

Emory Heart Center

Pioneering Exciting Advances in Cardiology Care

By Helen K. Kelley

When it comes to matters of the heart—medically speaking, that is—Emory Heart Center is world-renowned. Ranked for 11 years in the top 10 of *U.S. News & World Report's* annual survey of the best heart programs, the Emory Heart Center combines decades of experience treating the full spectrum of heart diseases and disorders with a rich history of cardiology education and research. Emory Heart Center's resources and innovative procedures draw referrals of cardiac patients from physicians locally, throughout the Southeast, and around the country.

The Center's scope of comprehensive cardiology care is reflected in the number of facilities it encompasses. The Emory Heart Center is comprised of all cardiac services and research at Emory University

PHOTO BY LELAND HOLDER



Dr. John Douglas in background during an angioplasty procedure at Emory University Hospital. "The use of stents has improved angioplasty tremendously."

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Hospital, Emory Crawford Long Hospital Carlyle Fraser Heart Center, the Andreas Gruentzig Cardiovascular Center of Emory University and the Emory Clinic. The doctors and staffs of these facilities, separately and together, are responsible for pioneering some of the most progressive care and treatments available in the fight against heart disease.

"We are very proud of the ongoing contributions the Emory Heart Center has made to the field of cardiology in education, research and the application of what we've learned to the clinical care of patients," notes Douglas C. Morris, M.D., director of the Emory Heart Center. "We've been involved in what some people call 'breakthroughs,' but those are not the result of some overnight discovery. In reality, our 'breakthroughs' have been based on years and sometimes decades of careful research and innovative approaches to problems."

LONG-TERM INTERVENTION TECHNIQUES

John S. Douglas, Jr., M.D., director of interventional cardiology at Emory, is a pioneer in the field of interventional cardiology. In 1987, he and Emory colleagues inserted the first stent—a tiny, metal tube-like object that helps keep arteries open after angioplasty—in an American patient. Today, three-fourths of all patients undergoing angioplasties receive stents.

"We've done a number of things at Emory to help improve the results of coronary angioplasty," says Douglas. "The use of stents has improved angioplasty tremendously. We've participated in trials of stents and reported at the recent America Heart Association meeting one of the first successful drug therapies for reducing stent re-narrowing. We've treated more than 35,000 patients successfully with coronary angioplasty, and have some of the best results, as far as low complications and high success rates, in the country."

Currently, Emory Heart Center researchers are investigating drug-eluting stents which hold the potential to give a more durable result following angioplasty.

Douglas notes there's an interesting new strategy, a combination of stents and surgery. "The approach involves a minimally-invasive surgery by Dr. Thomas Vassiliades, placing a left internal mammary graft to the left anterior descending artery first," he explains. "Then, during

Emory's Mini-Medical School, overseen by Dr. Randy Martin, is nationally recognized for its service to the public.

the same hospitalization, drug-eluting stents can be placed in the other artery. It's a terrific way to give the patient a minimally-invasive revascularization." By marrying the two procedures, patients can experience shortened recovery time and increase the chances they will have lasting results.

In addition to angioplasty and stent implantation, Emory Heart Center's interventional cardiologists are testing revolutionary techniques for treating heart diseases and abnormalities.

For example, Dr. Peter Block recently performed one of the first percutaneous mitral valve repairs in the country and has been involved in the pioneering of atrial appendage occluders. In addition, Emory physicians are using a new strategy, alcohol septal ablation, for treating patients who have developed some forms of cardiomyopathy, a very thick heart muscle tissue. The ablation basically causes a controlled heart attack, which results in thinning the outflow track of the heart. To date, close to 100 patients have been successfully treated with alcohol septal ablation.

Douglas notes the huge improvements in interventional cardiology made over the past 24 years. "Back in the 1980s, out of every 100 patients that had angioplasty, three to five would need emergency bypass surgery because angioplasty results were not adequate," he states. "Today, it's more like one out of every 2,000 patients. There has been a tremendous change in our ability to achieve a good result with angioplasty initially. And with the use of the new stents, we're now able to give a more durable result."

LESS INVASIVE PROCEDURES = FASTER RECOVERY TIME

Cardiothoracic surgeon Thomas Vassiliades, M.D. is excited about the progress being made in the area of minimally invasive heart surgery, particularly the bypass procedure. Vassiliades is nationally known for developing robotics assisted endoscopic techniques which allow coronary artery bypass surgery to be performed using small incisions between the ribs rather than an open-chest approach with a large incision through the sternum.

"There are a number of things that we can now do to make many bypass procedures less invasive. However, there are still lots of patients who have to undergo open chest surgery because they're not candidates for minimally invasive or hybrid procedures. But we'd like not to have to open anyone's chest if we could avoid it," says Vassiliades. "To be able to do multiple bypasses without opening the chest is beyond our reach right now. But, there are a number of exciting new ways in which we can connect blood vessels that will make it technically easier."

These innovations involve the use of robotics and other automated devices that can assist cardiac surgeons with the endoscopic view and suturing. The result of endoscopic procedures performed through small incisions between the ribs is less pain and a faster recovery time for the patient.

Like Dr. Douglas, Vassiliades is pleased with the progress Emory Heart



PHOTO BY LELAND HOLDER

Dr. Angel Leon, chief of Cardiac Services, performing an ablation at Emory Crawford Long Hospital in Atlanta. He performed the first linear left atrial ablation procedure in Georgia this past December. An ablation is a procedure used to burn out abnormal tissue using radio waves. The goal of this procedure is to treat abnormal heart rhythms.

Center has made on the hybrid approach to coronary revascularization, combining minimally invasive surgery and the use of drug-eluting stents.

"The combination of endoscopic surgery and stents gives long-term success without a lot of the negative complications and side effects that you have with traditional bypass surgery," notes Vassiliades. "Patients are out of the hospital in two-to-three days and back to normal activity in 14 days."

But even with these advances, Vassiliades says that he and his colleagues have a lot more work to do. "I do think cardiac surgery has been so far behind. For decades, nothing new happened and surgery was done the same way," he says. "We used to feel that almost every procedure had to be done with the chest wide open. But, we're finding that it just requires a little more inventiveness and skill... doing it in other ways is better for the patient."

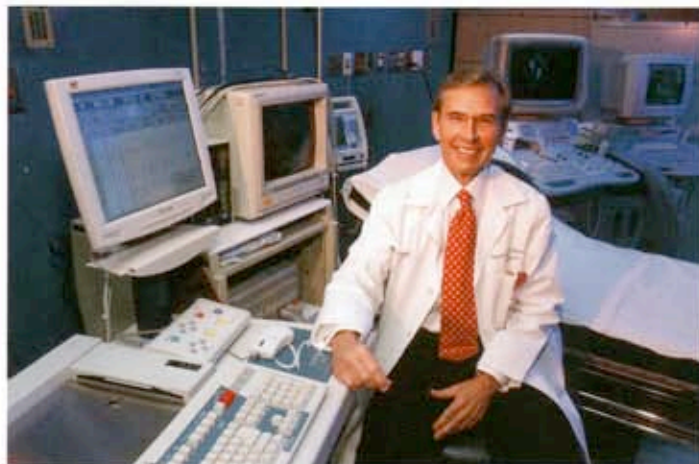
NEW HOPE FOR CURING HEART ARRHYTHMIAS

Angel Leon, M.D., an electrophysiologist and director of cardiology at Emory Crawford Long Hospital, specializes in diagnosing and curing abnormal heart rhythms. Using ablation techniques, Leon and his colleagues, Drs. David DeLurgio and Fernando Mera, are often able to destroy the abnormal tissue that causes heart rhythm disorders.

Leon is excited about new techniques and procedures in the field, and the dramatic results they can produce in very ill patients. One of the procedures Leon is currently helping to pioneer is linear left atrial ablation.

"We started performing linear left atrial ablation, which originated in Italy, a few months ago. It involves the use of a catheter in the left atrium of the heart," he explains.

"This procedure holds great promise in eliminating atrial fibrillation



Dr. Randolph Martin, M.D., in the Echocardiography lab at Emory University Hospital. A nationally recognized expert and innovator in the field of echocardiography, he is currently the president of the American Society of Echocardiography and chief medical consultant for Cox Television's ABC Atlanta affiliate, WSB-TV (Channel 2 Action News).

in some patients.”

Leon performed the first linear left atrial ablation procedure in Georgia this past December. Procedures like this one and others, such as resynchronization therapy, are drawing patients to the Emory Heart Center from around the country.

Leon also helps train physicians nation-wide in electrophysiology and other areas of cutting-edge cardiology. Physicians are able to tune in via satellite video to observe surgical procedures being performed at Emory Crawford Long Hospital Carlyle Fraser Heart Center and ask questions. To date, nearly 400 cardiac electrophysiologists have attended these video courses in the resynchronization therapy, alone.

EDUCATION—AN IMPORTANT KEY TO BETTER HEALTH

Randolph P. Martin, M.D., a nationally recognized expert and innovator in the field of echocardiography and current President of the American Society of Echocardiography, says this is a time of tremendous advances in the field of cardiology—not only in technology and surgical procedures, but also in terms of education and prevention of disease.

“We’re currently seeing an epidemic of heart disease in this country, fueled by the aging population and by the related epidemics of diabetes and obesity. Cardiologists, cardiac surgeons, cardiac nurses—all of us are busier than we’ve ever been,” Martin marvels. “I’m speaking not only of heart attacks and narrowing of the coronary arteries, but also valvular heart disease, arrhythmias, heart failure, vascular disease and peripheral vascular disease. And while there have been dramatic advances in both diagnosis and treatment of these diseases, there is also increasing awareness of, and emphasis on, early detection and prevention of disease.”

While technological advances in cardiology are very exciting, physicians are acknowledging more and more the need to counsel their patients about simple things like diet, exercise and new, innovative medications that can aid in slowing down or even reversing this onslaught of cardiovascular disease. Much of this education is grounded in good, old-fashioned common sense.

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“I think consumers sometimes get extremely confused because there’s so much information coming at them from the media about health and medicine,” says Martin. “But there are common messages about good health—that diet plays a key role, that weight management plays a key role, that exercise plays a key role, and that medicines as simple as aspirin play a key role—that hold true across the board. So, we as cardiologists and cardiovascular physicians and specialists, need to constantly educate our patients and the public about ways in which they can prevent heart disease, as well as ways to help them choose the most appropriate therapies.”

Toward its goal of education, Emory also offers innovative courses on a variety of topics throughout the year at its Mini-Medical School. Laypeople who attend these classes are able to learn first-hand about all kinds of health and medical subjects, including cardiovascular medicine, from Emory’s medical school faculty. The Emory Mini-Medical School, overseen by Dr. Martin, is nationally recognized for its service to the public.

“Education is traditionally the cornerstone of an academic medical center, which includes patient education as well as education of physicians, nurses and care givers. Now, that definition has been extended to include education of the consumer,” he says. “The bottom line for us at Emory Heart Center is that while we’ve really been innovators in the use of technology (both diagnostic and therapeutic), we also believe we must address early prevention of disease through education and research. That’s another of our innovations.”

Emory Heart Center—with its history of excellence, technological innovations, premiere facilities and constellation of exceptionally qualified cardiologists, cardiac surgeons, cardiac anesthesiologists, cardiac pathologists, cardiac nurses, vascular physicians and vascular nurses—provides cardiology care to its patients that is unrivaled anywhere else in the state.

For more information, call 404-778-7777 or visit online at www.emoryhealthcare.org. ■

More information about Emory Heart Center and its role in innovative procedures, techniques and education, can be found on three comprehensive Emory Healthcare web sites:

<http://www.emoryhealthcare.org/departments/heart/index.html>

<http://www.emoryhealthcare.org/departments/EUH/index.html>

<http://www.emoryhealthcare.org/departments/ECLH/index.html>