

A NEXT-GEN ALTERNATIVE TO Open-Heart Surgery

by Sandra Gordon

Rolland Hobbs didn't waste any time when he had chest pain while taking out the garbage. It had been nearly 20 years since he had undergone open-heart surgery and Mr. Hobbs felt fine. Still, he didn't want to take any chances.

The 79-year-old Plainview resident quickly visited his cardiologist, who referred him to the Structural Heart Program at North Shore University Hospital (NSUH).

Tests revealed that Mr. Hobbs, a retired Nassau County police lieutenant, had severe symptomatic aortic stenosis. The heart valve that led to his aorta, the body's largest artery, was severely narrowed. Blood couldn't flow properly from his heart's left chamber to the rest of Mr. Hobbs's body. Left untreated, severe symptomatic aortic stenosis can lead to serious problems, including congestive heart failure or sudden cardiac death.

AN ALTERNATE SOLUTION

Patients like Mr. Hobbs who have severe symptomatic aortic stenosis but are at higher risk for conventional open-heart surgery are candidates for transcatheter aortic valve replacement (TAVR). This minimally invasive procedure involves placing an artificial valve inside the patient's original valve to restore blood flow.

Using a technique similar to cardiac stent implantation, a multidisciplinary team of physicians guides a catheter with an artificial valve attached to it through an artery into the heart. Once it's situated, the new valve expands, anchoring itself — essentially pushing



BIOTECH IN ACTION

See an animation of a Lotus Valve implantation by the femoral (thigh) artery at bit.ly/LotusValve. The simulation shows the advantages of the valve's groundbreaking design.

>> NSUH is the only Long Island hospital participating in the REPRISE III clinical trial. The study is actively enrolling patients who have been diagnosed with severe symptomatic aortic stenosis. Learn about participating by calling NSUH's Valve Center at **516-562-4970**.

the damaged heart valve out of the way. The new valve begins to function immediately, restoring normal blood flow from the heart to the rest of the body.

The TAVR procedure significantly improves survival and quality of life in patients with severe symptomatic aortic stenosis and is an appropriate alternative to traditional open-heart surgery in patients who are at high risk.

"We've had outstanding success with TAVR," said Bruce Rutkin, MD, the interventional director of transcatheter valve therapies at NSUH.

NEW VALVE ON THE BLOCK

Innovation in cardiac interventions continues. The hospital's multidisciplinary heart team recommended that Mr. Hobbs enroll in REPRISE III, a major clinical trial offered with Dr. Rutkin as principal investigator. The study compares the effectiveness of the Boston Scientific Lotus Valve System, a second-generation TAVR valve, against an FDA-approved device. The Lotus is the newest transcatheter aortic valve to be potentially available in the US.

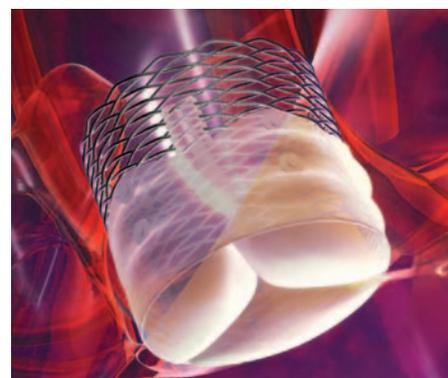
"The Lotus Valve System's major advancement is a new design that makes it repositionable and retrievable," Dr. Rutkin said. Unlike existing devices, a cardiologist can adjust, remove and

redeploy the Lotus Valve. "The Lotus gives us more flexibility and control. If we're not happy with the outcome, we can redo it," Dr. Rutkin said. "Proper positioning of the Lotus Valve within the patient's original valve allows us a greater degree of control, which we hope will translate to improved heart function and superior patient outcomes."

HEARTENING RESULTS

"We're extremely encouraged by the early results we're seeing with the Lotus Valve," Dr. Rutkin said. Mr. Hobbs, who underwent TAVR with the Lotus Valve System in March, can feel the difference. He no longer experiences any chest pain during his daily activity, he said. "I feel as good as new," he added. "I'm even playing golf again, with a cart." Mr. Hobbs was especially relieved to avoid a second open-heart surgery.

Michael Arenaro, another participant in the Lotus Valve trial, is also pleased with the results. "This was a big improvement. Before I had the procedure done, I had difficulty breathing," said the 93-year-old retired elevator manager from Bethpage. "Now, I can breathe a lot easier."



The Lotus Valve System

WHEN TO ASK ABOUT AORTIC STENOSIS

People can live with aortic stenosis without knowing it. Symptoms often go undetected for years, until they become severe and cardiac tissue is already damaged.

The most common symptoms include:

- irregular heartbeats or palpitations;
- chest pain;
- fatigue;
- dizziness with exertion;
- shortness of breath; and
- fainting spells.

GET CHECKED

Since symptoms of aortic stenosis may resemble other conditions, get a proper diagnosis from your physician. Call **855-HEART-11** to schedule a consultation or visit NorthShoreLIJ.com/cardiac to learn more.

Cardiac Care Improvements at LIJ Medical Center

A revamp of cardiac care surgery services at LIJ Medical Center has improved mortality rates for patients who undergo coronary artery bypass graft procedures.

The redesign enacted interventions in LIJ's preoperative and postoperative care, including identifying high-risk patients who need more detailed preoperative assessments; multiple, daily intraprofessional rounds; and updates to cardiac surgery performance improvement and patient safety procedures.

The results were dramatic. LIJ maintained significantly lower cardiac surgery mortality rates compared to the New York State average for the past three reporting periods. Furthermore, LIJ had the lowest risk-adjusted mortality rate in the state for cardiac-related procedures during the most recent reporting period (2009 to 2011).

SEE THE RESULTS. Find a video about the New York State report at bit.ly/HeartResults.





Sonia Survilla is enjoying the summer with her daughter, Ashley.

by Sandra Gordon

Telestroke, for When **MOMENTS COUNT**

Last April, Sonia Survilla was on her deck early one morning when she began to experience stroke symptoms. “The last thing I remembered was the deck spinning and my body going numb,” she recalled.

Alone on the deck, Ms. Survilla hoped her daughter, Ashley, would find her. Thankfully, she did. “She was not responding and there was foam around her mouth,” Ashley said. “I called 911 right away.”

A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain gets blocked by a clot or bursts. A stroke requires immediate attention. So when Ms. Survilla arrived at a local

hospital in Bethpage, the doctors reached out to the stroke team at LIJ Medical Center, and a consultation was ordered from North Shore University Hospital’s (NSUH) Telestroke Program. Through the Telestroke Program, patients like Ms. Survilla can receive treatment from a specialist even if they are miles away — making real-time, interactive communication possible between patients and stroke specialists at remote locations.

SAVING LIVES VIRTUALLY

The technology is a game changer. “Telestroke evaluates patients remotely using video teleconferencing equipment

STROKE BY THE NUMBERS

EVERY 40 SECONDS



someone in the US has a stroke.

49%

of Americans have at least one of the three major risk factors: high blood pressure, high cholesterol and smoking.

and software,” said Jeffrey Katz, MD, chief of vascular neurology at NSUH. During the video chat, it became clear Ms. Survilla had suffered a stroke, and NSUH’s stroke neurologists were able to intervene as soon as she arrived — saving her life.

“Our health system is the largest provider of Telestroke communications in this region. This is certainly a beautiful story of a daughter’s love for her mother and the importance of having state-of-the-art technology at our disposal,” Dr. Katz said.

Prior to the new program, patients with a possible stroke would arrive at the Emergency Department for evaluation. The physician would then call the stroke neurologists at NSUH to discuss the patient’s signs and symptoms and whether to transfer the patient to NSUH’s designated stroke center. But this process took a long time, preventing patients from getting immediate care.

To increase the chances of a full recovery from stroke, timing is key. Patients with stroke symptoms can receive tissue plasminogen activator (tPA), which is a clot-busting drug that can dissolve a blood clot and prevent the stroke area from becoming larger. The drug is only effective if it’s administered within three hours of stroke symptoms.

TELESTROKE IN ACTION

When a potential stroke patient comes to the Emergency Department, a cart with a monitor and a camera is wheeled to the patient’s bedside. The cart remotely connects to the stroke neurologist’s workstation at a remote location. “We can see patients immediately and help make decisions about their treatment, including whether the patient needs to be transferred,” Dr. Katz said. Being able to listen to patients and ask them questions helps the stroke neurologists make accurate diagnostic and treatment decisions.

“Video is worth a thousand words,” Dr. Katz said.

In addition to NSUH, Telestroke will roll out to LIJ Medical Center, Southside Hospital and Glen Cove Hospital in the coming months. “We hope it will lead to more patients being appropriately treated with tPA or other therapies,” Dr. Katz said.

MORE

TAKE ACTION

Find out if you are at risk for a stroke. Go to bit.ly/mystrokerisk.

Act FAST When a Stroke Strikes

The risk factors and causes vary. But one thing about stroke remains the same regardless of age or gender — fast treatment dramatically reduces the risk for death and disability. Increase the odds of survival by learning the signs and calling **911** when they appear. Remember the acronym **FAST**:

- **Face drooping.** Ask the person to smile — numbness will make the face appear uneven.
- **Arm weakness.** One arm may drift downward as one side of the body becomes paralyzed.
- **Speech difficulty.** Words may sound slurred, garbled or inaudible, and understanding language often becomes difficult, too.
- **Time to call 911.** Treatments administered within three hours of the first symptoms can restore blood flow to the brain and prevent long-term damage.

COMPREHENSIVE STROKE CARE

LIJ Medical Center and North Shore University Hospital (NSUH) recently received the **Stroke Gold Plus Quality Achievement Award** from the American Heart Association/ American Stroke Association for consistent adherence to protocols that reduce stroke-related mortalities and decrease long-term disability for stroke patients.

Furthermore, NSUH is the first Long Island hospital to receive advanced certification as a **Comprehensive Stroke Center**. The hospital’s ability to treat the most complex stroke cases earned it The Joint Commission’s Gold Seal of Approval and the American Heart Association/ American Stroke Association’s Heart-Check mark. Only three other New York State hospitals have achieved this advanced certification.

