



Figure 1: The Bland Altman analysis shows good agreement between the device and lab haemoglobin values

and Neurosciences and in Neurosurgical ICU. Blood sample was collected intraoperatively and Hb value was obtained using HemoCue Hb analyser immediately, and the same sample was sent for lab analysis. **Analysis of the Study:** SPSS 19 was used for the study. Paired sample *t*-test for comparison and Bland Altman plot was used to find the agreement between the two methods. **Results:** Paired samples *t*-test. **Conclusion:** HemoCue Hb analyser can be useful to guide blood transfusion in emergency neurosurgery and neurocritical care. **Limitations:** Availability of the device and small sample size **Applicability:** Simple and useful device to obtain instant Hb values in a high volume centre where lab reports are usually delayed and can be performed even by paramedical staff anytime of the day.

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Effect of anaesthetics on glioblastoma cell line migration, proliferation and matrix metalloproteinase-2

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Introduction: Anaesthetic technique and other perioperative factors have the potential to impact the invasion and migration ability of tumour cells that can affect long-term outcome after cancer surgery. The aim of this study is to investigate the effect of sevoflurane and thiopentone on cell migration, proliferation and matrix metalloproteinase (MMP)-2 of glioblastoma cell line. **Methodology:** Human glioblastoma U87MG cell line was chosen for the study. The study comprised a study group (cell line exposed to different concentration

of sevoflurane/thiopentone) and a control group (cell line not exposed to sevoflurane/thiopentone). In the thiopentone group, cells were treated with 100 μ M, 500 μ M and 1000 μ M concentrations of thiopentone for 30 min. In these sevoflurane group, the cells were exposed to 2.5% sevoflurane in air-oxygen mixture with a FiO_2 of 45–55% in an incubator chamber for 90 min. Cells in control group for sevoflurane were only exposed to mixture of 45–55% O_2 . Migration and activity of MMP-2 were assessed by wound healing migration assay and gelatin zymography assay, respectively, after incubation for 24 h whereas proliferation was assessed by 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide assay after 48 h of incubation. **Results:** Various concentrations of thiopentone and 2.5% sevoflurane significantly lowered the migration of the U87MG glioma cells and MMP-2 activity ($P < 0.05$) compared to controls. However, there was no significant effect of both thiopentone and sevoflurane on proliferation. **Discussion:** Anaesthetics at increasing concentration cause a decrease in cell migration and MMP activity essential for metastasis. This study may have implications for future development of anti-malignant therapy and can influence the choice of anaesthetic agent in cancer surgeries.

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Intraoperative haemodynamic changes during emergency surgical decompression in head injury patients

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Background: Intraoperative hypotension is associated with worse outcomes in head injury patients. We intended to study the intraoperative haemodynamic changes in traumatic brain injury (TBI) patients undergoing emergency surgery. **Methodology:** Twenty adult patients undergoing surgery for TBI within 48 h of insult were recruited. Patients' demographics and clinical findings were recorded. After induction, the radial arterial line was secured and cardiac output was monitored with FloTrac/EV1000 sensor to obtain cardiac index (CI), stroke volume index (SVI), pulse rate (PR) and mean arterial pressure (MAP). Systemic vascular resistance index (SVRI) was measured in patients who had central venous catheter *in situ*. Data were collected at following time points – incision, craniotomy beginning, end, durotomy and after decompression. **Results:** CI decreased during