

Cardiac Monitor

Save the Date: Education Opportunities

Join Dignity Health Heart and Vascular Institute of Greater Sacramento for a special CME opportunity featuring presentations from some of our top cardiovascular experts.

Cardiovascular Update 2016

Thursday, March 31 | 5:30 – 8:30 p.m.
Hilton Sacramento Arden West Hotel

To register for this event, visit dignityhealth.org/GSSACardioCME.

Cardiology & Electrophysiology Symposium

Mark your calendar now for the 26th Annual Cardiology & Electrophysiology Symposium: Concepts & Controversies.

Saturday, Oct. 29, 2016 | 7 a.m. – 4:30 p.m.
Hyatt Regency Sacramento

Registration and event details will be available this summer.

Referral Resources

CHAMP®	916.564.2880
Cardiac Rehabilitation	
Mercy General Hospital	916.453.4521
Mercy San Juan	916.537.5296
Sierra Nevada Memorial	530.274.6103
Woodland Memorial	530.662.4964 <i>ext. 4531</i>
Pulmonary Rehab./Smoking Cessation	
Mercy General Hospital	916.453.4268
Mercy San Juan	916.537.5299
Sierra Nevada Memorial	530.274.6084
Woodland Memorial	530.662.4964 <i>ext. 4531</i>
Cardiac Education Forum & Support Group	916.453.4521
HeartCaring	916.733.6245
Adv. Heart Disease Clinic	916.453.4768

Cardiac Monitor

WINTER 2016 / FOR PHYSICIANS

Mitral Valve Disease: New Options

More than five million Americans are diagnosed with heart valve disease every year. A segment of that group will have disease affecting their mitral valve.

When the mitral valve does not function properly, it allows blood to flow backwards into the left atrium, reducing the amount of oxygen-rich blood being pumped out to the body.

“Although many people with mitral valve disease experience no symptoms, others may experience fatigue or shortness of breath due to the reduced flow of oxygenated blood,” explains Michael Chang, MD, Dignity Health Heart and Vascular Institute Cardiologist and Medical Director. “Left untreated, severe cases of mitral valve disease can lead to life-threatening conditions such as heart failure or arrhythmia. At Dignity Health Heart and Vascular Institute, we are fortunate to be able to offer patients a wide breadth of treatment options.”

Understanding Types of Mitral Valve Disease

Mitral valve disease can take several forms:

Mitral Valve Stenosis – in which the valve opening narrows, restricting the blood flow that can pass through to the left ventricle.

Mitral Valve Prolapse – in which the flaps on the valve bulge instead of close tightly, preventing the valve from closing completely and potentially causing regurgitation (backward flow) of blood.

Mitral Valve Regurgitation – in which blood leaks from the valve and flows backward into the left atrium.

Recognizing Mitral Valve Disease Symptoms

In general, symptoms of mitral valve disease develop gradually over time. Symptoms, which may worsen when the body is dealing with extra stress, such as during infection or pregnancy, may include cough; shortness of breath (especially when lying down on back or exercising); fatigue; lightheadedness; pain or tightness in chest; and irregular or rapid heartbeat.

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New Valve Treatments a Success

Cliff Newland had been healthy his whole life, enjoying hunting and fishing even as he celebrated his 90th birthday. “I’ve always said, age is just a number,” says Newland, a retired engineer. “It’s about how you feel, how you are, and how you live.”

But last July, he suddenly began feeling short of breath and lethargic. “My wife was a nurse for 42 years and she looked at me and said, ‘You don’t look so hot.’ And I said, ‘Well, I don’t feel so hot.’”

Newland’s wife called the paramedics, who transported him to Dignity Health Sierra Nevada Memorial Hospital. He was then transferred to Mercy General Hospital where doctors found that both his aorta and his mitral valve were malfunctioning.

At Mercy General, Dr. Frank Slachman, cardiac surgeon, and Dr. Michael Chang, cardiologist, replaced Newland’s aortic valve using Transcatheter Aortic Valve Replacement (TAVR). This minimally invasive procedure uses a catheter

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A Message from Mercy Foundation

Gratitude is a powerful expression of the heart. Patients and their families are often overcome with thankfulness for the care they have received at the hands of our physicians, nurses and staff.

You can help patients and their families find meaningful ways to express gratitude by listening for their interest and connecting them with Mercy Foundation. Thanks to the generosity of our grateful patients and families, we can enhance the care and services provided to our community.

To connect grateful patients and family members to Mercy Foundation, call Mercy Foundation at 916.851.2700 or use the 24/7 direct referral hotline: 916.851.2880.

Research: Reducing Low Cardiac Output Syndrome after Surgery

Deirdre Harris RN, BSN, Clinical Coordinator, CV Research
Dignity Health Heart and Vascular Institute

Mercy General Hospital is participating in an exciting study with Allen Morris, MD, as the Principal Investigator. This study is titled LEVO-CTS: A Double-Blind, Randomized, Placebo-Controlled Study of Levosimendan in Patients With Left Ventricular Systolic Dysfunction Undergoing Cardiac Surgery Requiring Cardiopulmonary Bypass.

Patients who have a low ejection fraction going into cardiac surgery are at a higher risk for developing a “low cardiac output syndrome” or “LCOS.” The purpose of this study is to determine if the use of Levosimendan will reduce the occurrence of death, use of mechanical heart assist devices, perioperative MI, and need for dialysis.

Levosimendan is a promising new agent for the perioperative treatment of cardiac surgery patients to maintain hemodynamic performance and preserve myocardium function and prevent end organ damage.

This study is evaluating the efficacy of Levosimendan compared with placebo in reducing the co-primary endpoints of 30-day composite of all-cause death or use of mechanical assist device (IABP, LVAD or ECMO) or the composite event rate of all-cause death, perioperative MI, need for dialysis, or use of mechanical assist (IABP, LVAD or ECMO) in subjects with reduced ejection fraction undergoing cardiac surgery on cardiopulmonary bypass.

Levosimendan is a calcium sensitizer; it increases the sensitivity of the heart to calcium, thus increasing cardiac contractility without a rise in intracellular calcium. Levosimendan

exerts its positive inotropic effect by increasing calcium sensitivity of myocytes by binding to cardiac troponin C in a calcium-dependent manner. Unlike other positive inotropes, Levosimendan is not associated with substantial increases in oxygen demand.

Previous studies done with Levosimendan and cardiac surgery patients suggest that Levosimendan protects the myocardium and improves tissue perfusion, while minimizing tissue damage during the reperfusion period.

Currently there are no other drugs indicated for the prevention or treatment of low cardiac output syndrome after cardiac surgery. We hope that by participating in this trial we will open up more opportunities for patients with low ejection fraction undergoing cardiac surgery.

Welcome to New Physician

Dignity Health Heart and Vascular Institute welcomes cardiologist Tejpal Randhawa, MD. Dr. Randhawa joined Mercy Medical Group and will be practicing out of their Midtown office.



Dr. Randhawa graduated from Ross University School of Medicine in the West Indies. He completed his internship and residency at Mercy Hospital and Medical Center in Chicago and underwent fellowship training at the University of New Mexico, Albuquerque, School of Medicine.

Mitral Valve Disease (continued from first page)

Mitral Valve Treatment Options

Treatment of mitral valve disease depends on the severity of disease and typically is not necessary for mild cases. In some cases, medications can reduce symptoms but medication cannot reverse the disease.



The MitraClip, used in transcatheter mitral valve repair

For more progressed cases, Dignity Health Heart and Vascular Institute offers a variety of surgical and catheter-based treatment options. The therapy for an individual patient is based on a variety of clinical factors, including surgical risk, severity and cause of the mitral valve disease, co-morbidities, age, and patient preference. These options include traditional surgical repair, as well as robotic-assisted surgery (using the da Vinci® Xi Surgical System) and transcatheter mitral valve repair (TMVR), both minimally invasive options.

Traditional Open Surgery: In this procedure, surgeons either repair or replace the mitral valve, depending on the degree of damage through a sternotomy approach. For valve replacements, either a mechanical or biological (human or animal) valve may be used.

Robotic-Assisted Surgery: By using the da Vinci® Xi Surgical System, surgeons are able to gain access to the heart through small chest incisions instead of a sternotomy approach. The robot provides exceptional precision and vision of the mitral valve, and either a mechanical or biological valve is implanted. Because the procedure is minimally invasive and involves only several small incisions, patients experience a quicker recovery, reduced blood loss and pain, and are able to return to daily activities sooner than with a traditional open procedure.

Transcatheter Mitral Valve Repair (TMVR): Dignity Health Heart and Vascular Institute is among a select group of providers nationwide now offering patients living with severe mitral valve regurgitation who are at very high risk or who have not been surgical candidates this new treatment option. TMVR uses the MitraClip® device which is inserted via the femoral vein into the heart and clips together the anterior and posterior leaflets of the mitral valve, reducing the mitral regurgitation.

“TMVR with MitraClip® is truly revolutionizing treatment of severe mitral valve disease in select patients,” says Dr. Chang. “In fact, one study found a 73% reduction in heart failure hospitalizations in patients who underwent TMVR.” Like robotic-assisted treatment, TMVR is a minimally invasive procedure that reduces a patient’s risk and side effects.

The multidisciplinary Structural Heart Valve Team at Dignity Health Heart and Vascular Institute’s Advanced Heart Disease Clinic (AHDC) determines which treatment option is most appropriate for each individual through a thorough evaluation and assessment. For more information or to make a referral, call the AHDC Clinic at 916.453.4768.

Who is Eligible for Transcatheter Valve Procedures?

Both transcatheter aortic valve replacement (TAVR) and transcatheter mitral valve repair (TMVR) are for patients who are high-risk or inoperable for traditional open procedures, due to age, frailty or underlying health issues that would make open heart surgery too risky. To learn more, contact the Advanced Heart Disease Clinic at 916.453.4768.

Treatment Offers Hope
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through the groin to implant a replacement valve. For his faulty mitral valve, several months later, Newland underwent a separate minimally invasive procedure called transcatheter mitral valve repair (TMVR) [see cover article].

In the past, a diagnosis like Newland’s would have required open heart surgery, however because of his age Newland would be considered high-risk or inoperable for such an operation. Instead, he qualified for these new, less invasive treatments.

“With both procedures, I was out of the hospital pretty quickly and recovery really wasn’t a problem,” says Newland. “I feel great – I’m back to hunting and fishing. And I’m doing calculus and physics from my old Navy textbooks to keep my mind sharp!”

A sharp mind to match his once-again thriving body.

Transcatheter Mitral Valve Repair (TMVR)



Dignity Health Heart and Vascular Institute of Greater Sacramento is among a select group of providers in the nation offering patients Transcatheter Mitral Valve Repair (TMVR)—a minimally invasive procedure to treat moderate-severe to severe mitral regurgitation.



What is TMVR?

TMVR is a minimally invasive procedure that treats severe mitral regurgitation without requiring open heart surgery. The MitraClip® is inserted via the femoral vein. The anterior and posterior leaflets of the mitral valve are clipped together, resulting in a reduction in the mitral regurgitant jet.

Why TMVR for your patients?

- For patients who are high risk or inoperable for traditional open mitral valve repair
- Faster recovery times
- Less pain
- Better quality of life after the procedure

Why refer your patients to the Advanced Heart Disease Clinic for evaluation and treatment?

The multidisciplinary team at the Advanced Heart Disease Clinic has extensive experience in minimally invasive cardiac surgical techniques, including TAVR and daVinci.

All TMVR procedures are performed in a hybrid catheterization lab, using general anesthesia and advanced trans-esophageal echocardiography.

A 73% reduction in heart failure hospitalizations has been documented in patients who had a transcatheter mitral valve repair.*

How to Refer a Patient

To refer a patient to Dignity Health Heart and Vascular Institute's Advanced Heart Disease Clinic, call 877.999.8287 or 916.453.4768

Michael Chang, MD
Joseph Kozina, MD
Allen Morris, MD
Frank Slachman, MD

Valve Coordinators

Gina Collier, ACNP
Sue Harriman, RN
Marci McElman, RN
Leigh-Ann Wright, RN

"With TMVR, I was out of the hospital quickly and recovery wasn't a problem at all. I'm back to hunting and fishing!"

— 94-year old TMVR patient

*Lim, DS et al. JACC (2013). doi:10.1016/j.jacc.2013.10.021



National Leadership and Excellence in Cardiovascular Care

The network of cardiovascular centers that comprise the Dignity Health Heart and Vascular Institute of Greater Sacramento provides world-class cardiovascular care. Dignity Health Heart and Vascular Institute has achieved the highest rankings from the nation's leading reporting agencies. The long list of accolades is a clear demonstration of Dignity Health Heart and Vascular Institute's excellence in cardiac surgery, cardiac intervention, heart failure, heart attack, critical care and rehabilitation.



Mercy General Hospital is a recipient of the Healthgrades Cardiac Surgery Excellence and Critical Care Excellence Awards (2016), as well as the Coronary Intervention Excellence Award (2015). *Mercy General* is also a Five-Star Recipient for treatment of Coronary Bypass (14 years in a row – 2003-2016); Treatment of Heart Attack and Treatment of Heart Failure.

Healthgrades has named both *Mercy San Juan Medical Center* and *Mercy Hospital of Folsom* among the 100 Best Hospitals for Critical Care (2016). In addition, *Mercy San Juan* is also a 2016 Five-Star recipient for treatment of heart attack, heart failure and pacemaker procedures.

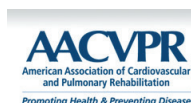
Methodist Hospital of Sacramento earned Health Grades' Critical Care Excellence Award and is a Five-Star recipient for treatment of heart attack (2016).

Sierra Nevada Memorial Hospital is a Recipient of Healthgrades' Five-Star Treatment of Heart Attack honor (2015 - 2016).



The Society of Cardiovascular Patient Care (SCPC) has awarded *Mercy General Hospital* Certification in Atrial Fibrillation, recognizing the hospital's commitment to providing the highest quality care to patients living with AFib, including community education, emergency care, acute care and outpatient care.

But the real testament is the number of lives saved and the community's improved cardiovascular health achieved through prevention, treatment and research. For a patient referral, call the Dignity Health Heart and Vascular Institute of Greater Sacramento at 916.453.4768.



The Cardiac Rehabilitation Programs at *Mercy General Hospital*, *Mercy San Juan Medical Center* and *Sierra Nevada*

Memorial Hospital have been recognized with certification through the American Association of Cardiovascular and Pulmonary Rehabilitation.



Designated
BlueDistinction®
Center
Cardiac Care

Mercy General Hospital and *Mercy San Juan Medical Center*

are Blue Cross/Blue Shield Distinction Centers for Cardiac Care, having demonstrated best practices in quality for cardiac surgery, intervention, electrophysiology and medical care.



Mercy General Hospital and *Woodland Healthcare* are recognized by the Society of Chest Pain Centers as Accredited Chest Pain Centers.



Dignity Health Heart and Vascular Institute's Ventricular Assist Device Program and CHAMP® (Congestive Heart Active Management Program) have earned the Gold Seal of Approval for disease-specific care from The Joint Commission.



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