

Clinical Neuroscience: Monitoring

A-261 Room E, 10/16/2000 9:00 AM - 11:00 AM (PS)

Effect of Sevoflurane on the Middle Latency Auditory Evoked Potentials Measured by a Fast Extracting Monitor *Stephan Alpigier, MD Dr.med.; Hans S. Helbo-Hansen, MD; Erik W. Jensen, MSc PhD, Anaesthesiology and Intensive Care, Odense University Hospital, Odense C, Denmark.* A negative correlation between AEP-index and concentration of sevoflurane was found by use of a fast extracting monitor.

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Evoked Potentials and Subjective Pain Ratings after Intravenous Ketamine in Healthy Volunteers *Petra Bischoff, MD; Eckehard Schwarein, PhD; Gunter N. Schmidt, MD; Burckhard Bromm, PhD; Jochen Schulte am Esch, MD, Department of Anesthesiology, University Hospital Eppendorf, Hamburg, Germany.* Ketamine resulted in decreases in pain perceptions and SEP amplitudes whereas AEP were unaffected.

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Venous Air Embolism - Comparison between Adults and Children *Parmod K. Bitbal, MD; Mibir P. Pandia, MD; Hari H. Dasb, MD; Bibek Mobanty, MD; Rajinder S. Chouban, MD, Neuroanaesthesia, All India Institute of Medical Sciences, New Delhi, India.* Incidence of VAE was similar in both age groups. It resulted in similar incidence of tachycardia and hypotension in both age groups. One adult died.

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Artifact Robustness, Inter-/Intraindividual Baseline Stability and Rational EEG Parameter Selection *Joergen Bruhn, M.D.; Thomas W. Bouillon, M.D.; Andreas Hoeft, M.D.; Steven L. Shafer, M.D., Department of Anesthesiology, University of Bonn, Bonn, Germany.* EEG approximate entropy, EEG Shannon entropy and canonical univariate parameter were more robust against artifacts than SEF95 and delta ratio.

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Shannon Entropy Applied to the Measurement of the EEG Effects of Desflurane *Joergen Bruhn, M.D.; Lutz E. Lebmann, M.D.; Heiko Roepcke, M.D.; Thomas W. Bouillon, M.D.; Andreas Hoeft, M.D., Anesthesiology, University of Bonn, Bonn, Germany.* The Shannon entropy was used to quantify the probability density function of the EEG amplitude values. Shannon entropy strongly correlated with desflurane concentrations.

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Transcranial Doppler and Computerized Cognitive Function Testing for Post-Operative Evaluation *Leonid Bunegin, B.S.; Claudia S. Miller, M.D.; Jerry F. Gelineau, B.S., Anesthesiology and Family Practice, University of Texas Health Science Center at San Antonio, San Antonio, TX, United States.* Latency and performance correlate inversely with percent increase in MCABFV during cognitive challenge.

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Remifentanil Increases ECT Seizure Duration and Improves Beck's Depression Scores without Lowering Mini-mental Status Examinations *J.G. Cain, MD; P. Sullivan, MD; D. Boyd, AA-C, MS; C. Bezouska, MD; W.A. Kofke, MD, Anesthesiology, West Virginia University, Morgantown, WV, United States.* Remifentanil increases ECT seizure duration. Beck's depression scores are improved. Mini-mental status exam scores are unchanged.

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A Comparison of Two Constant Dose Continuous Infusion of Remifentanil for Severe Postoperative Pain after Remifentanil-Propofol-Based Anesthesia *Enrique Calderon, MD PhD; Antonio Pernia, MD; Luis Torres, MD PhD, Anesthesia, HPM, Cadiz, Spain.* in a double blind study with 30 patients, remifentanyl (R) was found and effective and safe opioid for 4 hours postoperative severe pain. The continuous infusion of R at constant dose of 0.1 and 0.05 mcg/kg/min without changes in rate or addition boluses afforded adequate analgesia without signs of respiratory depression.

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Delineating Intraoperative Transcranial Electrical Motor Evoked Potentials (Tce-MEPs) Monitoring during Spinal Surgery under Propofol-Narcotic Total Intravenous Anesthesia (TIVA) *B. Chun, M.D.; A.J.C. Cronin, M.D.; E.J. Frink, M.D.; H.G. Schuler, B.A.; G.B. Russell, M.D., FRCPC, Anesthesiology, Penn State College of Medicine, Hershey, PA, United States.* Tce-MEPs during spinal surgery with TIVA can provide useful information.

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Electromyographic Detection of Malpositioned Pedicle Screws during Spinal Fusion *A.J. Cronin, M.D.; D.E. Gelb, M.D.; A. Forjan; G.B. Russell, M.D., Anesthesiology, Penn State College of Medicine, Hershey, PA, United States.* Monitoring EMG for pedicle screw insertion detects breaches in bony cortex. EMG feedback may not decrease malpositions. S1 screws are not consistently malpositioned.

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Correlation of Non-Invasive Acoustic Brain Monitoring with Changes in Intra-Cranial Pressure *Richard P. Dutton, MD; William Bernhard, MD, Anesthesiology, University of Maryland, Baltimore, MD, United States.* Acoustic signals monitored non-invasively in patients with severe traumatic brain injury correlate with changes in intracranial pressure when the underlying acoustic signal is normal.

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Near-Infrared Spectroscopy Detects Cerebral Ischemia *Harvey L. Edmonds Jr, PhD; Aida Sebic, MD; Juan Villafane, MD; Igor Singer, MD, Anesthesiology, University of Louisville, Louisville, KY, United States.* Tilt-table-induced pre-syncope and syncope resulted in >20% decline in frontal cortex O₂ desaturation, while negative tilt tests (n=27) always had ≤13% desaturation.

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Clonidine Decreases Propofol Requirements as Assessed by Bispectral Index *Simona B. Febr, M.D.; Marco P. Zalunardo, M.D.; Burkhardt Seifert, Ph.D.; Thomas Pasch, M.D.; Donat R. Spahn, M.D., Institute of Anesthesiology, University Hospital, Zurich, Switzerland.* Amplification of anesthetic depth by clonidine is measurable with BIS and allows a reduction of propofol dosing to achieve a specific depth of anesthesia.