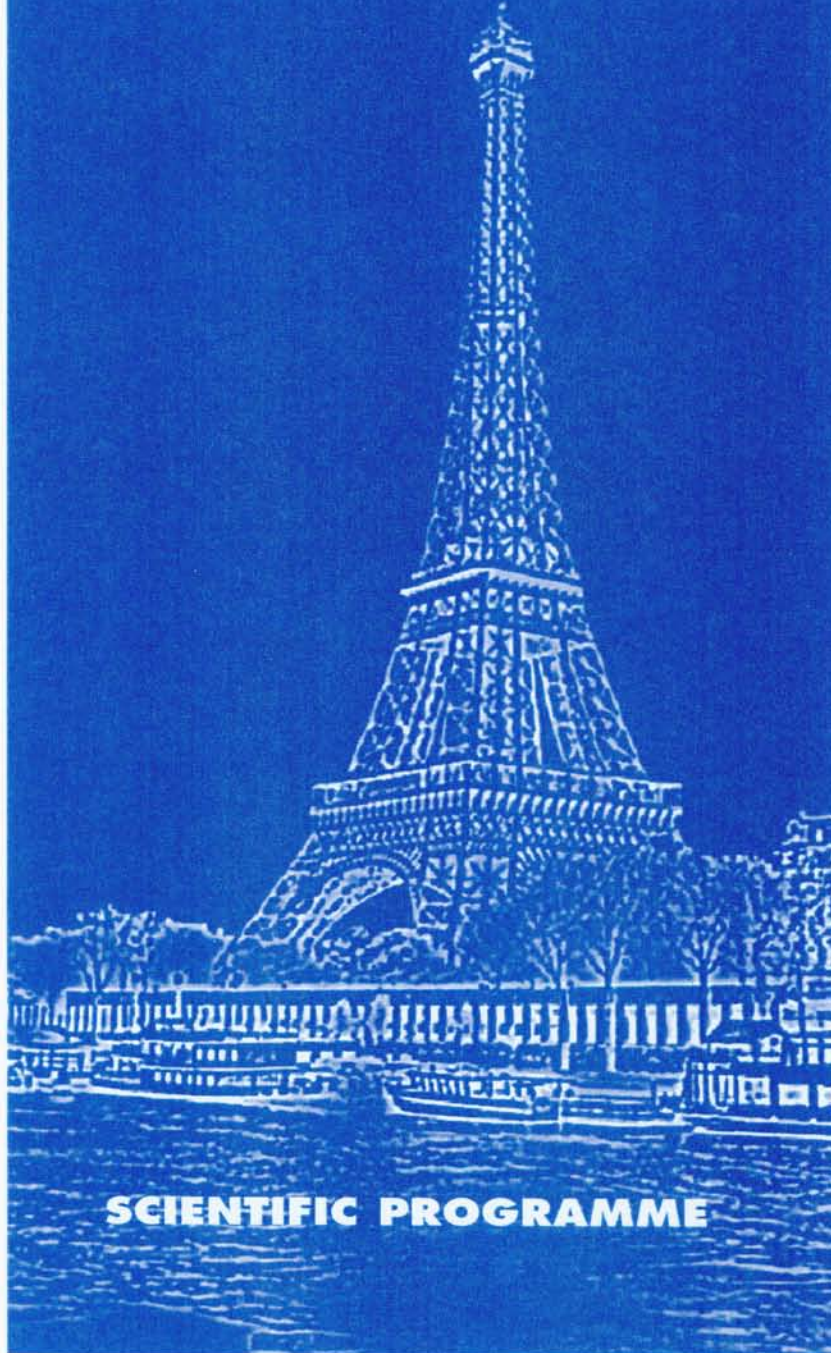

THURSDAY, April 22, 2004
13th WORLD CONGRESS OF ANAESTHESIOLOGISTS



SCIENTIFIC PROGRAMME

Thursday, April 22, 2004

- P0949
B108 VALIDITY AND RELIABILITY OF A NEWLY DEVELOPED INDIRECT CALORIMETRY DEVICE (CANOPUS®) IN THE PRESENCE OF NITROUS OXIDE AND/OR A HIGH O₂ FRACTION IN A PORCINE MODEL
Hashiguchi T, Isowaki S, Kuniyoshi T, Tahara M, Kaminosono T, Matsunaga A, Kakihana Y, Kanmura Y (Kagoshima, Japan)*
- P0950
B109 COMPARISON OF TWO METHODS OF MEASUREMENTS OF OXYGEN CONSUMPTION IN MECHANICALLY VENTILATED POSTOPERATIVE PATIENTS
Inadomi C, Terao Y, Fukusaki M, Yamashita K, Takada M, Sumikawa K (Sasebo, Nagasaki, Japan)*
- P0951
B110 CHANGES IN THE CEREBRAL BLOOD FLOW BEFORE AND AFTER IRRADIATION BY SUPER LIZER™ TO THE SITE CLOSE TO STELLATE GANGLION-COMPARISON WITH STELLATE GANGLION BLOCK-
Gushiken T, Nakabeppu Y, Tsuneyoshi I, Masuyama T, Yoshimine K, Tobo K, Kakihana Y, Kanmura Y (Kagoshima, Japan)*
- P0952
B111 THE EFFECT OF HEMODYNAMIC CHANGE ON CEREBRAL OXYGENATION ON YOUNG AND ELDERLY PATIENTS
Hsu YW, Yu-Chun H, Chun-Jen H, Chien-Chuan C (Taipei, Taiwan)*
- P0953
B112 FLEXIBLE AND HIGH QUALITY PATIENT MONITORING REDUCES COST IN SURGICAL INTERMEDIATE CARE UNIT
Köster N, Menzel H, Moecke H (Hamburg, Germany)*
- P0954
B113 PREOPERATIVE ULTRASONOGRAPHIC ASSESSMENT OF GASTRIC FLUID VOLUME
Gill A, Pagala M, Arora S, Haque D, Nagpal D, Gandras E, Shevde K (Brooklyn, USA)*
- P0955
B114 THE BRAIN TEMPERATURE TUNNEL: A NON-INVASIVE TECHNIQUE FOR MONITORING CORE TEMPERATURE
Blum J, Mcisaac J (Hartford, USA)*

Thursday

P0955

THE BRAIN TEMPERATURE TUNNEL: A NON-INVASIVE TECHNIQUE FOR MONITORING CORE TEMPERATURE

Blum J. (2), Mcisaac J.* (1)

(1) *University of Connecticut, Hartford, USA* - (2) *Hartford Hospital, Hartford, Ct, USA*

Introduction:

It has been reported by Dr. Marc Abreu that a small area of skin between the eye and nose may reflect the temperature of the brain, and has been called the brain temperature tunnel. This study evaluates the use of this brain temperature tunnel to non-invasively monitor core temperature

Materials and Methods:

After Institutional Review Board approval, thirty surgical patients undergoing general anesthesia in the supine position were selected. A specialized infrared thermometer was held eight inches above the forehead and the areas between the eyes and nose. A nasopharyngeal temperature probe and an esophageal stethoscope were placed after induction of anesthesia. Temperature measurements were taken before induction, immediately following induction, fifteen minutes after induction, and thirty minutes after induction. In cases where a forced hot air blanket was used, the patient's face was insulated from the warm air.

Results:

Analysis of variance (ANOVA) for each of the time periods revealed a significant difference between the temperatures measured at the different locations ($p < 0.001$). The average brain temperature tunnel results were $1.8^{\circ}\text{C} \pm 0.7$ warmer than the forehead temperatures after induction of anesthesia ($p < 0.05$), and were not significantly different from the esophageal or nasopharyngeal temperatures ($p > 0.05$). Statistical power for the samples used was > 0.95 .

Conclusion:

The results of the present study provide encouraging evidence that the brain temperature tunnel may be able to be exploited to monitor core temperature during anesthesia.