ISNACC-S-38

A randomised comparative study between AirTraq and McCoy for intubation in patients with cervical spine injury**Narmada Padhy, Srilata Moningi, Dilip Kumar Kulkarni, R. Gopinath**

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Background: Various airway devices have been used successfully for endotracheal intubation of simulated patients with cervical collar. This study was done to compare AirTraq and McCoy for intubation characteristics and haemodynamic parameters following endotracheal intubation in patients undergoing anterior cervical discectomy and fusion (ACDF) surgery. **Methods:** After Institutional Ethical Committee approval, a prospective randomised comparative study was designed on 60 American Society of Anesthesiologists I and II patients involving single level ACDF with mild to no neurological deficit. Following standard anaesthesia protocol and manual in-line stabilisation applied along with cervical collar or pin traction, all the patients were intubated either with AirTraq or McCoy. The time taken for intubation, Intubation Difficulty Scale (IDS) score, comfort grading and haemodynamic parameters were noted following intubation. **Statistical Analysis:** The categorical data were compared using Chi-square test and the continuous variables were compared between the groups using paired sample *t*-test. Repeated ANOVA was tested for haemodynamic data at each measurement time point, and Tukey *post hoc* was used for within the group comparisons at different timings following intubation. **Results:** The mean intubation time was 24.41 ± 14.8 s in AirTraq group which was statistically significant compared to McCoy group 38.96 ± 15.55 s ($P = 0.001$). The IDS score and comfort grading were statistically significant in Group A compared to Group M. The changes in heart rate and mean arterial pressure following intubation were comparable in both the groups. **Conclusion:** AirTraq improves the grade of glottic visualisation with minimal assistance. It also minimised the time taken for intubation and had stable haemodynamics with increased comfort to the anaesthetist.

ISNACC-S-39

Intranasal transmucosal sphenopalatine ganglion block: An approach to block anterior scalp innervation**Moningi Srilata, Narmada Padhy, Dilip Kumar Kulkarni, Rajesh¹, Srikanth Inturi, R. Gopinath**Departments of Anaesthesia and ¹Neurosurgery, Nizam's Institute of Medical Sciences, Hyderabad, Telangana, India

Introduction: Scalp block is traditionally given based on innervations and local infiltration to specific sites where the superficial nerves emerge. These nerves are branches of trigeminal nerve branches anteriorly and cervical plexuses posteriorly. That is supratrochlear and supraorbital are from ophthalmic division, zygomaticotemporal is from maxillary division, auriculotemporal and posterior auricular are from mandibular division, greater and lesser occipital are the branches from cervical plexus. Sphenopalatine ganglion block by transnasal route blocks the sphenopalatine ganglion and its emerging nerve roots. This requires minimal expertise in placement of culture swabs impregnated with local anaesthetic. Once the culture swabs were in place bilaterally, 5 ml of 0.5% sensorcaine was instilled with the help of an intravenous catheter. This blocks the nerves supplying the anterior part of the cranium from suprorbital nerve to posterior auricular nerve. To complete the block, all the patients also received specific nerve block in the posterior area pertaining to the exact site of pin placement. This study was, therefore, done to analyse if this approach can be an alternative to anterior scalp block in patients undergoing craniotomies. **Materials and Methods:** After approval from Institutional Ethics Committee, 50 patients undergoing elective craniotomy surgeries for various causes who belonged to American Society of Anesthesiologists I or II were randomly assigned into two groups (Group SPG - sphenopalatine block, Group S - scalp block). After induction and intubation, either of the procedure was performed as per the group. All the patients were maintained with 0.8–1 minimum alveolar concentration of isoflurane concentration throughout the procedure. The patients were observed for haemodynamic parameters following pin insertion, surgical incision and dural incision. Secondary objectives included any complications observed. **Results:** This was done for 25 patients in each group. All the data were normally distributed. Two sample independent *t*-test was done for numerical, ordinal data which showed there was no significant difference between the two groups (for haemodynamics). **Discussion and Conclusion:** Transnasal sphenopalatine block is a non-invasive technique and requires very less dosage of local anaesthetic for its blockade. This minimally invasive technique of blocking the scalp nerves can be an effective alternative to scalp block in patients undergoing craniotomy for supratentorial surgeries.

ISNACC-S-40

A comparison of maintenance and recovery profile of sevoflurane and desflurane with dexmedetomidine in patients undergoing surgery for supratentorial tumours**Nithya J. B., Adarsh Kulkarni, Anita N. Shetty**

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Background: Haemodynamically stable induction, intraoperative course, rapid emergence after intracranial surgery is desirable for neurological assessment. Dexmedetomidine as an adjuvant has good perioperative haemodynamic control, no respiratory depression, reduces anaesthetic, analgesic requirement thereby improving outcome. This study was undertaken to compare desflurane and sevoflurane with dexmedetomidine for supratentorial tumour surgeries on intraoperative, immediate post-operative haemodynamics, extubation, post-operative recovery time. **Methodology:** 100 patients undergoing craniotomy for supratentorial tumour excision were randomly allocated in two groups 50 each. Induced by routine protocol, maintained on sevoflurane + dexmedetomidine in (S + D) group, desflurane + dexmedetomidine in (D + D) group along with oxygen, nitrous oxide and atracurium infusion. Dexmedetomidine loading dose (0.5 mcg/kg) for 10 min, maintenance (0.2–0.7 mcg/kg/h) titrated according to haemodynamics. Desflurane, sevoflurane maintained at 1.0 minimum alveolar concentration. Haemodynamics recorded every 10 min till 300 min and till 30 min after extubation. Time taken for eye-opening, orientation, extubation was noted. Recovery time was noted based on fast track criteria, Aldrete recovery score at 5th, 10th min in operating room and at 5th, 10th and 25th min in post-operative recovery room. The data were analysed using unpaired *t*-test and Student's *t*-test. **Results:** Total duration of anaesthesia, dose of dexmedetomidine was significantly higher in desflurane group. Effects on haemodynamics were similar. Time taken for eye-opening in minutes D + D = 8.22 ± 3.35 , S + D = 9.49 ± 3.43 , time for extubation in D + D = 11.28 ± 5.18 , S + D = 11.44 ± 3.99 , time for orientation in D + D = 9.72 ± 4.1 , S + D = 13.7 ± 4.61 , statistically significant with D + D. **Discussion:** Both groups were comparable with respect to haemodynamics. D + D combination had better recovery time. No adverse effects observed with either of combinations used. Clinical trials with larger sample size employing multiple parameters might be necessary to come out with policy guidelines. This study shows that D + D is safer, convenient anaesthetic for neurosurgery.

ISNACC-S-41

Dietary supplementation of potassium alone to correct hypokalaemia in the Neurointensive Care Unit: A comparative study with conventional method of management a preliminary report of an ongoing study

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Introduction: Hypokalaemia defined as serum potassium <3.5 meq/L is commonly encountered in the Intensive Care Unit (ICU). Treatment modalities include correction in the form of intravenous (IV) injection and oral syrup potassium chloride (KCl). **Aim:** To evaluate the efficacy of dietary supplementation of potassium in hypokalaemic patients in the ICU. **Methods:** Institutional Ethics Committee approval obtained for the conduct of the study. A total of 85 patients were included in the study from two ICUs. Forty-five patients in the Neurointensive Care Unit received only dietary supplementation and the remaining 40 patients included from general ICUs receiving conventional supplementation (both IV and oral in the form of syrup KCl) acted as control. Dietary correction was done calculating the deficit and normal daily requirement. Changes in the serum potassium levels were monitored at 24, 48 and 72 h and at day 7. Results were computed using Student's *t*-test. **Results:** The average baseline value of serum potassium was similar in both groups (control group - 3.24 meq/L and study group - 3.16 mEq/L). All patients in control group received IV KCl for first 24 h and 12 patients for 48 h in addition to the oral supplementation of calculated dose of KCl. None of the patients in the study group received IV KCl. The change in potassium levels from baseline to normal clinical levels (>3.5 meq/L) in both the groups was similar at 24 h and increased to 4.0 meq/L by day 4 and maintained till day 7. In control group, on oral syrup KCl, more patients experienced bad taste and nausea. None of the patients on only dietary supplementation had any side effects. **Conclusion:** Appropriately calculated dietary sources of potassium could be used in the correction of mild hypokalaemia, which is cost effective, physiological, convenient and safe.

ISNACC-S-42

Anaesthesia modifications for intraoperative evoked potential monitoring: Series of 100 cases

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Background: Monitors of electric function of nervous system have advancement in the field of neurosurgery. Monitoring goal is to determine integrity of the nervous system before potential irreversible damage during surgery in an anaesthetised patient. Baseline EPs were recorded as a pre-operative investigation. **Methodology:** We describe our clinical experience and practice pattern in a series of 100 cases conducted between June 2014 and June 2015. Inclusion – American Society of Anesthesiologists 11–111, Baseline EPs were recorded as a pre-operative investigation. Spinal cases mainly tumours. Cranial cases: Cerebellopontine (CP)