

Device treats patients with mitral valve disease who are not candidates for open-heart surgery



A breakthrough percutaneous mitral regurgitation (MR) therapy now available at UCLA — known as the MitraClip transcatheter mitral valve repair procedure — significantly improves symptoms, disease progression and quality of life for people who are at prohibitive risk for an invasive procedure.

Until recently, the only way to repair mitral valves was through open-heart surgery, but the presence of co-morbidities, frailty or advanced age left many patients with MR — the backflow of blood into the heart due to a faulty mitral-valve — without effective treatment options.

Approved by the Food and Drug Administration (FDA) in 2013, the MitraClip remains the only effective treatment for patients with mitral-valve disease who are not good candidates for traditional surgery.

One in 10 people 75 and over affected by mitral regurgitation

Healthy valves function as one-way gates that keep blood moving forward through the heart. Mitral regurgitation — the most common type of heart-valve insufficiency — occurs when the leaflets of the mitral valve do not close completely, allowing blood to

Major advance in treatment of mitral valve regurgitation

“Patients treated with the MitraClip device can have dramatic improvements when their mitral regurgitation is reduced and their heart can pump blood more efficiently,” says Richard J. Shemin, MD, chief of cardiac surgery and co-director of the UCLA Cardiovascular Center. “Many of these patients have suffered with MR without an effective treatment option because they are prohibitive-risk surgical candidates. Now with the MitraClip, we are seeing results that are remarkable, especially when one considers that most of these patients are elderly and with significant morbidities.”

“An ongoing environment of innovation, where the latest therapies are offered and cutting-edge techniques and devices are developed and tested, is integral to cardiac care at UCLA,” says Ravi Dave, MD, clinical professor of cardiology and director of UCLA Interventional Cardiology. “We’re excited to be one of only a handful of centers in the U.S. with the resources and expertise to offer the MitraClip. After spending just two or three nights in the hospital, a patient can return to a more full and active life.”

leak back from the main pumping chamber into the lung circuit. As a result, the heart works harder to provide adequate blood flow to the body and the backup of blood into the lungs causes breathing difficulty.

Mitral valve regurgitation can be a debilitating, progressive and life-threatening disease that damages the cardiac muscle and raises the risk of arrhythmia, stroke and heart failure. More than 4 million Americans suffer from severe MR. Another 1.7 million new cases are added each year. Nearly one in 10 people aged 75 years and older is affected.

Symptoms include shortness of breath, extreme fatigue, lightheadedness, foot and leg swelling and palpitations. Medications are limited to symptom management and do not stop the progression of the disease.

Percutaneous mitral-valve repair

Aided by state-of-the-art cardiac imaging, the MitraClip is delivered via catheter to the patient's heart and mitral valve through the femoral vein. Once positioned and implanted, the tiny clothespin-like device works by permanently clipping together a portion of the leaflets of the valve. The backflow of blood is reduced or eliminated, allowing the heart to pump more efficiently.

Multiple clinical trials, published reports, and registries of patients treated with the MitraClip have demonstrated a positive safety profile, reduction in mitral regurgitation, improvement in symptoms and quality of life and decrease in hospitalizations for heart failure, even in some of the most ill and debilitated patients.

Analysis of a 2013-2014 nationwide MR registry involving 564 patients showed the MitraClip success rate, as defined by a reduction in regurgitation to a level of "moderate" or less, to be 91.8 percent.

Team approach provides comprehensive care

UCLA's dedicated mitral-valve team includes cardiac surgeons, interventional cardiologists, advanced heart-failure specialists, anesthesiologists, echocardiography sonographers, nurse practitioners and catheterization-lab staff, all working in close partnership with patients, their families and referring physicians to coordinate a care plan designed to offer the best outcomes.

A bi-monthly conference conducted in the Cardiovascular Center allows access to the entire mitral-valve team in one visit and location. Individuals are encouraged to ask questions and a detailed review of each patient's clinical prognosis and personal preferences is discussed. The team offers a same-day consensus and joint recommendation for the most effective treatment strategy.

The MitraClip procedure takes about two hours and is performed under general anesthesia. A typical hospital stay is about three days. The clinical improvement in symptoms due to increased circulation efficiency can be immediate.

Participating Physicians

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