U.S. Army To Test New Device On Trauma Patients

Heart rate complexity metric will be tested on trauma patients in the U.S. Army's new Critical Combat Care Engineering (C3E) program area

David H. Fater, CEO of Vicor Technologies, Inc. [1] (OTCBB: VCRT), announces that Colonel Leopoldo Cancio of the U.S. Army Institute of Surgical Research (USAISR) identified its PD2i as a heart rate complexity metric that will be tested on trauma patients under the new Critical Combat Care Engineering (C3E) program. Vicor Technologies is a biotechnology company focused on the commercialization of innovative, non-invasive medical devices and diagnostics using its patented, proprietary PD2i algorithm and software to stratify patients at risk of sudden cardiac death and trauma victims in need of lifesaving intervention.

Colonel Cancio's identification of the PD2i as a heart-rate complexity metric to be tested on trauma patients in C3E is contained in "Bridging the Critical Care Chasm," an article describing the C3E. C3E is a new program area within the U.S. Army Medical Research and Materiel Command's Combat Casualty Care Research Area Directorate (RAD II) that was created to improve battlefield care and, specifically, address the "critical care technology gap." The article appears in the August 2009 issue of Military Medical/CBRN Technology (Volume 13, Issue 5).

"We're extremely gratified to have our patented, proprietary PD2i included for testing in the new C3E program," stated Mr. Fater. "All of the clinical trials of our PD2i conducted with the U.S. Army Institute for Surgical Research (USAISR), under our collaborative research and development agreement entered into in January 2008, reveal the PD2i to be the only diagnostic capable of consistently and accurately determining severity of injury and the probability of survival in critically injured soldiers and civilians utilizing both 'raw' and 'noisy' EKG data. This is consistent with the EKG data that will be collected from trauma victims in actual battlefield conditions to identify those in need of an immediate lifesaving intervention. As such, we believe the PD2i is a vital sign that can significantly enhance the Army's current combat trauma triage efforts, as well as those in the civilian emergency response sector," Mr. Fater concluded.

As described in the article, C3E is committed to three specific tasks, the first of which is to identify new vital signs, such as improved patient monitors able to predict the need for lifesaving interventions more quickly and accurately. Colonel Cancio describes the four basic approaches to deriving new vital signs that the C3E will explore. The PD2i is the only diagnostic identified within the extraction category. Extraction refers to obtaining additional information from an existing sensor such as the electrocardiogram.

Colonel Cancio writes, "Extraction of more information from the EKG of the heart by means of complexity or variability analysis is particularly appealing, because it uses a sensor (the EKG) that is uniformly used in patient care already. Our laboratory has pursued this line of research for several years, demonstrating that heart-rate complexity served as a superior method of predicting the need for lifesaving interventions in trauma patients... and will likely be embodied in decision support monitors. We have identified a heart-rate complexity metric, PD2i, which is now FDA approved and marketed by Boca Raton, Fla.-based Vicor Technologies. This device will be tested in trauma patients under C3E."

Vicor's patented, proprietary point correlation dimension algorithm (PD2i) is a deterministic, non-linear measure that analyzes electrophysiological potentials to predict future pathological events with a high degree of accuracy in target populations. Specifically, its PD2i Analyzer has 510(k) marketing clearance from the U.S. Food and Drug Administration to measure heart rate complexity.

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