

The Beat

A PUBLICATION OF THE CARDIAC ELECTROPHYSIOLOGY SERVICE AT NEWYORK-PRESBYTERIAN HOSPITAL/COLUMBIA UNIVERSITY MEDICAL CENTER



Welcome

This issue marks the inauguration of a new publication by New York-Presbyterian/Columbia University

Medical Center's Cardiac Electrophysiology Service. Advances in our field are happening at a rapid pace, improving outcomes and bringing better quality of life to patients with arrhythmias, heart failure, and other disorders. We're producing this publication to keep you abreast of these developments so you can direct your patients to the best cardiac care in New York City, right here at New York-Presbyterian Hospital.

Hasan Garan, MD

Director, Cardiac Electrophysiology Service
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MADIT-CRT Proves Value of CRT for Mild Heart Failure



Cardiac resynchronization therapy (CRT) decreases symptoms and rates of hospitalization and death among patients with New York Heart Association (NYHA) class III and

IV heart failure. Now MADIT-CRT investigators report that patients with relatively asymptomatic (class I or II) heart failure also benefit from CRT.

"Because of recent publicity about defibrillators that didn't work, practitioners and patients have been reluctant to accept them," says Frederick Ehlert, MD, Associate Clinical Professor of Medicine at NewYork-Presbyterian/Columbia. "Not only do these new data confirm that defibrillators are effective in patients with mild heart failure — they show that CRT can slow the progression of heart failure symptoms."



Image courtesy of Boston Scientific Corporation

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FDA Approves Multaq® (Dronedarone) for Atrial Fibrillation

The U.S. Food and Drug Administration has approved Multaq tablets (dronedarone) to help maintain normal heart rhythm in patients with atrial fibrillation

Multaq represents an attractive alternative treatment option to amiodarone, which has been the standard pharmacologic therapy for atrial fibrillation for years.

(AF) or atrial flutter (AFL). The drug is indicated to reduce the risk of cardiac hospitalizations in patients with paroxysmal or persistent AF or AFL, with a recent episode of AF/AFL and associated cardiovascular risk factors who are in sinus rhythm or who will be cardioverted.

Multaq may cause critical adverse reactions, including death, in patients

with recent severe heart failure. The drug's label contains a boxed warning cautioning that the drug is contraindicated in patients with NYHA Class IV

heart failure or NYHA Class II-III heart failure with a recent decompensation requiring hospitalization or referral to a specialized heart failure clinic.

In a multinational clinical trial with more than 4,600 patients (ATHENA), Multaq (400 mg twice daily) reduced cardiovascular hospitalization or death from any cause by 24 percent, when compared with placebo. Most of that

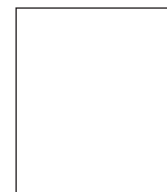
effect was due to reduced hospitalizations, especially those related to atrial fibrillation.

Multaq represents an attractive alternative treatment option to its chemical cousin, amiodarone — the standard pharmacologic therapy for atrial fibrillation. "Amiodarone has potentially devastating systemic toxicities that limit its use in select patients," explains Dr. Ehlert. "This study shows that dronedarone works very well without those toxicities. Its shorter half-life also means that it doesn't accumulate in tissue the way amiodarone does."

REFERENCE Hohnloser SH et al. Effect of dronedarone on cardiovascular events in atrial fibrillation. *N Engl J Med.* 2009;360:668-678.

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MADIT-CRT Proves Value of CRT for Mild Heart Failure continued

MADIT-CRT Study Design

Multicenter Automatic Defibrillator Implantation Trial-Cardiac Resynchronization Therapy (MADIT-CRT) is the largest randomized, NYHA Class I/II CRT-D trial: 1,820 patients at 110 centers in 14 countries. MADIT-CRT was designed to assess whether early intervention with CRT can slow the progression of heart failure.

Patients were eligible to participate if they had ischemic or nonischemic cardiomyopathy, an ejection fraction of 30 percent or less, a QRS duration of 130 msec or more, and NYHA class I or II symptoms. Researchers randomized 1,089 patients to CRT plus an implantable cardioverter-defibrillator (ICD) and 731 to an ICD alone.

A Reduced Risk of Heart Failure

After an average follow-up of 2.4 years, 25.3 percent of patients who received an ICD alone died or experienced nonfatal heart failure, versus 17.2 percent of those in the CRT-ICD group – a differ-

ence of 34 percent. The benefit of CRT was due largely to a 41 percent reduction in heart failure events (22.8 percent of ICD patients experienced heart failure versus 13.9 percent of CRT-ICD patients). The trial was halted in June 2009, shortly after only the 9th of 20 planned analyses, based on this statistically significant difference.

CRT-ICD was especially beneficial in women, who experienced a 63 percent reduction in heart failure events (versus a 24 percent decrease in men), and in patients with a QRS duration of 150 msec or more (52 percent risk reduction). CRT was equally beneficial for patients with ischemic or nonischemic cardiomyopathy.

Left ventricular ejection volume was reduced and ejection fraction increased to a greater extent in patients in the CRT-ICD group than among those who received ICD alone.

The incidence of adverse events was low and was generally similar between the two groups.

Conclusions

These data support the value of CRT devices for reducing the risk of heart failure events in patients with asymptomatic or mildly symptomatic heart failure. "It's important to identify patients at risk of heart failure events and make sure that these individuals receive defibrillators," adds Dr. Ehlert.

NewYork-Presbyterian/Columbia's electrophysiology experts specialize in the implantation of ICDs and other devices. We have an active pacemaker and ICD clinic to monitor patients with pacemakers or defibrillators. We can also make arrangements for remote monitoring of some devices so that patients do not have to visit the clinic in person as frequently.

REFERENCE Moss AJ et al. Cardiac-Resynchronization Therapy for the Prevention of Heart-Failure Events. *N Engl J Med*. Published online September 1, 2009.

Making an Appointment

The Cardiac Electrophysiology Service at NewYork-Presbyterian/Columbia has a long tradition of providing effective and comprehensive care for patients with abnormal heart rhythms. We offer a wide range of diagnostic and treatment services, including non-invasive risk stratification for arrhythmia, device implantation, laser lead extraction, and catheter ablation for arrhythmias, including atrial fibrillation and ventricular tachycardia.

To refer a patient to the Cardiac Electrophysiology Service, please call 212-305-1533.

The Cardiac Electrophysiology Service at NewYork-Presbyterian Hospital/Columbia University Medical Center
<http://www.cumc.columbia.edu/dept/cardiology/ep/index.html>

Directions to Columbia University Medical Center
http://www.cumc.columbia.edu/about/cumc_map.html