Pedro R. Cox-Alomar, M.D., MPH, FACC

TAVR–An Alternative to Open Heart Surgery

Aortic stenosis occurs when the aortic valve narrows and limits blood flow to the heart. It's usually caused by age-related scarring and calcium buildup in the valve leaflets (flaps that open to allow blood flow). The standard of care for AS for the past 60 years has been open-heart surgery to replace the damaged valve, but, for some patients, open-heart surgery is too risky.

Transcatheter aortic valve replacement now provides an alternative to open-heart surgery. Approved by the Federal Drug Administration in 2011, TAVR has demonstrated its effectiveness in multiple, large, randomized, multi-center trials during the past eight years. The results show a decrease in mortality, improved symptoms and a better quality of life for patients.

"TAVR has changed the conversation we have with our patients regarding the treatment of severe AS," says Dr. Pedro R. Cox-Alomar, assistant professor of medicine at LSU-UMC and director of the UMC Structural Heart Valve Program. "During the past eight years, TAVR has become the standard of care for patients with severe AS that show a prohibitive risk [or] high risk, and a reasonable alternative for patients at intermediate risk for open-heart surgery. Just to give you an idea of the unprecedented growth of this effective procedure, in 2017 there were 103,000 TAVR procedures done worldwide, and, by 2025, we anticipate 289,000. AS represents the largest area of growth in cardiovascular disease management in the past decade, and we predict that it will continue to be for the next two decades."

TAVR is Less Invasive

Traditional open-heart surgery is a several-hour procedure that requires general anesthesia and involves opening up the chest plate to cut out the old valve and sew in a new one. Recovery is often one week in the hospital, and most patients will be unable to resume a normal lifestyle for several more weeks or even months. During TAVR, a catheter threaded from the groin places a new valve in the heart, expanding the new valve and displacing the faulty one. Patients are generally lightly sedated, but are awake and can talk during the procedure, which takes 30 minutes. Recovery typically consists of one or two days in the hospital, and patients can often resume normal activities soon after.

Given the less invasive nature of the procedure, TAVR allows the heart valve team at LSU-UMC to treat more patients. "It is truly amazing to watch the dramatic improvement in someone's life after the TAVR procedure," Dr. Cox-Alomar says. "It is both the beauty of my profession and the magic of medicine that our team can help someone live a full life."

The heart valve team is composed of a magnificent group of experts, including cardio thoracic surgeons, an interventional cardiologist, cardiac imaging experts, an electrophysiologist, a neurologist, and dedicated OR and cath lab techs and nurses. "Our robust interdisciplinary team brings different perspectives to complex cases resulting in excellent outcomes," Dr. Cox-Alomar says. "We meet regularly to review all cases referred for TAVR, and encourage active collaboration and shared decision making between patients, families and providers to design and manage a customized and comprehensive care plan."

Exciting News

Last year the number of TAVR procedures eclipsed traditional open-heart surgery. With its growing success rate, doctors are investigating the long-term effects of the minimally invasive procedure, as well as whether it's also appropriate for people who are eligible for open-heart surgery.

"It is extremely exciting that LSU cardiology has been selected to be part of the Underrepresented Registry of the Partners 3 Trial to study the safety and efficacy of TAVR in low risk patients with severe aortic stenosis," Dr. Cox-Alomar says. "The study will be conducted in UMC. As we continue to move down the risk spectrum, we are committed to providing exceptional care without exception."

A native of Puerto Rico, Dr. Cox-Alomar received his doctor of medicine degree from UCC School of Medicine in San Juan, Puerto Rico. He completed his internal medicine internship and residency at Harvard School of Medicine and continued with fellowships in cardiovascular diseases and interventional cardiology. When asked why he become a doctor, he says that he is inspired by his father who has been a practicing cardiologist for the past 40 years. "My father has dedicated his life to train future generation of cardiologists, improving access of care and cardiovascular research," he says. "Meticulous, compassionate and dedicated to the things he believes, he has a great curiosity for learning and willingly spreads his new knowledge."

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