NewYork-Presbyterian
Weill Cornell Medical Center

January 2010

The Beat

A PUBLICATION OF THE CARDIAC ELECTROPHYSIOLOGY LABORATORY AT NEWYORK-PRESBYTERIAN/WEILL CORNELL MEDICAL CENTER

Welcome

This issue marks the launch of a new publication by the Cardiac Electrophysiology Laboratory in the Division of Cardiology at NewYork-Presbyterian/Weill Cornell Medical Center. Since we first opened our doors in the 1980s, our service has grown into one of the busiest and most experienced laboratories in the country. We offer the full complement of cardiac rhythm management with diagnostic and therapeutic interventions utilizing the most advanced equipment and techniques.

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We've created this publication to keep you up-to-date on advances in our ever-expanding field. Read about the comprehensive services we offer to improve the lives of your patients.

Bruce B. Lerman, MD
H. Altschul Professor of Medicine
Chief, Division of Cardiology
Director, Cardiac Electrophysiology Laboratory

Catheter Ablation for Atrial Fibrillation

Pharmacologic therapy with anti-arrhythmia drugs is the first line of treatment for patients with symptomatic atrial fibrillation. Patients may receive digoxin, beta blockers (atenolol, metoprolol, or propranolol), or calcium antagonists (verapamil or diltiazem) to control ventricular rate. Drugs that can suppress atrial fibrillation include flecainide, propafenone, sotalol, dofetilide, dronedarone, and amiodarone.

Today cardiac electrophysiologists are increasingly using catheter ablation to treat patients with atrial fibrillation that is refractory to anti-arrhythmic medication. In fact, in February 2009, the U.S. Food and Drug Administration approved the first ablation catheters designed specifically for the treatment of paroxysmal atrial fibrillation: the NAVISTAR® THERMOCOOL® and EZ Steer THERMOCOOL® Nav Irrigated Deflectable Diagnostic/Ablation Catheters.

There are 2.4 million people in the United States with atrial fibrillation, tens of thousands of whom receive ablation each year. Yet many more may be eligible for this effective procedure, which successfully restores heart rhythm and prohibits the need for lifetime medication in the majority of patients.

About Catheter Ablation

Using an endovascular approach, radiofrequency catheter ablation uses intense energy to destroy sleeves of atrial tissue surrounding the pulmonary veins, the source of the arrhythmia. The "firewall" between the pulmonary veins and left atrium created via ablation results in a restoration of normal heart rhythm.

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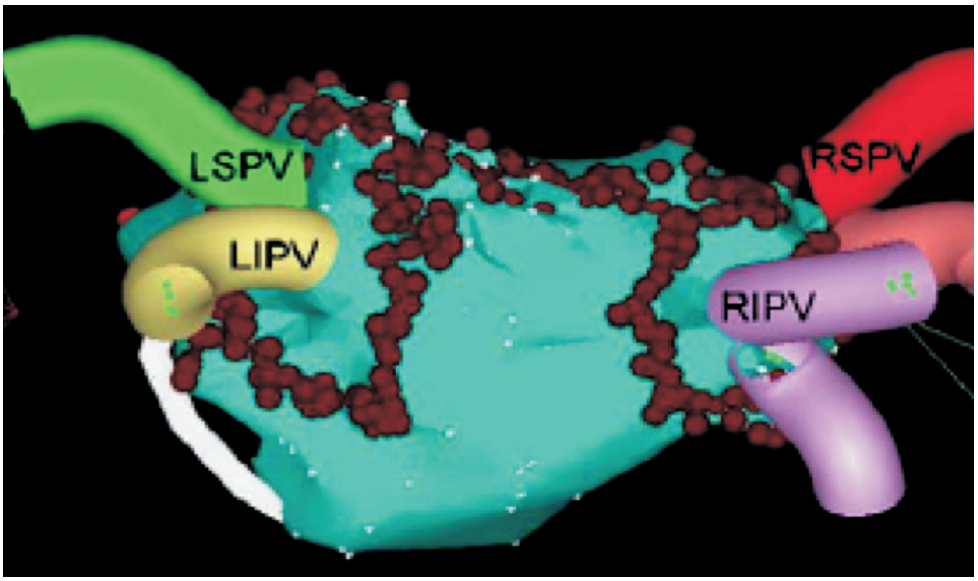

The left atrium of a patient undergoing ablation for atrial fibrillation. This three-dimensional electroanatomic map shows the isolation procedure performed around the pulmonary veins. The red circles represent ablation lesions. (LSPV=left superior pulmonary vein, LIPV=left inferior pulmonary vein, RSPV=right superior pulmonary vein, RIPV=right inferior pulmonary vein)

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Weill Cornell Medical Center
525 East 68th Street
New York, NY 10065

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Catheter Ablation for Atrial Fibrillation continued

In some patients, this firewall may become compromised, and electrical connections are re-established between the pulmonary vein(s) and left atrium, triggering a recurrence of the arrhythmia. In these cases, a second ablation procedure may be indicated, usually several months after the initial ablation.

Who Is Eligible?

Catheter ablation is most effective for paroxysmal atrial fibrillation and is usually reserved for patients age 80 and younger. Patients over 80 are at more risk for complications — such as cardiac tamponade, stroke, atrio-esophageal fistula, and phrenic nerve paralysis — and as a result, the technique is only indicated in these patients in the most severe cases. Ablation is also less effective in atrial fibrillation patients with underlying structural heart disease, such as hypertrophic cardiomyopathy.

In a subset of patients, atrial fibrillation may impair ejection fraction, prompting some physicians to diagnose idiopathic dilated cardiomyopathy. But this reduction in heart function may be due to tachycardia-induced cardiomyopathy related to atrial fibrillation that can be successfully treated with ablation.

The cardiac electrophysiologists at NewYork-Presbyterian/ Weill Cornell are highly skilled in the use of catheter ablation to treat patients with atrial fibrillation, with some of the best outcomes in the nation.

Ablation may enable patients to forego Coumadin therapy and enjoy an improved quality of life as they achieve a normal sinus rhythm.

What Your Patients Can Expect

The cardiac electrophysiologists at NewYork-Presbyterian/Weill Cornell are very experienced and highly skilled in the use of catheter ablation to treat patients with atrial fibrillation, with some of the best outcomes in the nation. The day before the procedure, patients may have an outpatient transesophageal echocardiogram to rule out left atrial blood clots and/or a CT scan of the heart to visualize the topography of the pulmonary veins.

They return for the procedure the next day, and are usually discharged from the hospital after an overnight stay. Our compassionate team of healthcare professionals ensures that the provision of care is seamless and efficient, easing the experience for your patients.

Today, non-surgical approaches such as ablation are safer and more effective than ever before. Catheter ablation for atrial fibrillation is one of many minimally invasive treatments that NewYork-Presbyterian/Weill Cornell cardiologists provide for cardiovascular disorders.

Making an Appointment

The Cardiac Electrophysiology Laboratory at NewYork-Presbyterian/Weill Cornell provides diagnostic cardiac electrophysiology studies, catheter ablation of complex atrial and ventricular arrhythmias, implantation of pacemakers and cardioverter-defibrillators, cardioversion, cardiac resynchronization therapy, and other services to meet the needs of your patients with arrhythmias. We also offer select patients participation in clinical trials.

To refer a patient to the Cardiac Electrophysiology Laboratory, please call 212-746-2158

The Cardiac Electrophysiology Service at NewYork-Presbyterian/Weill Cornell Medical Center
www.cornellcardiology.com