eNNOVEA Medical’s CardioQuick Patch® Reduces Electrode Placement Errors During ECG Acquisitions in New Study

Researchers at Ulster University, University Hospitals Case Medical Center, and the Department of Cardiology in Almagelvin Hospital reveal a new, promising solution to the common problem of electrode misplacement.

Columbus, OH (PRWEB) December 05, 2016 -- A newly released study has found that a novel engineering solution called the CardioQuick Patch® significantly improves the reproducibility and accuracy of placing precordial electrodes with little cognitive effort and a high degree of usability in various healthcare settings.

Over the last 60 years, studies have shown that single electrode misplacement is one of the single largest contributing factor to errors in 12-lead ECG analyses. A misplacement of as little as one-inch can result in morphological changes in the resulting ECG and contribute to misdiagnosis in 1 in 5 patients.

Researchers in the new study revealed that the reasons for such widespread human errors are largely unknown, although their prevalence is ingrained into clinical practice. The study, entitled “Human Factors Analysis of the CardioQuick Patch®: A Novel Engineering Solution to the Problem of Electrode Misplacement During 12-Lead Electrogram Acquisition”, appears in the November issue of the peer-reviewed Journal of Electrocardiology.

There are more than 40 million ECG recordings in the United States every year, and electrode misplacement can occur between 40% to 60% of the time. When electrodes are positioned incorrectly, the signals are affected and can conceal abnormalities that result in misdiagnoses which, in turn, lead to inappropriate therapy, delay in the administration of proper treatment, or the ineffective use of medical resources.

During an interview, Robert Deans, Divisional Director of eNNOVEA Medical, said, “Any misdiagnosis from an erroneous ECG acquisition prevents timely medical intervention for the patient which, in worst case scenarios, increases the likelihood of morbidity and mortality.”

In response to the prevalent problem of electrode placement errors, eNNOVEA Medical—a division of EG Industries—developed and introduced the CardioQuick Patch®, an innovative medical device that assists clinicians in locating the correct anatomical landmarks for proper electrode placement. It has a unique design and is adaptable to all adult patients regardless of gender or torso size.

In addition to reducing the number of electrode placement errors, the study concluded that the CardioQuick Patch® has the potential to improve clinical efficiency by reducing the number of repeat ECG recordings. Moreover, the accurate serial comparison of ECGs is not only now possible with the CardioQuick Patch®, but readings are more reliable allowing physicians to use prior ECG recordings with confidence as a benchmark to determine morphological changes in each of the leads and, consequently, spot any development of cardiac abnormalities. Furthermore, the device can also be used during clinical trials in which precise electrode positioning is vital in analyzing the effects of novel drugs on cardiac function.

“We’re extremely pleased that all the research and development that has gone into developing the CardioQuick Patch® has resulted in a significant improvement in obtaining accurate and reproducible ECG tracings. What’s more striking is that training, which has been the traditional solution to this issue, has had little or no impact on
performance in improving ECG acquisition quality,” Mr. Deans remarked. “We’re hoping that this study and its accompanying data will finally prove to hospitals around the world that the CardioQuick Patch® is the solution they’ve been looking for to solve this age-old clinical issue,” he added.

For more information on the study, please contact Robert Deans at (855) 997-2273 or send an email to info(at)ennovea(dot)com. A copy of the study may be downloaded here.

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About eNNOVEA Medical LLC (www.ennoveamedical.com)

eNNOVEA Medical LLC is a privately held company in Columbus, OH that designs, develops, and manufactures innovative ECG solutions for use in hospitals, long term care facilities, doctors’ offices, and emergency management services.

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