Exergen Temporal Artery Thermometry Studies Recently Accepted for Publication

Exergen was recently informed by the principle investigators that the studies listed below have been peer-reviewed and accepted for presentation or publication as follows:

1. **When Body Temperature Changes, Does Rectal Temperature Lag Behind?** David S. Greenes, Gary R. Fleisher, **Harvard** Medical School, Division of Emergency Medicine, Children's Hospital, Boston, MA, accepted by ***The Journal of Pediatrics*.**

   Following their initial study of 304 pediatric patients 0-12 months demonstrating Exergen Temporal Artery Thermometry to be significantly more accurate than ear thermometers when compared to rectal temperature, the investigators, in a new study of 51 pediatric patients 0-12 months, concluded "rectal temp defervesces less than TA temp 60 and 90 minutes after an antipyretic drug is given. These data support the theory that changes in rectal temp lag behind changes in core body temp and raise questions about whether rectal thermometry should be the standard for non-invasive clinical thermometry."

2. **Validation of Temporal Artery Thermometry by Its Comparison with the Esophageal Method in Children.** Fahad Al-Mukazeem, Upton Allen, Luba Komar, et al. University of Toronto, Pediatrics, Division of Emergency Medicine, The Hospital for Sick Children, accepted by ***The Journal of Pediatric and Child Health***, official journal of the Canadian Pediatric Child Health Society.

   The investigators concluded "The TA thermometer agrees well with the esophageal thermometer and the TA temperatures can be considered comparable to core temperatures taken by the esophageal reference standard. The agreement between esophageal-TA temperatures is not significantly different from that between esophageal-rectal temperatures."

3. **Comparison of Temporal Artery and Rectal Thermometry in Children in the Emergency Department.** S. Schuh, L. Komar, D. Stephens, et al. University of Toronto, Pediatrics, Division of Emergency Medicine; Divisions of Infectious Diseases, Anesthesia, and Population Health Sciences, The Hospital for Sick Children, accepted by ***The Journal of Pediatric Emergency Care***.

   In this study of 327 pediatric patients, the investigators concluded "All children with high rectal fever were febrile by the TA method; in contrast 3 children with high fever by TA method were afebrile rectally – all 3 had infectious diagnoses. The TA thermometer agrees well with the rectal criterion standard and has a high sensitivity in detecting fever in children with rectal temperatures ≥38.3°. Disagreements in fever detection by the TA and rectal thermometers were mild and of minor clinical significance".

4. **A Comparison of Measurements from a Temporal Artery Thermometer and a Pulmonary Artery Catheter Thermistor.** DL Carroll, C. Finn, J. Sawyer, B. Judge, Massachusetts General Hospital, Division of Cardiac Intensive Care, Boston, MA, accepted for presentation at the *National Teaching Institute & Critical Care Conference* to be held in May.

   In this study of 300 adult patients led by Dr. Carroll at Massachusetts General Hospital, the investigators reported: "There were no statistically significant differences between the PA thermistor reading and the TA temperature", that "these results demonstrate that the TA thermometer is as accurate as a PA thermistor", and that "TA predicts PA as accurately as rectal temperature, and significantly more accurately than oral temperature."

   Earlier published studies on Exergen's TA thermometer found it to be "significantly more accurate than ear thermometry" (Boston Children's Hospital and Harvard Medical School); "a rapid, noninvasive screening tool for detection of rectal fever" (Johns Hopkins Hospital and School of Medicine); and to be "indispensable for pediatric practice use" in a recent 2300 patient study (Children's Hospital Medical Center of Akron).

   Exergen Corporation is world leader in the science and technology of non-invasive thermometry systems. Developed by a team led by Dr. Francesco Pompei, President, the temporal artery thermometers are protected by more than 20 US and foreign patents.

   Full studies are available at www.exergen.com/TATpapers.

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