunction, which does not entirely revert in the immediate postoperative period.

#### **A009 Anesthetic Requirements in Patients with Medically Refractory Seizures Undergoing Neurosurgery**

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**Background:** Antiepileptic drugs (AEDs) are known to alter the requirement of anesthetic agents depending on their interaction with these agents. We performed a study to test the hypothesis that the requirement of propofol for induction and maintenance of anesthesia in patients with medically refractory seizures (MRS) on multiple AEDs will be altered when compared with that in patients on single AED.

**Materials and Methods:** We conducted a prospective observational study on neurosurgical patients in our hospital. Anesthesia was induced and maintained with propofol using Schnider's protocol using a target control infusion (TCI) pump, along with fentanyl and atracurium in all patients. The effect site concentration of propofol (Ce) was titrated to target a bispectral index (BIS) of 45 to 55. The dose of propofol required for induction, Ce of propofol for maintenance, fentanyl requirement, and emergence parameters were noted and compared with that of patients on levetiracetam. Data were analyzed using unpaired student t-test for parametric data and Chi-square test for nonparametric data.

**Results:** We recruited 34 patients with MRS on multiple AEDs and 10 patients with levetiracetam in our study. Patients with MRS were found to have significantly lower requirement of propofol for induction and maintenance, and had rapid emergence, when compared with patients on levetiracetam ( $p < 0.05$ ). Requirement of fentanyl was also less in patients with MRS, when compared with levetiracetam group, but this was not statistically significant.

**Conclusions:** Patients with MRS on multiple AEDs have lower propofol requirements during induction and maintenance of anesthesia.

#### **A010 Evaluation of Analgesic Effect of Ropivacaine versus Ropivacaine with Clonidine in Caudal Epidural Block in Lumbosacral Spine Surgery**

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**Background:** To compare effect of 0.2% ropivacaine alone versus 1 µg/kg of Clonidine with 0.2% ropivacaine in caudal epidural block in lumbosacral spine surgery with respect to VAS score, duration of analgesia, hemodynamics, and associated side effects.

**Materials and Methods:** A double blinded controlled interventional study was performed in which a total of 72 patients of lumbosacral spine surgery were studied and randomized into two groups. Each group received 20 mL of caudal epidural injection either of 0.2% ropivacaine alone (group A) or 1 mg/kg of injection clonidine with 0.2% ropivacaine (group B) according to group allocation after patient was placed prone for surgery after general anesthesia. VAS score, duration of analgesia, sedation score, and side effects were recorded at regular interval postoperatively up to 24 hours and hemodynamics were recorded in both intraoperative and postoperative period.

**Results:** Mean VAS scores were significantly lower in group B as compared with group A for the first 12 hours postoperatively. Significant difference was observed in duration of analgesia between both the groups. Group B showed prolonged duration of analgesia. There were no significant differences observed with respect to hemodynamics, sedation score, and side effect profile of patients in both groups.

**Conclusions:** The results suggested that injection clonidine is a good and effective adjuvant for analgesia to 0.2% injection ropivacaine for caudal epidural block in lumbosacral spine surgery.

#### **A011 Effect of Phenylephrine versus Mephentermine Treatment on Frontal Lobe Oxygenation during Correction of Hypotension in Supratentorial Cerebral Tumor Patients under General Anesthesia: A Randomized Controlled Study**

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