Medtronic News

Medtronic Exclusive Reactive ATP(TM) Therapy Slows Progression of Atrial Fibrillation in Real-World Patient Population

Data Presented as Late Breaking Clinical Trial at EUROPACE 2017

DUBLIN and VIENNA - June 18, 2017 - Continuing its leadership in the detection, reduction, and treatment of atrial fibrillation (AF), Medtronic plc (NYSE: MDT) today announced that its Reactive ATP(TM) therapy slows the progression of AF in patients with implanted cardiac devices. A robust, real-world analysis of nearly 8,800 patients was presented as a late breaking clinical trial at EHRA EUROPACE-CARDIOSTIM 2017.

An unusually fast or quivering rhythm in the heart's upper chambers (atria), AF is a progressive disease that afflicts more than 33 million people worldwide.1 Common among patients with cardiac devices, AF impairs quality of life, and increases the risk of hospitalization, stroke and death. Reactive ATP (atrial-based antitachycardia pacing) is an advanced, painless pacing therapy found exclusively on Medtronic pacemakers, implantable cardioverter defibrillators (ICDs) and cardiac resynchronization therapy (CRT) devices. It repeatedly sends pacing pulses to the atria during abnormally fast rhythms to restore the heart's normal rhythm, thereby slowing the progression of AF.

The retrospective analysis assessed pacemaker, ICD and CRT device data from 8,798 patients followed by the Medtronic CareLink® remote monitoring system. Reactive ATP therapy was associated with a statistically significant decrease in AF events compared to a matched control group. Most notably, the Reactive ATP patient group experienced a 38 percent reduction in persistent AF events (lasting greater than seven days) ($p<0.0001$). This benefit was observed across patient age, sex, and device type.

"Atrial fibrillation can be a debilitating disease that imposes a significant burden upon the entire healthcare community - impacting patients, caregivers, providers and costs of care - especially as the disease progresses," said Giuseppe Boriani, M.D., Ph.D., full professor of cardiology at the University of Modena and Reggio Emilia, Italy. "These are the first real-world data on the clinical impact of Reactive ATP therapy and the first in patients with ICDs and CRT devices. These data have important implications for all device patients because of the high prevalence of AF and the correlation of disease progression to worsened patient outcomes."

This study builds upon the MINERVA trial, the first randomized, controlled study of Reactive ATP. It found that Reactive ATP therapy significantly slowed AF disease progression in patients with pacemakers with the therapy, compared to those without it.2 Furthermore, Reactive ATP significantly reduced AF-related hospitalizations, emergency department visits and cardioversions, resulting in payer cost savings.2,3

"Physicians have been asking how the CareLink Network data can be leveraged to gain real-world insights into the benefits of our therapies," said Rob Kowal, M.D., Ph.D., vice president and chief medical officer of the Cardiac Rhythm and Heart Failure Division at Medtronic. "This study does exactly that. It helps us understand how Reactive ATP impacts the burden of persistent atrial fibrillation in a larger and more varied group of patients than we might normally be able to study within the constraints of a controlled trial."

In collaboration with leading clinicians, researchers and scientists worldwide, Medtronic offers the broadest range of innovative medical technology for the interventional and surgical treatment of cardiovascular disease and cardiac arrhythmias. The company strives to offer products and services of the highest quality that deliver clinical and economic value to healthcare consumers and providers around the world.

About Medtronic

Medtronic plc (www.medtronic.com), headquartered in Dublin, Ireland, is among the world's largest medical technology, services and solutions companies - alleviating pain, restoring health and extending life for millions of people around the world. Medtronic employs more than 88,000 people worldwide, serving physicians, hospitals and patients in approximately 160 countries. The company is focused on collaborating with stakeholders around the world to take healthcare Further, Together.

Any forward-looking statements are subject to risks and uncertainties such as those described in Medtronic's periodic reports on file with the Securities and Exchange Commission. Actual results may differ materially from anticipated results.

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1 Chugh S, Havmoeller R, Narayanan K, et al. Worldwide epidemiology of atrial fibrillation: a global burden of disease 2010 study. Circulation. 2014; 129:837-847.

2 Padeletti, L., Pürerfellner, H., Mont, L. et al. New-generation atrial antitachycardia pacing (Reactive ATP) is associated with reduced risk of persistent or permanent atrial fibrillation in patients with bradycardia: Results from the MINERVA randomized multicenter international trial. Heart Rhythm. 2015;12:1717-1725.

3 Boriani G, Manolis AS, Tukkie R et al. Effects of enhanced pacing modalities on health care resource utilization and costs in bradycardia patients: An analysis of the randomized MINERVA trial. Heart Rhythm 2015;12:1192-200.

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