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CURING ATRIAL FIBRILLATION

Even the healthiest heart skips a beat now and then.

But for people with atrial fibrillation (AF), an irregular heart rhythm can be a constant companion, putting them at risk for stroke and congestive heart failure.

Caused by random electrical impulses that surge across the heart, AF can make the upper two chambers of the heart (atria) quiver instead of contract. In response, the ventricles (lower chambers)

also beat erratically. As a result, blood pools in the atria. If a clot forms, a stroke can occur.

Mini-Maze. Treatment for AF traditionally has focused on medications such as blood thinners and drugs to control the heart's rhythm and rate. But now, a new approach to an older surgical method is offering hope for a medication-free life to patients with AF.

Called the Wolf mini-Maze procedure, the new operation requires a small incision on both sides of the chest. Guiding a tiny video camera through one of these openings, the surgeon then introduces a radiofrequency-powered clamp. It's used to burn precise lines across the left atrium, creating scar tissue in areas where faulty impulses are known to originate. This isolates the out-of-control electrical signals from the rest of the heart. During the procedure, the atrial appendage, a small flap of tissue in which 90 percent of all heart-related blood clots form, is also removed to reduce the chance of a stroke.

A new procedure is offering hope to patients with atrial fibrillation.

"This minimally invasive procedure has transformed the lives of many patients with long-standing AF," says **Dr. Amir Abolhoda**, a University of California, Irvine Healthcare cardiac surgeon who performs the procedure. "It's cured them of the condition, freed them from medications and allowed them to overcome the depression and anxiety that's often associated with this problem."

"The older version of this operation is done mostly in conjunction with other open-chest surgeries. But the mini-Maze

can be performed as a stand-alone procedure for patients with no structural heart disease," says **Dr. Jeffrey Milliken**, a cardiothoracic surgeon at UC Irvine Healthcare. He stresses that treatment for AF and other heart conditions requires the close collaboration of internists, cardiac surgeons and cardiologists. "Providing patients with a convenient and integrated way to obtain all their cardiovascular care is the focus of the Comprehensive Cardiovascular Care Center being established at UC Irvine Medical Center," he says.

A nonsurgical solution. Another possibility for patients with AF is a nonsurgical procedure called catheter ablation. "Although chaotic electrical impulses can originate anywhere in the upper chambers of the heart, they often begin in the pulmonary veins or the region where these vessels intersect with the atrium," says **Dr. Subramaniam Krishnan**, a cardiologist specializing in abnormal heart rhythms. With catheter ablation, these areas are isolated from the rest of the heart by a series of radiofrequency-generated lesions created with a flexible electrode-tipped catheter.

The device is guided through a puncture in the groin to the area of the heart responsible for generating the random electrical signals. "Catheter ablation and the mini-Maze procedure are revolutionary advances in atrial fibrillation therapy," says Krishnan, who directs UC Irvine Healthcare's cardiac arrhythmia service. "With high success rates, they have the potential of freeing patients from a lifelong regimen of medication and relieving them from the burden of AF."

For an appointment, call the cardiovascular contact center at 714.456.6699.

