

M.D. NEWS

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The Beat Goes On

St. Clair Cardiovascular Surgeons, PLC —
C. Douglas Lees, M.D., and
James R. Martin, M.D.

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C. Douglas Lees, M.D., and James R. Martin, M.D., Lead the Way in Heart Valve Surgery

By Annemarie Cronin

The heart is a delicate organ. It will beat more than 2.5 billion times in a lifetime and be the epicenter for the gamut of emotions. And yet, despite our efforts to embrace a healthier lifestyle, heart disease still remains the No. 1 cause of death in America. The heart can let us down, without notice or pause.

We seem to take more notice when our celebrities are felled by a cardiac incident, and we breathe a sigh of relief when they survive it. Robin Williams, 57, comedian, entertainer, actor and all-around bundle of boundless energy was taken to a Miami hospital after complaining of shortness of breath and a week later was at the Cleveland Clinic having heart valve surgery. This news came shortly after former first lady Barbara

Bush, at 83, was reported to be recuperating also from heart valve surgery she had had several weeks earlier. They were both lucky. Unlike many cardiac incidents, there's usually little warning and not much time afforded for research and discovery. It's a reminder to us all that we need to know our doctors and surgeons *before* we need them.

Aortic valve surgery, although a fairly common procedure, is the treatment of choice for a very serious condition. According to the American Heart Association, 17,592 aortic valve procedures were performed in 2007. While aortic valve problems mostly affect the elderly, some people are born with a congenital defect.

At St. Clair Cardiovascular Surgeons, PLC in Roseville and

James R. Martin, M.D. and C. Douglas Lees, M.D. between procedures





C. Douglas Lees, M.D., and James R. Martin, M.D., arriving at the hospital

Port Huron, MI, James R. Martin, M.D., and C. Douglas Lees, M.D., take a bold and fearless approach to cardiac surgery, while at the same time following a protocol that dictates that they perform the procedure that, in the long run, will be best for the patient. The long run, in this case, meaning the patient will survive for a longer period of time following the

C. Douglas Lees, M.D., with patient in cardiac cath suite



surgery. While their practice runs the gamut of a full-service cardiothoracic practice, from coronary bypass, heart valve replacement and repair and thoracic surgery, they are best known for their resolve to repair rather than replace heart valves and for taking on challenging and difficult cases. Of course, the outcome of any surgical procedure depends to a great extent on the skills and experience of the surgeon.

Dr. Lees was born and raised in Glasgow, Scotland, and received his medical degree from the University of Glasgow. Following an internship at the Western Infirmary in Glasgow, he then left Great Britain and came to the Cleveland Clinic, where he completed residencies in both general surgery and in thoracic and cardiovascular surgery. “We don’t just deal with coronary artery disease, we deal with valve disease, and surgery is usually the standard for significant heart valve problems, whether repairing a blocked or leaky valve or correcting an aortic insufficiency,” says Dr. Lees. The patient will usually present with symptoms of shortness of breath, loss of energy or even chest pain. In the case of Barbara Bush, she was suffering from aortic stenosis or narrowing of the valve, which

is common in the elderly patient. Arnold Schwarzenegger had surgery for a leaky valve. Patients can also be born with an abnormal valve that works well until around age 50, when it starts to fail. This is known as a bicuspid aortic valve and is the most common adult congenital problem of the heart. With 2% of the population being born with this condition, this translates into 6 million people in America with a bicuspid valve that was doomed to fail. “We typically offer a tissue valve replacement or a mechanical valve,” says Dr. Lees. The tissue replacement is taken from either bovine or porcine matter and is the preferred form of treatment, as it eliminates the need for the patient to be put on a blood thinner. Another problem for the elderly is that the normal valve just doesn’t last that long and is burning out from calcific aortic stenosis. This surgery can be done with very low risk.

Aside from aortic valve replacement, “We also do a lot of surgery for mitral valves,” says Dr. Lees. Mitral valve disease, which once consisted of patients suffering from rheumatic fever, has been eradicated since the advent of penicillin. With mitral valve insufficiency, a condition

with a leaky mitral valve, the valve is usually repaired. Dr. Lees emphasizes their success rate in repairing over 80% of the cases that they encounter. He recalls that when he first came to the Detroit area, there were very few valve repair surgeries being done. Patients at that time were being sent out of state to either the Cleveland Clinic or NYU for valve repair. Having been trained at the Cleveland Clinic, Dr. Lees started doing arterial bypasses and restarted the valve program at St. John Hospital. “We would advocate that most of these mitral valve cases can be repaired,” he says. “Patients are frequently still getting mitral valve replacement, and the long-term results are not as good. We think the standard is such that more patients should be getting repairs, and our intent is to do a repair on most of the mitral valve cases we see,” he says.

“The philosophy of the group is to offer state-of-the-heart care,” says Dr. Martin who was raised and educated in New York, then attended Cornell University before getting his medical degree at the University of Vermont. He is also currently the Chief of Cardiovascular Surgery at St. John Macomb-Oakland Hospital, where he is well

C. Douglas Lees, M.D., conferring with nurse





PHOTO BY JUEL ZAMPLAS

James R. Martin, M.D. and C. Douglas Lees, M.D.

known and well respected for his abilities not only in coronary bypass, but also in heart valve and thoracic procedures. “We do coronary bypass operations through minimally invasive approaches,” says Dr. Martin, pointing out that a large number of coronary operations can be performed without stopping the heart. This procedure, known as the off-pump coronary artery bypass operation, is performed by bypassing multiple coronary arteries through a sternotomy approach, which is a vertical incision in front of the chest. This is done without stopping the heart and without putting the patient on a heart lung machine. This procedure has been shown to significantly reduce the surgical risk, including the risk of blood transfusion, and also significantly shortens the hospital stay. “Although the bypass procedure is considered a very safe operation when you do stop the heart, it is even safer to not have to resort to the heart lung machine. It reduces the risks of an already safe operation,” he says. Dr. Martin also points out that since 1999, he has been doing all of his surgeries off-pump. The Worldwide Beating Heart Hall of Fame requires surgeons to have done at least 1,000

such surgeries. With an incredible experience in this field, Dr. Martin is one of its distinguished members. “It is technically more demanding to do the surgery off-pump,” he points out, but with a highly skilled surgeon, it is the best option. “It’s not better for the doctor because it is very demanding,” he says, “but it is better for the patient.”

When Dr. Lees first came to the Detroit area in 1984, almost no one was using arteries in coronary bypass surgery, a procedure that involves taking an artery from the chest wall or the arm and putting it on the heart. This void in the cardiac surgery landscape allowed them the opportunity to be pioneers in using arteries for bypasses. “Dr. Martin and I did the first radial artery bypass in Michigan,” Dr. Lees points out. “The state-of-the-art procedure for doing bypasses is to use arteries coming from inside the chest or the arm, like the radial artery in the forearm. These arteries can be tested for efficacy through Doppler testing, which can be done in the office,” he says. Research from the Cleveland Clinic published in the *New England Journal of Medicine* has verified a clear relationship between length of survival and the use of the internal mammary bypass.

In looking at his career over the past 25 years, Dr. Lees



comments, “The philosophy of this practice is to treat patients with dignity and allow them to have input into their treatment, as well as to have the ability to choose a top-quality institu-

tion and an experienced surgeon. This is what America is about — choice.”

Doctors reviewing test results



“There are things that are new that may not be better, but there are things that are new and upcoming that improve either the outcome or the risks of the surgery,” says Dr. Martin, “and if we can do these things, then we are doing better medicine.” ■

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