

CARDIAC MONITOR

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Atrial Fibrillation: Increases in Treatment Options

Gearoid O'Neill, MD

Atrial fibrillation is the most common type of arrhythmia, affecting more than two and a half million people. The prevalence of atrial fibrillation (AFib) is predicted to grow to approximately 16 million people by the year 2050, based on forecasts by The Advisory Board Company, Cardiovascular Roundtable in Washington DC.

The prevalence of AFib increases with age, with the highest incidence in people in their late 70s. Atrial fibrillation can cause thromboembolic events and changes in hemodynamics which can increase morbidity, mortality and healthcare costs. When stroke occurs in AFib patients, they

tend to be more disabling and cause a higher risk of death (50% mortality at one year). Preventing serious side effects from AFib will improve patients' lives and ultimately reduce related healthcare costs.

Developments in Treatment of AFib

Treatment of AFib is focused on preventing strokes as well as resetting the heart rhythm and controlling the heart rate. Resetting the heart rhythm can be accomplished through cardioversion using either medication, electrical shock, or ablation techniques. Heart rate control is usually achieved with medication. Sometimes, ablation of the AV node is

undertaken along with placement of a pacemaker.

New treatment options are available that may provide a potential cure for AFib. The key feature of these therapies is electrical isolation of the pulmonary veins using ablation technology, either radiofrequency ablation or cryoablation.

Radiofrequency therapy involves inserting a catheter through the femoral vein to the left atrium and delivering point to point thermal lesions at the atrial side of the vein ostia. Cryoablation uses a balloon catheter to briefly occlude the

Continued, page 3 "AFib Treatment"

Mercy General Hospital Receives AFib Certification

In early January Mercy General Hospital received Certification in Atrial Fibrillation (AFib) from the Society of Cardiovascular Patient Care (SCPC), an honor which recognizes the hospital's commitment to providing the highest quality care possible to patients living with AFib.

The SCPC promotes quality improvement processes through accreditation of hospitals providing comprehensive cardiovascular care. Preparing for certification requires hospitals to evaluate their current care processes for patients with atrial fibrillation. Mercy

General Hospital's Atrial Fibrillation multidisciplinary task force developed a specific order sets and algorithms for New Onset Atrial Fibrillation which includes the preferred medications for rate and rhythm control. In addition, CHA2DS2-VASC and HAS-BLED scores are used to assist the physician in determining the risk of stroke and to guide anticoagulation therapy and risk for major bleeding associated with oral anticoagulation in a patient with AFib.

The outcome of becoming a certified center is to provide a disease-centered approach through a coordinated and comprehensive

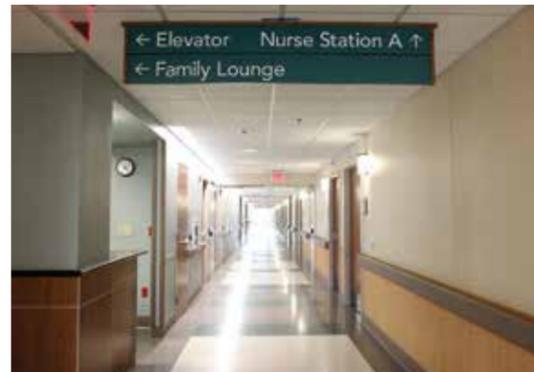
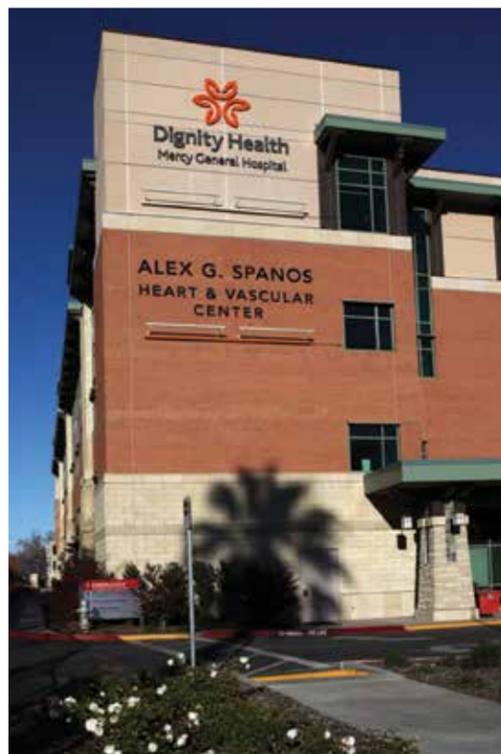
multidisciplinary methodology including outpatient and inpatient care to effectively diagnose, manage and treat patients with AFib. The focus is across the entire continuum of care, from community, to EMS, to Emergency Department, to acute care setting and outpatient and ongoing care.

Mercy General Hospital is the largest arrhythmia management center in Northern California. Mercy General is already recognized as an Accredited Chest Pain Center by the SCPC (as is Woodland Healthcare).



Alex G. Spanos Heart & Vascular Center Update

Planning is underway at Mercy General Hospital for the move into the new Alex G. Spanos Heart & Vascular Center. The 123,000 square foot facility will be the new main entrance and will house the hospital's cardiac ICU; cardiopulmonary care unit; cardiac and pulmonary rehab; 71 private patient rooms; cardiac surgery operating rooms, including a state-of-the-art hybrid operating suite; and a new chapel.



*Top row: building lobby and hybrid cardiac surgery suite;
Middle row: lobby registration area and patient room;
Bottom row: chapel and patient care unit.*

The information included in this newsletter is provided as an educational service. Cardiac Monitor highlights the latest news in cardiac and vascular care and features helpful information about diet and exercise, medication and prescription updates, upcoming educational opportunities and profiles of Mercy services. Distribution of Cardiac Monitor is for patients who are active participants in any of the Cardiovascular Disease Management programs, or who have had a recent hospitalization for a cardiovascular-related condition. If you wish to be removed from the mailing list, please call 916.733.6966.

MHVI Research Update: TRANSFORM Clinical Trial

A new class of rapid-deployment aortic valves has emerged with the potential to simplify aortic valve surgery and reduce cardiopulmonary bypass times. One such valve, the EDWARDS INTUITY Aortic Valve System, is undergoing evaluation in a clinical trial called the TRANSFORM Clinical Trial. The INTUITY Valve System has been designed to reduce the implant time by minimizing the number of sutures required and is combined with a balloon expandable frame to further secure the valve in place.

The TRANSFORM trial is for people with a damaged aortic valve (aortic valve stenosis) whose doctors believe they may benefit from receiving a bioprosthetic (artificial) heart valve. Those that are being referred for surgical replacement of their aortic valve (open heart surgery) would be potential candidates for this study. The Dignity Health Heart and Vascular Institute is currently recruiting participants for this clinical trial, led by Allen Morris, MD, and including Kapil Sharma, MD, Frank Slachman, MD, and John Dein, MD. For more information, contact Research Coordinators Sandra Brainerd, RN at 916-453-4161 or Deirdre Harris, RN at 916-733-6290.

MGH Becomes First in State to use S-ICD

In October, Mercy General Hospital became the first California hospital to implant a new innovative therapy to treat potentially lethal heart rhythms. Dr. Gearoid O'Neill implanted the device, known as the S-ICD system, successfully into a female patient who has recovered and is doing well.

The S-ICD is the world's first subcutaneous implantable cardioverter defibrillator used to treat patients at risk for sudden cardiac arrest (SCA). Unlike traditional ICDs, the S-ICD works without placing electrodes (or leads) into the heart itself but still offers the same protection as the traditional ICD. The S-ICD is implanted just below the skin using just two or three small incisions. The S-ICD is implanted in the lateral thoracic region of the body and uses a subcutaneous electrode instead of transvenous leads to both sense and deliver therapy.

SCA occurs when the heart abruptly stops functioning. SCA kills nearly 400,000 Americans every year and approximately 850,000 Americans are believed to be at risk for SCA.

Patient-Centered Approach to Antithrombotic Therapy

By James Palmieri, PharmD

Current guidelines* recommend antithrombotic therapy (AT) to prevent thromboembolism in most patients with atrial fibrillation. However, a variety of patient-centric issues dictate how, and even whether, to anticoagulate these patients. Shared decision making between patient and provider increases the likelihood that AT will be successful.

In a recent article** in *Cardiosource.org*, Dr. Andrew Freeman reminds us of the variety of patient issues that govern the choices for AT. Things to take into consideration in addition to thromboembolic risk include cost, transportation issues, language and

cultural barriers, health beliefs, frailty, renal and hepatic function and concomitant drug therapy, among others. In essence, the guidelines are only the beginning of the story.

As with evidence-based guidelines that recommend clinical decision making, Dr. Freeman makes the additional point that our clinical training and judgment should only guide the patient choices to be made and that it is a shared decision between patient and provider that will lead to the best possible outcome. For those patients who are ambivalent, thorough education of the pros and cons of treatment delivered in a language that the patient understands

AFib Treatment (continued from first page)

pulmonary vein and deliver liquid nitrogen to the balloon under pressure, freezing the attached atrial tissue and inhibiting AFib triggers from the pulmonary veins. For patients undergoing open heart surgery another option is MAZE surgery, in which vein isolating and other lesions are delivered under direct vision using a combination of scalpel, radiofrequency and cryoablation.

Mercy General Hospital continues to participate in pivotal clinical trials to study the best treatment options for atrial fibrillation. During the development of the new novel anticoagulants (dabigatran, apixiban, and rivoroxaban), Mercy enrolled patients in these important trials that led to FDA approvals for these medications. Recently Mercy General Hospital participated in a research trial using a new laser delivery system with direct visualization via endoscope to achieve isolation of the pulmonary veins. And Mercy is currently enrolling patients in a new multicenter research trial to evaluate the benefit of concomitant renal artery denervation (RDN) when treating Afib patients with cardiac ablation.

is essential, as are goal setting, motivational interviewing, and a patient-specific monitoring mechanism.

Consensus guidelines remain an important starting point for patient-centered care. This approach is an evolution in population-based medical management that encourages patient self-management and patient-provider communication, and promotes success.

*Circulation. 2013; 127: 1916-1926 (published online before print April 1, 2013)

** AFibProfessional.Cardiosource.Org: Hot Topics – Patient-Centered Anticoagulation: Are You Getting the Best Results? By Andrew M. Freeman, MD, FACC (October 3, 2013)

Vascular Surgeon Joins MHVI



Mercy Heart & Vascular Institute welcomes a new Vascular Surgeon to its team. Shannon Beal, MD, is a graduate of the University of

Tennessee Health Science Center and completed her residency at the University of California – Davis. She completed fellowship training at Emory University. Dr. Beal’s office is at Mercy Medical Group, 3000 Q Street.

Two hundred medical professionals attended the 23rd “Cardiology & Electrophysiology: Concepts and Controversies” symposium in October. Shown here: Puja Mehta, MD; Wayne Levy, MD; Scott Baron, MD; John Kane, MD; and Gearoid O’Neill, MD.



Referral Resources

The following programs are available for physicians to refer their patients to and to help in managing heart disease.

Heart Smart and CHAMP®	916.564.2880
Cardiac Rehabilitation	
Mercy General Hospital	916.453.4521
Mercy San Juan	916.537.5296
Sierra Nevada Memorial Hospital	530.274.6103
Pulmonary Rehabilitation / Smoking Cessation	
Mercy General Hospital	916.453.4813
Mercy San Juan	916.537.5299
Sierra Nevada Memorial Hospital	530.274.6084
Cardiac Support Group	916.453.4514
HealthScreen	916.733.6245
HeartCaring	916.733.6245
Adv. Heart Disease Clinic	916.453.4768

WOODLAND HEALTHCARE
SIERRA NEVADA MEMORIAL HOSPITAL
METHODIST HOSPITAL OF SACRAMENTO
MERCY SAN JUAN MEDICAL CENTER
MERCY HOSPITAL OF FOLSOM
MERCY GENERAL HOSPITAL
mercyheartssacramento.org
1.877.9HEART9
Sacramento, CA 95816
3810 J Street