

CHANGING INDICATIONS IN ELECTROPHYSIOLOGY

By Pdraig G. O'Neill, MD, Medical Director for Mercy Electrophysiology

Recent clinical trials may reshape how physicians view the indications for implantable cardiac devices. Cardiologists at Mercy participated in a large multi-center clinical trial which demonstrated that patients with more mild cardiac symptoms may benefit from implantable Cardiac Resynchronization Therapy with ICD. They are also reevaluating which patients may benefit from an Implantable Cardioverter Defibrillator (ICD).

Cardiac Resynchronization Therapy (CRT) relies on leads to electrically stimulate the heart, synchronizing the contractions of the two ventricles. In addition to the two leads (right atrium and right ventricle) used by a common pacemaker or defibrillator, the CRT device has a third lead delivered thru the venous system to a branch vein of the left ventricle. Previous studies showed CRT could improve the condition

of many patients with moderate to severe heart failure. A new study which Mercy General participated in and which was published in the New England Journal of Medicine (NEJM Oct. 1, 2009) analyzed data from 1,820 patients with cardiomyopathy, left or right bundle branch block, an ejection fraction of 30% or less and class I or 2 heart failure symptoms. The study found a 41% reduction in the risk of heart failure events in patients who received CRT and concluded that CRT combined with ICD decreased the risk of heart failure events in relatively asymptomatic patients.

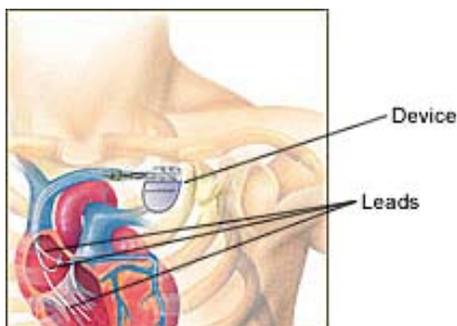
Additionally, the CRT device allows for remote monitoring – of blood pressure, daily weights and clinical symptoms remotely through the internet. That information is then communicated electronically to their physician, who can make interventions that will potentially preempt hospitalizations.

Another area where cardiologists have seen a shift in device indications is with Implantable Cardioverter Defibrillators (ICDs), which monitor for and correct episodes of rapid dangerous ventricular arrhythmias. A series of studies confirmed that ICDs significantly reduce the risk of sudden cardiac death due to arrhythmias, compared to medication alone.



Pdraig G. O'Neill, MD

Additionally, Jonathan Hemphill, MD, Medical Director for Mercy San Juan Medical Center Cardiac Cath Lab, says research data has shown that implanting devices too soon after myocardial infarction (MI) can be harmful. "A patient's Ejection Fraction (EF) may be less than or equal to 35% following a MI, however, it is reasonable to delay implant because this may improve with healing and the ICD may no longer be required," explains Dr. Hemphill. "In recent years, we have become more thoughtful of who is an optimal candidate for a defibrillator. The indications assume that the ICD recipient is receiving optimal medical
(continued on page 2)



CRT devices include an implanted ICD and three leads.

John Mallery, MD, (on the left) welcomes Arash Aryana, MD, for his Electrophysiology Update presentation at Sierra Nevada Memorial Hospital on April 27.



ELECTROPHYSIOLOGY

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therapy and has a reasonable expectation of survival with good functional status for at least a year.”

Clinical trials are constantly reshaping medicine – and that is evident at Mercy. It is this attention to the very latest in research findings that has allowed Mercy physicians to help an ever-changing demographic of patients experience the benefits of implantable devices and therapies. ♥

MERCY GENERAL IS FIRST IN REGION TO SAVE LIFE WITH TANDEMHEART®

This past March, Mercy General Hospital became the first hospital in the Sacramento region to successfully use the TandemHeart® circulatory support system to assist a patient after a life-saving cardiac procedure. The TandemHeart System is a short-term extra corporeal support device that can take over a large part of the pumping work normally done by the heart, helping to stabilize patients who have suffered a cardiac event.

Mercy’s first TandemHeart patient was an otherwise healthy, 47-year-old male who had suffered a major heart attack. Michael Chang, MD, Medical Director of Cardiovascular Services at Mercy General Hospital, opened the patient’s blocked artery with an angioplasty and stent procedure and then inserted

the TandemHeart assist device. The TandemHeart system, developed by CardiacAssist Inc., is threaded into position through blood vessels to temporarily assist the heart’s pumping function, helping deliver oxygenated blood to the body’s vital organs to prevent further tissue damage.

“The damage done to the patient’s heart was so extensive, we needed to provide additional support to assist his blood flowing normally throughout his body, and we inserted the TandemHeart,” said Dr. Chang. “This patient’s heart is still very weak but, with this device, we are keeping his circulatory system working and significantly reducing the potential damage to his other organs,” added Chang.

TandemHeart can be placed rapidly by either interventional cardiologists in a cath lab or by cardiac surgeons in an operating room to provide short-term circulatory support to patients requiring additional cardiac assistance. TandemHeart is now being used in nearly 90% of the “Best U.S. Heart & Heart Surgery Hospitals” as ranked by *U.S. News & World Report*, with nearly 1,800 procedures performed at nearly 150 hospitals across the United States.

Dr. Chang sees firsthand the impact the TandemHeart can have. “Mercy made the right choice in acquiring this technology. It has really made a difference in patient outcomes.” ♥

MERCY HEART & VASCULAR INSTITUTE

Cardiac Surgeons

John R. Dein, MD
Michael Ingram, MD
Richard J. Kaplon, MD
Robert Kincade, MD
James Longoria, MD
Allen S. Morris, MD,
Medical Director
Kapil Sharma, MD
Frank N. Slachman, MD
Henry L. Zhu, MD

Cardiac Electrophysiologists

Arash Aryana, MD
Peter Jurisich, DO
Padraig G. O’Neill, MD,
Medical Director
Stephen I. Stark, MD
Larry J. Wolff, MD

Cardiologists

Arvin Arthur, MD
Richard Axelrod, MD
Philip M. Bach, MD
Scott B. Baron, MD
David A. Bayne, MD

Raye L. Bellinger, MD
Larry E. Berte, MD
Rohit Bhaskar, MD
Dennis R. Breen, MD
Peter R. Callahan, MD
Michael L. Chang, MD,
Medical Director
Kenny Charn, MD
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Howard Dinh, MD
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Daniel C. Fisher, MD
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James M. Foerster, MD
Michael Fugit, MD
Kathryn Glatter, MD
Jonathan A. Hemphill, MD
Stanley C. Henjum, II, MD
Elizabeth Hereford, MD
Mehrdad Jafarzadeh, MD
Ajay Joshi, MD
Roy F. Kaku, MD
Brian Kim, MD
Joseph A. Kozina, MD
Edmond Lee, MD
Timothy Y. Lee, MD
Lee-Tzu Lin, MD

Reginald I. Low, MD
David J. Magorien, MD
Nick Majetich, MD
John A. Mallery, MD
Walt Marquardt, MD
Harvey J. Matlof, MD
Malcolm M. McHenry, MD
Stephen L. Morrison, MD
M. Michele Penkala, MD
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Vice President

CARDIACMONITOR

NEWS ON STATINS

By Nicole Lee, Pharm.D Candidate 2010

As guidelines change to emphasize strict control of cholesterol goals, there is a greater push to utilize higher doses of statins. Of note, the FDA released a safety announcement about the potential increased risk of rhabdomyolysis from high dose simvastatin. The FDA highlighted one study that showed more cases of myotoxicity with the 80mg dose. This number was highest among trials studying high doses of other statins. The package insert for simvastatin provides details of the conditions that increase the risk of rhabdomyolysis. Among the indications: patients of Chinese descent should not receive 80mg concurrently with niacin (more than 1 g/day), and other dose limitations should be used in combinations that include cyclosporine, gemfibrozil, amiodarone, verapamil, or diltiazem.

In other news, Kowa Pharmaceuticals will release Livalo® (pitavastatin), which is indicated for primary hyperlipidemia

The FDA highlighted one study that showed more cases of myotoxicity with the 80mg dose.

and mixed dyslipidemia as adjunctive therapy to diet. It is dosed 2- 4mg daily. Patients with renal impairment have a maximum dose of 2mg daily.

We are still waiting for a new version of the NCEP ATP guidelines. First promised in 2009, the ATP IV guidelines are now expected to be released in fall 2011. ♥

PATIENT GIVES MERCY HIGH MARKS

Recently a Mercy patient wrote a letter to Mercy Medical Group (MMG), expressing his gratitude for the care he received after going to the MMG Urgent Care on Q Street with chest pains and being referred to the cardiac team at Mercy General:

"Dr. Kathleen Quadro gave me an EKG and strongly suggested I check in to Mercy General for further testing. She even made the phone call to facilitate my check-in. I was admitted to the hospital, received an angiogram and placement of four stents... I believe that Dr. Quadro's insight and intervention saved my life."

– Timothy K. Johnston ♥

MERCY FOUNDATION: GRATEFUL PATIENTS & FAMILIES

Gratitude is a powerful expression of the heart. Mercy Foundation's Grateful Patients & Families Program enables patients to express appreciation and recognize their caregivers by making a gift to Mercy Foundation. Their support not only helps Mercy continue to provide high-quality care to the Sacramento region, but it also strengthens the Sisters of Mercy's ministries that benefit the less fortunate in our community.

Grateful patients and their loved ones may designate their gift to a specific Sisters of Mercy ministry or the Mercy facility where they received care. One-hundred percent of contributions go directly to the area the donor chooses. For more information about our Grateful Patients & Families Program, please contact Mercy Foundation at 916.851.2700. ♥



SPANOS CENTER WORK CONTINUES

Construction on the \$150 million Alex G. Spanos Heart & Vascular Center, located on the interior of the Mercy General Hospital campus, is underway. The new facility is scheduled for opening mid-2012 and will house state-of-the-art technology, including new cardiac operating rooms, hybrid operating rooms and a biplane angiography suite.

Many meetings with the neighbors, the City of Sacramento and the community, resulted in a collaborative design for the center that blends the established East Sacramento community with the new construction on the hospital campus.

The landscape master plan features a quarter-acre park with a water fountain, bench seating, and drinking fountains for pedestrians as well as pets. There are three other "plaza" areas which will welcome the community into the interior of the hospital campus. Private patient rooms, a new hospital chapel and an external healing garden near J Street will offer additional patient comforts to continue to legacy of compassionate care at Mercy General Hospital. ♥

MERCY RECEIVES CARDIAC DESIGNATION

Both Mercy General Hospital and Mercy San Juan Medical Center are now designated Cardiovascular STEMI (ST Elevated Myocardial Infarction) Receiving Centers (SRC). A SRC is the preferred destination for patients who access 911 suffering a heart attack, as determined by responding paramedics. The local EMS designates such centers based on a facility's interventional, emergency cardiac catheterization capabilities. ♥



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HEADLINE



FEATURED SPEAKERS:

Miguel Valderrabano, MD
Methodist DeBakey Cardiology Assoc.,
Houston, TX

Shepal Doshi, MD
St. John's Health Center Pacific Heart
Institute, Santa Monica, CA

Gregg Fonarow, MD
UCLA Medical Center

Timothy Icenogle, MD
Sacred Heart Medical Center, Spokane, WA

Sheldon Litwin, MD
University of Utah School of Medicine

Raj Makkar, MD
Cedars-Sinai Heart Institute

Kelly Tucker, MD
Orange Heart Institute & Research Center,
Los Angeles, CA

UPCOMING: CME Symposium

Mark your calendars to attend:
20th annual Mercy Heart & Vascular Institute
symposium

CONCEPTS & CONTROVERSIES IN

CARDIAC TREATMENT.

2010 Cardiology & Electrophysiology

Symposium

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Hyatt Regency Sacramento

Cost:

\$120 All physicians

\$85 All Mercy technologists, nurses,

dietitians, pharmacists

\$100 All Non-Mercy technologists, nurses,

dietitians, pharmacists

To register or request a brochure, call Mercy
Heart & Vascular Institute at 916.733.6966 or

e-mail daniel.sutherland@chw.edu.