CLINICAL NEUROSCIENCES

A-371 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
Propofol Reduces ICP during Craniotomy Compared to Isoflurane and Sevoflurane *Kurt D. Petersen, M.D.; Uffe Landsfeldt, M.D; Georg E. Cold, Ph.D.; Claus B. Pedersen, M.D.; Peter Holst, M.D, Anesthesiology, Aarhus University Hospital, Aarhus, Denmark.* Significantly lower ICP and higher CPP are seen during propofol anesthesia compared to isoflurane and sevoflurane anesthesia before and after hyperventilation.

A-372 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
Evaluation of Relationship between Cerebral and Retinal Blood Flow *Max J. Rist, MD; Stephan Mierdl, MD; Karin Friedrich, MD; Volker Lischke, MD, Centre of Anesthesiology, Goethe-University, Franfurt (Main), Germany.* Retinal blood flow measured by laser doppler correlates significantly with transcranial Doppler of the middle cerebral artery and cerebral perfusion pressure.

A-373 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
Selective Brain Cooling Decreases Cerebral Infarct Volume *A.E. Schwartz, MD; A.D. Finck, MD; E.S. Connolly, MD; J.G. Stone, MD; N.M. Edwards, MD, Anesthesiology, Mt Sinai Hosp & Columbia Univ, New York, NY, United States.* After 1hr of cerebral ischemia, baboons were at 37°C or treated with selective cerebral cooling to 25°C. Controls had hemisphere infarction of 35.4(4.4)% vs 0.5(.5)% for brain-cooled baboons.

A-374 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
Effect of Xenon on Carbondioxide Reactivity in Humans *Claudia K. Stapelfeldt, M.D.; Christoph P. Hahn, M.D.; Peter H. Tonner, M.D.; Jens Scholz, M.D.; Jochen Schulte am Esch, M.D., Dept. of Anaesthesiology, University Hospital Eppendorf, Hamburg, Germany.* Carbondioxide (CO2) reactivity was determined in 34 anesthetized patients. CO2 reactivity was preserved using xenon and not different to isoflurane.

A-375 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
Remifentanil Provides Hemodynamic Stability and Faster Awakening Time in Transsphenoidal Surgery *Concezione Tommasino, MD; Marco Gemma, MD; Silvano Cozzi, MD; Simona Narcisi, MD; Pietro Mortini, Anesthesia and Intensive Care, University of Milano, IRCCS San Raffaele Hospital, Milano, Italy.* Better hemodynamics and faster awakening from anesthesia with remifentanil

A-376 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
Measured, Calculated and Effective Plasma Osmolality in Neurointensive Care Patients *Concezione Tommasino, MD; Marco Gemma, MD; Edy Prandi, MD; Marco Cerri, MD, Anesthesia and Intensive Care, University of Milano, IRCCS S Raffaele H, Milano, Italy.* Effective serum osmolality, in patients with brian pathology, can be used as an index of relative dehydration or overhydration.

A-377 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
Cerebral Blood Flow Velocities during Xenon Anesthesia *Peter H. Tonner, MD; Claudia Stapelfeldt, MD; Christoph Hahn, MD; Jens Scholz, MD; Jochen Schulte am Esch, MD, Dept. of Anesthesiology, University Hospital Eppendorf, Hamburg, Germany.* Cerebral blood flow velocities (CBFV) were determined in patients receiving either xenon or isoflurane. No differences in CBFV were found.

A-378 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
Cerebral Autoregulation in Healthy Children *Monica S. Vavilala, M.D.; Elizabeth Junger, M.D.; Colleen A. Douville, B.A.; David Newell, M.D.; Arthur M. Lam, M.D., Anesthesiology, Pediatrics, and Neurosurgery, Harborview Medical Center, Seattle, WA, United States.* Using dynamic cerebral autoregulation testing, we have found that children have a lower autoregulatory index than adults.

A-379 Room C, 10/17/2000 9:00 AM - 11:00 AM (PS)
The Antioxidant Potential of Propofol in Human Red Blood Cells *Shihai Zhang; Shanglong Yao, Anesthesiology, Union Hospital, Wuhan, Hubei, China.* G-6-PD, PFK and HK did not change during propofol anesthesia. G-6-PD activity increased significantly during enflurane anesthesia. The results indicate propofol can effectively scavenge free radicles at anesthetic concentration.

Clinical Neuroscience: Monitoring Neurologic Function & Temperature

A-380 Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)
Paradoxical Increase of EEG Bispectral Index (BIS) with Increasing Concentrations of Sevoflurane *Schneider Gerhard, MD; Naguib S.K. Naguib, MD; Hanel Frank, MD; Kochs F. Eberhard, MD, Anesthesiology, Klinikum rechts der Isar, TU Munchen, Munich, Germany.* Stepwise increase (by 0.6%, maintenance 10 min.) of sevoflurane (starting at 1.0%) resulted in an increase of BIS in all patients.

A-381 Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)
Categorization and Analysis of Pain and Activity Levels in Patients with Back Pain Using an Artificial Intelligence Technique *John J. Liszka-Hackzell, MD; David P. Martin, MD, PhD, Department of Anesthesiology, Mayo Clinic, Rochester, MN, United States.* Neural networks were used to investigate the relationship between activity and pain, which may provide diagnostic and prognostic information.

A-382 Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)
Misprediction of the Effect-Site Concentration during Rapid Induction of Propofol Sedation *Anthony G. Doufas, M.D.; Myriam Bakhshandeh, M.D.; Ellie Lekov, M.D.; Robert Greif, M.D.; Daniel I. Sessler, M.D., Outcomes Research Institute and Anesthesiology, University of Louisville, Louisville, KY, United States.* Predicted propofol effect-site concentrations differ with ramp speed, thus mispredicting effect-site.

A-383 Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)
Ability of the Bispectral Index (BIS) To Predict Verbal Responsiveness In Patients Undergoing Intravenous Sedation *Donald Mathews, MD; Scott Greenwald, PhD; Sanjeev Kumar, MD; Aaron Kopman, MD; George Neuman, MD, Department of Anesthesiology, St. Vincent's Hospital, New York, NY, United States.* The relationship between BIS and verbal responsiveness is preserved in sedated patients.

A-384 Room 301, 10/16/2000 2:00 PM - 3:30 PM (PD)
Temperature Measurement during CPB *Wei-ping Cheng, M.D.; MariaRosa Marino, M.D.; Alexander Romagnoli, M.D.; David Walding, B.S.; Nancy Nussmeier, M.D., Cardiovascular Anesthesia, Texas Heart Institute, Houston, TX, United States.* During CPB rewarming, jugular bulb temperature is underestimated by nasopharyngeal and esophageal (1-2°C) and particularly rectal and bladder (3-4°C) temperatures.