

patients allocated into three equal groups to receive either sevoflurane ($n = 22$), desflurane ($n = 22$), or propofol ($n = 22$). Standard anesthesia protocol was followed. Patients with preoperative MMSE ≤ 23 were excluded. Each patient was assessed thrice with battery of cognitive tests in preoperative period (baseline), after 72 hours (early POCD), after 3 months (delayed POCD) of surgery. Serum levels of IL-6, TNF- α , and S-100 β were measured before surgery and 72 hours after surgery.

Results: Mean score of various psychometric tests was improved slightly in early postoperative period which was not significant ($p > 0.5$). In delayed postoperative period, there was significant improvement in cognitive scores as compared with baseline ($p < 0.5$) in all the groups. There was nonsignificant change in the levels of biomarkers S-100 β , TNF- α , and IL-6 between baseline and postoperative period in all the groups.

Conclusion: In young patients, there is no effect of anesthesia on postoperative cognitive functions. As far as inflammatory markers are concerned, they do not relate to patient's cognitive status.

Keywords: anesthesia, sevoflurane, desflurane

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A041 Clinical Presentation and Outcome of Midline Posterior Fossa Tumors: A Single Center Prospective Observational Study

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Introduction: Posterior fossa tumors constitute 50% of childhood brain. Medulloblastomas are the most common midline posterior fossa tumor in childhood. This study is designed to determine the frequency and types of midline posterior cranial fossa tumors and study the different clinical presentation of these tumors, surgical complications, and final outcome as measured by the Karnofsky performance scoring.

Methodology/Description: After permission from ethics committee, the study was performed as a prospective observational study on 60 patients admitted from March 2015 to March 2017 and operated for midline posterior fossa tumors, at the KIMS Hospital, Secunderabad. The data were entered on the predesigned form. Descriptive statistics were used for demographics. Data were analyzed using the EXCEL and SPSS softwares.

Results: The gender distribution was 38 male and 22 female patients with equal adults and children. Maximum

belonged to the age group of 0 to 12 years. Of these, 52 patients presented with headache and 40 had vomiting. Blurring of vision was seen in 22 patients. Most common midline posterior fossa tumor was medulloblastoma. Postoperative hydrocephalus and seizures were seen in six patients. Out of 60 patients, 12 patients had poor outcome versus 48 patients with good outcome on the Karnofsky performance status.

Conclusion: Midline posterior fossa tumors were more common in males. Symptoms of raised ICP and cerebellar symptoms were most common presentations. Headache and histopathology of tumor: high grade or low grade shows statistically significant correlation with outcome of patients as measured with the Karnofsky performance scoring. As our study was of small duration, long-term study can give better results

Keywords: Karnofsky performance scoring, medulloblastomas, midline posterior fossa tumor

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A042 Setting Up an Intraoperative MRI Suite: Our Experience

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Introduction: The advent of intraoperative magnetic resonance imaging (IOMRI) represents a substantial improvement in ensuring complete removal of intracranial lesions but poses specific challenges to the neurosurgical OT team.

Methodology/Description: This observational study was conducted to assess our learning curve of resource utilization and conduct of 3T-IOMRI at our hospital for the first month. Every time we performed an IOMRI, we collected data and noted mistakes and processes we could improve next time. Data collected included time required to move patients into the MRI room and back to OT, number of personnel required, changes made to our checklist, and standard operating procedures for equipment utilization and patient transfer. We also collected data regarding number of patients with residue who underwent resurgery, quality of scans, and surgeon satisfaction.

Results: Personnel involved in the IOMRI theater were trained for a week before setting up the unit and mock drills performed. In a period of 1 month, 21 scans were performed, out of which 11 patients had residue and 9 underwent resurgery. The image quality was rated as good in 7 patients and satisfactory in 11 patients. Personnel required to shift the patients into the MRI were reduced with 12 initially to 4 later. We were also able to reduce the time taken to shift the patients into the MRI room and back substantially by continuous training of personnel and remodifying our protocols (four times).

Conclusion: Setting up an IOMRI involves challenges. Institute-based checklists, protocols, and data recording of events help prevent untoward incidences and improve resources utilization.

Keywords: IOMRI, intracranial lesions, resurgery

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A043 Cervical Spine Movement during Awake Orotracheal Intubation with Fiberoptic Scope and McGrath Videolaryngoscope in Patients Undergoing Surgery for Unstable Cervical Spine

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Introduction: Cervical spine (c-spine) movement during intubation with direct laryngoscopy (DL) can cause new-onset neurological deficits in patients with unstable cervical spine (UCS). While fiberoptic intubation is preferred, this is not always possible. Intubation using videolaryngoscope causes lesser C-spine movement than DL and may be better option for intubation in these patients. The primary objective of this study was to compare C-spine movement during awake fiberoptic-guided intubation (FGI) and McGrath videolaryngoscope-guided intubation (VGI) in patients undergoing surgery for UCS.

Methodology/Description: Following ethics committee approval and informed consent, 21 patients with UCS scheduled for fixation surgery were recruited over 1-year. Patients were included if they were 18 to 65 years and had upper C-spine instability. Based on computer-generated table, patients were randomized to FGI or VGI. Awake intubation was facilitated with airway blocks and fentanyl. C-spine movement during intubation was assessed by lateral fluoroscopy at three-time points (T1-baseline, T2-during glottis view, and T3-with tube in-situ). Motor power was assessed before and after intubation.

Results: The most common diagnosis was atlantoaxial dislocation followed by C1 or odontoid fracture. The mean age was 34.73 (13.63) and 33.70 (11.0) years in VGI and FGI groups, respectively. The degree of motion at C1/2 was

7.2 ± 1.9 in FGI and 6.5 ± 2.1 in VGI ($p = 0.863$). The movement at C3 was 5.01 ± 0.91 in FGI and 5.93 ± 2.52 in VGI. No patient developed new-onset deficits.

Conclusion: The degree of cervical spine movement was similar with both the techniques and no patient developed intubation-related motor deficits.

Keywords: UCS, VGI, FGI

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A044 Intracranial Hemorrhage in a Patient with Double Valve Replacement: A Balancing Act

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Introduction: Vitamin K antagonist “warfarin” is recommended in patient with prosthetic heart valve with aim to maintain international normalized ratio (INR) of 2.5. Intracranial hemorrhage is a dreaded complication in these patients. Optimum correction of anticoagulation to provide a window to allow neurosurgery while preventing valve thrombus is a delicate balancing act.

Methodology/Description: A 31-year-old patient, known case of rheumatic heart disease with aortic and mitral valve replacement done a month back, presented with emesis for a day and headache and fever. Computed tomography (CT) scan showed a right frontoparietal subdural hematoma and midline shift. The INR was 7.7 and 300 mL fresh frozen plasma was administered to correct it to INR 1.8. During the emergency decompression craniotomy, the main concerns were bleeding, thromboembolism, hemodynamic instability, valvular dysfunction, and infective endocarditis. Balanced anesthesia was used with invasive monitoring and transesophageal echocardiography. Intraoperative course was uneventful and patient was extubated. Intravenous heparin was administered. On day 2, CT suggested hematoma with midline shift. Patient was taken for re-exploration with repeat blood and plasma transfusions. After extubation, a single episode of convulsions occurred on the fifth day. Anticonvulsants were started. CT scan showed increased size of extra-axial hematoma. A third decompression craniotomy followed. Injection low-molecular-weight heparin (LMWH) 0.4 mg subcutaneous twice a day started. At present, patient is stable and shifted to ward.

Conclusion: Valve replacement patients are at high risk of intracranial hemorrhage due to anticoagulation. Appropriate management of anticoagulation is essential to ensure functioning of valve as well as prevent bleeding at other sites.

Keywords: double valve replacement, warfarin, intracranial hemorrhage