

Background: Tracheal extubation is almost always associated with stress response, airway response and arrhythmias. We have compared Verapamil and Dexmedetomidine on attenuation of these responses. **Materials and Methods:** Thirty patients (ASA grade I, II) scheduled for spinal surgeries under general anaesthesia were randomly divided into two groups. At the end of surgery, after return of spontaneous efforts (BIS > 80), in "Group V" Verapamil 0.1 mg/kg and in "Group D" Dexmedetomidine 0.3 µg/kg were administered bolus intravenously over one minute. Heart rate, SBP, DBP and MAP were recorded just before and 2 minutes after intravenous administration, just after oral suction and extubation and 10 minutes post-extubation. Duration of emergence and extubation, quality of extubation, Richmond Agitation and Sedation Score (RASS) and time to reach Modified Aldrit Score ≥ 9 were evaluated. **Results:** Heart Rate, SBP, DBP, MAP were higher in Group V than Group D but statistically insignificant ($P > 0.05$). Extubation Quality Scores was 1 for 20%, 2 for 60% and 3 for 20% patients in Group V whereas 1 in 80%, 2 in 20% in Group D. There was occurrence of Bradycardia within 2 minutes of administration of drug in 1 patient in Group D. RAAS score was in the range of -1 to +1 in > 90% patient in Group V whereas -3 to -1 in 80% cases in Group D. **Conclusion:** Single dose of dexmedetomidine (0.3 µg/kg) given before extubation produced significant attenuation of circulatory and airway responses during extubation as compared to Verapamil (0.1 mg/kg).

Comparison of peri-operative course of patients undergoing trans-sphenoidal pituitary surgery via endoscopic versus microscopic approach - A retrospective analysis

Varun Jain, Arvind Chaturvedi, Mihir P. Pandia, Parmod K. Bithal

Department of Neuroanaesthesiology and Critical Care, All India Institute of Medical Sciences, New Delhi, India

Background: Endonasal endoscopic approach for transsphenoidal excision of pituitary adenoma has undergone remarkable evolution in last two decades. It is considered less invasive and less stressful, with results comparable to the previous 'gold standard' technique of microscopic transsphenoidal excision of pituitary adenoma. **Materials and Methods:** Data of 307 patients from January 2011 till December 2013 were reviewed. Various parameters were divided and compared on the basis of type of approach for pituitary tumor resection vis-à-vis microscope assisted sublabialtranssphenoidal resection (MSLTS) or microscope assisted transnasal transsphenoidal resection (MTNTS) or endoscope assisted endonasal transsphenoidal resection (ETSS). **Results:** Demographic variables (except age); tumor type (microadenoma/macroadenoma/giant and functional status), dimensions, and invasiveness;

patients' comorbidities were comparable among three groups. Duration of surgery and anaesthesia were shortest for MTNTS group and longest for ETSS group ($P < 0.001$). Blood loss was higher in ETSS technique (median 300 ml) and least in MTNTS (median 100 ml) and difference was significant across all three groups ($P = 0.0003$). Postoperatively, pain, nausea/vomiting, electrolyte imbalance, respiratory and cardiovascular problems, and imaging findings were comparable among all the three groups. Post-operative CSF rhinorrhoea was 17% in the MSLTS group compared to 6.5% in MTNTS and 7.9% in ETSS ($P = 0.047$). **Conclusions:** ETSS with the expected advantage of being less invasive, offers a better chance for complete resection of adenoma. Neuroanaesthesiologist must however be prepared for longer surgical time and more blood loss as compared to previous microscopic approach, atleast till the surgeons expertise in this newer technique.

Outcome of Hypernatremia in neurological/neurosurgical patients: A retrospective analysis

Ramesh V. J., Sritam S. Jena, Dhaval Shukla, Rita Christopher

Departments of Neuroanaesthesia, Neurosurgery and Neurochemistry, National Institute of Mental Health and Neuro Sciences, Bengaluru, Karnataka, India

Background: Hypernatremia is known to have high mortality and morbidity. However, in many of the studies it is not clear whether the Hypernatremia associated with brain death has been excluded or not. As including them and Glasgow coma score (GCS) 3 patients will spuriously give a very high mortality rate. In this study, we have evaluated the mortality of Hypernatremia patients after excluding the brain dead and of GCS 3 patients on the first day of Hypernatremia. **Materials and Methods:** All the neurological patients admitted to hospital and had Hypernatremia were included into the study. Brain dead and GCS of 3 patients on the first day of Hypernatremia were excluded. The demographic variables, clinical variables and outcome variables were collected from the case files retrospectively. **Results:** Totally, one hundred Hypernatremia patients were chosen for the study. Among them 14 patients were excluded because of GCS 3 or GCS data was not available on the day of Hypernatremia. The demographic variables were given in the table. There was 32%, 39% and 52% mortality in the mild, moderate and severe Hypernatremia patients respectively. The head injured patients had higher mortality in comparison to all other diagnoses (56% Vs 29.6%, $P < 0.02$). **Conclusion:** The mortality is very high even in mild cases of Hypernatremia. Very high mortality (52%) is seen, even after excluding the GCS 3 patients. Therefore it is very important to identify, treat and monitor aggressively these patients.