STA-MCA Bypass and eight underwent combination of both. Thirteen patients belonged to pediatric age group (age < 18 years). There were 10 male patients. One patient had an associated cleft lip and palate. Standard monitoring and anesthesia techniques were used. Fourteen patients were induced with intravenous agent while two underwent inhalational induction. Thirteen were maintained on inhalational agents and two on propofol infusion. Opioids and muscle relaxants were used as required. All patients had a hemodynamically stable course. Normocapnia and normothermia was maintained. One patient had significant blood loss requiring transfusion. All patients were reversed and extubated. The mean duration of anesthesia was 2.45 (1:30-4) hours. The mean duration of hospital stay was 4.5 (3-10) days. Two patients had postoperative aphasia. **Conclusion:** Our data shows that with efficient perioperative anesthetic management the patients with Moyamoya disease can have a favorable outcome. Careful perioperative anesthetic management in Moyamoya disease is associated with good patient outcome.

17. Comparison of analgesic effect of infusion of low dose ketamine and dexmedetomidine on post-operative pain in spine surgery

Nidhi Bidyut Panda, Neha Garg, Y. K. Batra, Hemant Bhagat, R Chabra[1]

Department of Anaesthesia and Intensive Care, [1]Neurosurgery, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, India

Background: The aim of the study was to compare the effects of infusion of Dexmedetomidine and low dose of Ketamine on postoperative pain in patients undergoing Spine Surgery. **Materials and Methods:** In a randomized, double-blind controlled trial, 66 ASA 1-2 patients undergoing elective lumbar and thoracic spine surgery were divided into three groups. Group K received Ketamine with midazolam bolus (0.25 mg/kg and 10 μg/kg) followed by infusion of a mixture of Ketamine and Midazolam (0.25 mg/kg/hr, 10 μg/kg). Group D received dexmedetomidine bolus (0.5 μg/kg) and infusion (0.3 μg/kg/hr). Group C received normal saline infusion at a rate of 3-8 ml/hr. All patients received test drug infusion for 24 hours and assessed till 48 hours postoperative period. Morphine 3 mg bolus was used as rescue analgesic and sedation was assessed by Modified Ramsay sedation scale. **Results:** Pain score differed significantly at 2, 6, 8, 12, 24 and 48 hours postoperatively with the lowest score in group K then D and maximum in group C. The pain scores were comparable between group K and D (p- 0.620). Rescue analgesic requirement was minimum in group K < D < C (P VALUE-.000). Sedation score was higher in group K. No significant difference in side effects was found in the three groups. **Conclusion:** Ketamine and dexmedetomidine have comparable analgesic effects. Dexmedetomidine was associated with lower side effects (nausea, vomiting, dizziness, diplopia) than Ketamine, though the difference was not statistically significant. Dexmedetomidine or low dose Ketamine infusion can be used for postoperative analgesia in spine surgery.

18. Extubation failure in head-injured patients: An analysis of three-months data

Varun Jain, Sujoy Banik, Ashish Bindra, Keshav Goyal, Girija Prasad Rath

Department of Neuroanaesthesiology, AIIMS, New Delhi, India

Background: Mechanical ventilation is the life sustaining modality, used until the patient is deemed fit for extubation and predicting extubation failure or re-intubation is one of the most challenging. The literature on predictors of successful extubation in head injured patients is very scarce. Hence, we planned to determine the weaning parameters which may predict re-intubation in these patients. **Materials and Methods:** In this observational study, we present three (3) months data of patients admitted to our neurocritical care unit (NCCU), who were extubated after achieving the standard criteria for tracheal extubation. Data on improvement of Glasgow Coma Scale (GCS) score, duration of mechanical ventilation, PaO_2/FiO_2 ratio, hemoglobin, tolerance to spontaneous breathing trials, adequate cough reflex, tracheal secretions and frequency of suctioning were recorded. Pre-extubation criteria such as associated co-morbidities, nature of injury, post-surgical complications (like hematoma, CSF leak, and electrolyte imbalance) were analyzed. **Results:** Seventy (70) patients who met the inclusion criteria were analyzed; of which 9 (12.8%) patients required re-intubation. Postoperative hydrocephalus, infarction, and impaired gag reflex were found to be the risk factors for re-intubation in these cases ($P < 0.05$). Most of these patients required percutaneous tracheostomy except two with ventilatory failure who were successfully extubated at the second attempt. **Conclusion:** Our preliminary study suggested that post-procedural neurosurgical complications and impaired gag reflex were the risk factors for re-intubation in head-injured patients. However, a larger study with big sample size may be needed to substantiate these findings.

19. Effect of hypertonic saline and mannitol on patients undergoing supratentorial tumor surgery

Kiran Jangra, V. K. Grover, Ankush Singla, Preethy J. Mathew, S. K. Gupta[1]