

exacerbation of spinal cord injuries. Application of rigid cervical collar may reduce cervical spine movements, but it hinders tracheal intubation with standard laryngoscope. It significantly reduces the mouth opening, rendering laryngoscopy difficult and also lifts up the chin and tips the larynx anteriorly. The aim of this study is to compare the hemodynamic responses to fiberoptic bronchoscope and McCoy laryngoscope in patients undergoing elective surgery under general anesthesia with rigid cervical collar simulating cervical spine immobilization in the situation of cervical trauma. **Materials and Methods:** Thirty two patients in age range 20-50 years, of ASA I - II, and of either sex undergoing elective surgery under general anesthesia were randomly allocated into each group. There were two groups according to the technique used for intubation: Group A (Flexible Fiberoptic Bronchoscope) and group B (McCoy Laryngoscope). Systolic Blood Pressure (SBP), Diastolic Blood Pressure (DBP), Mean arterial blood pressure (MAP) and heart rate (HR) were recorded at baseline, intra-operatively, immediately before and after induction, and immediately after intubation. Thereafter, every minute for the next five minutes. Demographic data is presented as numbers and intergroup comparison of these was done by Chi square test. The value of  $P < 0.05$  was considered statistically significant. Quantitative data is presented as mean values and standard deviation. Intergroup comparison of quantitative data was done by parametric test (unpaired  $t$ -test) and probability was considered to be significant if less than  $<0.05$ . **Results:** The demographic data is comparable. Due to intubation response, heart rate and blood pressure increased significantly ( $P < 0.05$ ) above preoperative values in McCoy group as compared to fiberoptic group. **Conclusion:** We suggest that the flexible fiberoptic bronchoscope is an effective and better method of intubation in situation like traumatic cervical spine injury and provides stable hemodynamics.

## 12. Attenuation of hemodynamic pressor response to laryngoscopy and intubation with single pre-induction dose of dexmedetomidine in patients undergoing neurosurgery and neurointervention

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**Background:** The aim of the study was to evaluate the effect of a single pre induction dose of dexmedetomidine on pressor response to laryngoscopy and intubation on patients undergoing neurosurgery and neurointervention and to

assess the incidence of adverse effects of dexmedetomidine. **Materials and Methods:** After obtaining the approval of the hospital ethics committee an observational study was conducted on 100 ASA grade 1 and 2 patients. Written, informed valid consent was obtained from all patients. Inj. Dexmedetomidine was started in an infusion at the rate of 1mcg/kg for ten minutes before induction. Heart rate and blood pressure were then recorded at specific intervals before and after intubation. **Results:** Sixty patients were enrolled for the study. The baseline heart rate was 77.15 (SD 14.49) beats per minute (bpm). One minute after intubation mean heart rate was 121.44 (SD 22.34) bpm. The baseline mean arterial pressure was 109.29 (SD 14.58) mm Hg. One minute after intubation mean value was 95.06 (SD 17.89) mm Hg ( $P < 0.001$ ). The difference was significant in all parameters at the said intervals as compared to the baseline. No adverse effects were reported. **Conclusion:** Dexmedetomidine is a very useful drug as a premedicant @1 mcg/kg in an infusion for ten minutes to attenuate the sympathetic response to laryngoscopy and intubation.

## 13. A prospective randomized control evaluation of desflurane and propofol for emergence from anesthesia following resection of cerebellopontine angle tumors

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**Background:** Desflurane and propofol are commonly used anesthetic agent in neurosurgical patients. Though these agents have been commonly used in patients undergoing supratentorial neurosurgery, there is paucity of data evaluating its use in surgery for cerebellopontine (CP) angle tumors. The primary aim was to evaluate the time to emergence from anesthesia with use of desflurane when compared to propofol. The intraoperative hemodynamics, brain relaxation and vasomotor response during tumor resection were the secondary outcomes. **Materials and Methods:** The present study was a prospective randomized trial conducted on thirty adult patients undergoing CP angle tumor resection. Anesthesia was induced with morphine 0.1 mg/kg and thiopentone 4-6 mg/kg while muscle relaxation was achieved with vecuronium. Anesthesia was maintained with desflurane or propofol as per the randomization along with nitrous oxide (NO) to maintain a state 2 entropy value of 40-60. Desflurane or propofol were switched off after completion of skin sutures while NO was switched off following removal of skull pins.

**Results:** The time to emergence following cessation of anesthesia was  $4.7 \pm 1.3$  minutes in desflurane group while it was  $9.6 \pm 3.3$  minutes in propofol group ( $P < 0.05$ ). The intraoperative hemodynamics, brain relaxation, vasomotor response and emergence characteristics were comparable in both groups. **Conclusions:** The use of desflurane for maintenance of anesthesia is associated with faster emergence when compared to propofol in patients undergoing resection of CP angle tumors. However, the intraoperative profiles were similar with the use of either anesthetic agent.

## 14. Clinical outcome of intracranial aneurysms: A retrospective analysis

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**Background:** The aim of the study is to analyze the factors affecting the outcome of patients with intracranial aneurysms and to review the perioperative management of patients undergoing surgical clipping. **Materials and Methods:** Retrospective review of all the patients presenting for neurosurgical clipping over a period of 10 months was done. Data collected and analyzed included demographic profile, preoperative medical and surgical record, aneurysm characteristics, neurosurgical grading, anesthetic details, intra and postoperative complications and clinical outcome at discharge and six months after discharge from hospital.  $P < 0.05$  was considered significant. **Results:** Four hundred and eighty two patients of aneurysmal SAH were seen, of which 330 underwent an intervention under anesthesia; 93% (307/330) had clipping, and 7% (23/330) had coiling. All the factors affecting the outcome were analyzed. The patients with higher WFNS and Fischer grade, hypertension, diabetes mellitus, hydrocephalous, preoperative infarct, vasospasm, multiple aneurysms and re-bleeding were associated with poor outcome. **Conclusion:** From the analysis it was observed that various clinical factors and premorbid conditions were associated with a poor outcome. We conclude that the outcome in patients with aneurysmal SAH is affected by multiple factors. A thorough understanding of these factors can help us in predicting the perioperative outcome in these groups of patients.

## 15. Comparison of propofol anesthesia to dexmedetomidine + propofol for intraoperative management and emergence in craniotomy surgery

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**Background:** This study evaluated the effect of adding DEX to a total intravenous anesthetic on hemodynamic control and emergence, and requirement for antihypertensive therapy and long acting opiates. **Materials and Methods:** Thirty nine ASA I-III patients were enrolled into this prospective, single blind, randomized study. All patients received a standardized anesthetic and were randomized to propofol (PROP) or propofol plus DEX ( $0.2-0.7$  mcg/kg/hr) infusions during surgery. Hemodynamic data is collected continuously during the case. The emergence was videotaped and analyzed for the number of episodes and severity of coughing. Hospital length of stay was also examined. Data is analyzed using ANOVA with repeated measures and the Kruskal-Wallis test. **Results:** Demographic data is similar among the 2 groups. There were no adverse events or neurological outcomes in either group related to the anesthetic. Video analysis of emergence showed a tendency of increased coughing episodes for PROP vs. DEX:  $5.6 \pm 8.3$  vs.  $1.1 \pm 1.3$  ( $P = 0.04$ ) while surgeons' ratings were similar for both groups ( $P = 0.35$ ). Mean arterial blood pressure (MAP) significantly decreased intra-operatively from baseline within groups but was not different between groups. The length of hospital stay was not significantly different for DEX and PROP groups:  $2.6 \pm 1.9$ , and  $3.2 \pm 1.9$  days, respectively. **Conclusion:** DEX appears to reduce coughing therefore providing a more favorable emergence when compared to PROP. PROP + DEX is hemodynamically stable than PROP

## 16. Perioperative anesthetic management and outcome of patients undergoing surgery for moyamoya disease: An institutional experience

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**Background:** The aim was to study the demographics, anesthetic management and outcome in patients undergoing surgery for Moyamoya disease. **Materials and Methods:** After obtaining institutional approval, medical records of all patients who underwent revascularization surgeries for Moyamoya disease from January 2007 to present date is included for retrospective analysis. Various preoperative, intraoperative, and postoperative data is recorded. **Results:** There were total of 16 patients. Six patients underwent encephaloduroarteriomyosynangiosis, two underwent