

GOS at discharge was 5 (2–5). There was no in-hospital mortality. The quality of life at 3rd and 6th month did not change significantly when compared to baseline (i.e., health status of patient 1 week before admission to hospital). **Conclusion:** The baseline prolactin level and involvement of hypothalamus affect GOS at discharge but none of the demographic or perioperative determinants (anaesthesia or surgery) affected the quality of life appreciably over the observation span of 6 months.

ISNACC-S-23

Heart rate variability as a predictor of infection and organ dysfunction in neurological patients

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Background: Bacterial infection is a major cause of morbidity and mortality in patients admitted to Intensive Care Unit (ICU). Early diagnosis and timely, appropriate treatment can save the lives of many patients with severe infection. Analysis of activity of the autonomic nervous system (ANS) may provide a novel approach in early detection of developing infections. Heart rate variability (HRV) analysis has shown that the degree of alteration of frequency profiles correlates with illness severity. We intended to use HRV and measurement of autonomic function changes as a tool to observe and predict the incidence of infection and organ dysfunction in neurologically ill patients admitted to the ICU. **Methodology:** Adult patients admitted to the ICU in our hospital were included in this prospective observational study. They were monitored for HRV changes using the portable ANSiscope device. For analysis, the patients were divided into two groups depending on the severity of autonomic dysfunction – $\leq 40\%$ and $>40\%$. Infection was defined using the ‘CDC/NHSN Surveillance Definitions for Specific Types of Infections’. **Results:** 47 (72%) of the 65 patients studied developed infection in the ICU. Most of them developed single system infection (53%), lower respiratory infection the most common. The two groups did not differ with respect to Glasgow coma scale, mean percentage of autonomic dysfunction, median level of sympathetic dysfunction and percentage of individuals with mean autonomic dysfunction $>40\%$. There was a significant association between sympathetic dysfunction and the percentage of autonomic dysfunction. A high number of patients were found to have higher percentage of sympathetic dysfunction with reduced HRV. **Conclusion:** Patients with neurological diseases have autonomic dysfunction secondary to their disease process itself. There is no

conclusive evidence that changes in HRV characteristics can precisely predict infection or organ dysfunction. The use of changes in HRV alone may not help in early prediction of infection and organ dysfunction.

ISNACC-S-24

Comparison between dexmedetomidine alone and propofol with fentanyl combination for fibreoptic-guided endotracheal intubation in neurosurgical patients using bispectral index-guided conscious sedation: A prospective, randomised case-control study

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Background: Awake fibreoptic intubation (AFOI) is the gold standard for anticipated difficult airway management. If improperly done, there could be loss of airway or compressing the already compromised cervical cord and worsening of neurological status. We hypothesised that there are no differences in the intubation conditions produced with either dexmedetomidine infusion alone or a combination of propofol with fentanyl infusion using bispectral index (BIS) guided sedation (target 70) for AFOI using ‘spray as you go (SAYGO)’ technique in patients coming for elective neurosurgical procedures with anticipated difficult airway. **Methodology:** Forty adult neurosurgical patients requiring awake fibreoptic bronchoscope intubation were enrolled and randomly divided into two groups. Group D (dexmedetomidine) received a loading dose (LD) -1 mcg/kg over 10 min and 0.5 mcg/kg/h infusion till target BIS. Group PF (propofol with fentanyl), propofol received LD at 1 mg/kg/h with fentanyl 1 mcg/kg over 10 min and 1 mg/kg/h and 1 mcg/kg infusion, respectively, till target BIS. AFOI with SAYGO technique was performed followed by post-intubation neurological examination. **Results:** The demographic data, vitals, cough severity, lignocaine dose and post-operative recall was not significant. The BIS value at 9 and 12 min and time taken to achieve target BIS was statistically significant. BIS and OAA/S had good correlation. Total intubation score is better in Group PF than Group D. **Discussion:** Propofol with

Table 1: Time to achieve BIS <70

Groups	n	Time to achieve BIS (mean \pm SD)	t	P
Group D	19	11.89 \pm 2.49	2.533	0.016*
Group PF	20	10.00 \pm 2.18		

* $P < 0.05$, and is statistically significant. BIS: Bispectral index, SD: Standard deviation

Table 2: Intubation score

Criteria	Evaluation	Score	Group D n (%)	Group PF n (%)	P	Mann-Whitney U-test/P
Anesthesia quality	Asleep, deep sedation	2	19 (100)	20 (100)	1.000	136.000/0.039*
	Slight, resistance	0	0	0		
Vocal cords relaxation	No	0	0	0	0.064	
	In part, middle	1	3 (15.8)	0 (0)		
	Relaxed, open	2	16 (84.2)	20 (100)		
ETT tolerance	Bad, disturbing: Cough, swallowing	0	0	0	0.047*	
	Middle; coughing or swallowing not disturbing the procedure	2	7 (36.8)	2 (10)		
	Good, no coughing or swallowing	4	12 (63.2)	18 (90)		

ETT: Endotracheal tube

Fentanyl combination provided better AFOI condition than dexmedetomidine with shorter intubating time, better intubation score and post-operative profile with SAYGO technique. Both BIS and observer's assessment of awareness/sedation OAA/S are reliable indicators of sedation. Blinded could not be possible and small sample size were the limiting factors.

ISNACC-S-25

A retrospective analysis of pre-operative management of patients presenting for awake craniotomy: Sree Chitra Tirunal Institute for Medical Sciences and Technology experience

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Introduction: Awake craniotomy is performed when the lesions (usually tumour/seizure) are located close to the functional areas of the brain. However, awake craniotomy can pose challenges to the entire team of anaesthesiologist, surgeons and patients as well. We have retrospectively evaluated our experience in the management of these patients. **Materials and Methods:** Institutional Ethics Committee approval and patient consent waiver were obtained. Anaesthetic charts of all the patients who underwent the awake craniotomy in our institute from 2000 to August 2015 were analysed. **Results:** A total of 45 patients underwent awake craniotomy in the above period. The mean age of the patients was 33.4 years, male:female was 29:16. Initial presentation was seizure in 22 patients, speech disturbance in 11, sensory

in 4 and motor symptoms in 14. Premedication consisted of T diazepam (17), clonidine (16), pethidine (3) and haloperidol (9). One patient had airway obstruction and as converted to general anaesthesia. Rest of the patients underwent successful awake craniotomy. Scalp block was administered in 35, laryngeal mask airway was used in 3 (asleep awake asleep) technique. For maintenance anaesthesia, propofol with fentanyl infusion was given in 34 patients, dexmedetomidine in 3, midazolam in 2 and each pethidine and haloperidol in 2 patients. Intro complications were high end-tidal carbon dioxide (EtCO₂) in 6, tachycardia in 10 patients, hypertension in 25 patients, bradycardia in 5, hypotension in 6 patients. Pre-operative seizures occurred in 10 patients, brain bulge in 3 patients and intraoperative pain in 5 patients. **Conclusion:** Awake craniotomy is a challenging situation. Our experience showed that propofol with fentanyl infusion combined with scalp block was popular. However, in patients with dexmedetomidine, haemodynamic problems were less compared to propofol fentanyl group but the numbers were small to make a useful comparison.

ISNACC-S-26

Cerebral vascular effects of loading dose of dexmedetomidine: Transcranial colour Doppler study

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Background: Dexmedetomidine has been widely used in critical care settings because of its property of maintaining stable haemodynamics and inducing conscious sedation.