

A0035 Effect of Scalp Block and Ultrasound-Guided Transverse Abdominis Plane Block on Intraoperative Hemodynamics and Perioperative Analgesia in Abdominal Bone Flap Cranioplasties: A Prospective, Randomized, Double-Blinded Study

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Background: Regional techniques provide good perioperative analgesia and stable intraoperative hemodynamics but sparsely used in neuroanesthesia. This study assessed the effect of scalp block and ultrasound-guided transverse abdominis plane (TAP) block with 1 µg/kg clonidine as adjuvant to 0.2% ropivacaine versus intravenous fentanyl (0.1 µg/kg/h) on intraoperative hemodynamics and perioperative analgesia in abdominal bone flap cranioplasties (ABFC).

Materials and Methods: Sixty ASA I, II, and III patients undergoing ABFC were randomly divided into two groups of 30 each to receive either ropivacaine + clonidine in scalp and TAP block and IV saline infusion (group T) or saline in scalp and TAP block and IV fentanyl infusion (group C) after general anesthesia. Intraoperatively IV fentanyl (1 µg/kg) was given as supplemental analgesic when there was > 20% rise in hemodynamics above baseline. Postoperatively, paracetamol 1 g IV was given, when VAS scores were ≥ 4. Intraoperative hemodynamics, opioid requirement, postoperative duration of analgesia, VAS scores, and total analgesic requirement were noted. Data were analyzed using chi-square test/Fisher's exact test for categorical data and the Mann-Whitney test/unpaired *t*-test for quantitative data.

Results: Intraoperatively, stable hemodynamics, reduced fentanyl requirement (µg/kg) (0.06 ± 0.04 vs. 1.73 ± 0.52) and, postoperatively, prolonged duration of analgesia (minutes) ($1,056 \pm 364.6$ vs. 394 ± 202.2), better VAS scores (2.5 ± 0.7 vs. 3.2 ± 0.7), and reduced total analgesic requirement (grams) (1 ± 0.8 vs. 3 ± 0.6) were found in group T as compared with group C.

Conclusions: Regional techniques with adjuvant along with general anesthesia offers better hemodynamic stability and perioperative analgesia in ABFC surgeries.

A0036 Intraoperative Motor Evoked Potentials in a Pregnant Patient

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Background: Intraoperative neurophysiological monitoring (IONM) is used to monitor the integrity of neuronal pathways and is necessary in neurosurgical procedures to prevent postoperative deficits. But its use and safety in pregnant cases is sparsely reported and remains to be established.

Case Description: We describe case of a lady with 26 weeks of gestation with right intraventricular tumor extending up to thalamus posted for craniotomy and excision under IONM. Motor evoked potentials (MEPs) were chosen

since tumor was close to thalamus and internal capsule. Patient was induced and intubated, and anesthesia was maintained with bi-spectral index (BIS)-guided total intravenous anesthesia (TIVA). We monitored fetal rate with USG and also monitored uterine tone with fetal cardiotocography (CTG). We limited the number of MEP stimulations to minimum and used lowest currents (150–175 V) to get responses. No significant changes in MEP amplitude were observed intraoperatively, and patient was extubated without any motor or sensory deficits. Normal fetal heart rate was also confirmed with CTG and fetal ECHO.

Conclusions: A multidisciplinary team approach involving neuroanesthesiologists, neurosurgeons, and obstetricians with continuous monitoring of the fetal well-being by fetal heart rate, uterine contractions by CTG, and intraoperative neurophysiological monitoring by MEP were useful in our case. In our case, no deleterious intraoperative or postoperative complications were seen in mother and fetus with the use of MEP monitoring. Keeping the voltage minimum for MEP, reducing number of MEP stimulation trains, monitoring of fetal heart rate, and uterine tone are some of the strategies which can be considered in such cases.

A0037 High-Field 3T Intraoperative Magnetic Resonance Imaging in Neurosurgery: Single-Center Experience of 100 Cases

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Introduction: Intraoperative MRI (iMRI) is an upcoming tool in this modern era of neurosurgery, but it poses specific challenges.

Materials and Methods: Prospective observational study was conducted at Yashoda hospitals, and patients undergoing iMRI-guided resection of intracranial space-occupying lesions (SOLs) were included. At our center the magnet is located in the room adjacent to neurosurgery operating room (OR). Following variables were recorded: preoperative imaging diagnosis, presence or absence of residue on iMRI, whether iMRI modified our surgical decision, complications and mishaps attributed to iMRI, and time required to shift and time for image acquisition. Data were recorded using spreadsheet software (Excel) and analyzed.

Results: A total of 100 patients with various intracranial SOLs were included in the study. Primary gross total resection (GTR) was achieved in 44 cases (44%) and residue was detected in 56 cases (56%), secondary GTR was achieved in 37 (37%) cases, and decision of discontinuing surgery was taken in 19 cases (19%) due to presence of tumor remnant in eloquent cortex or adjacent to major vascular structures. The mean time required for shifting and image acquisition in first 20 cases was 85.6 minutes, which was reduced to 37.4 minutes in next 80 cases. We noted and analyzed the mishaps occurred during imaging and complications in the early postoperative period. Coil induced and contact burns were seen in 3 cases (3%), circuit disconnection and transient rise in EtCO₂ occurred in one patient.