



The Society of Thoracic Surgeons
633 N. St. Clair, Suite 2100
Chicago, IL 60611
www.sts.org

News

Media Contact:
Jennifer Bagley
312-202-5865
jbagley@sts.org

Early Valve Replacement May Be Better than Watchful Waiting in Patients with Severe Aortic Stenosis *Research shows survival benefit for patients treated within a year of diagnosis*

CHICAGO (March 21, 2019)—Patients with severe aortic stenosis who have no symptoms may benefit more from an aggressive strategy of early valve replacement than from a conservative watch and wait approach, according to new research published today online in *The Annals of Thoracic Surgery*.

“We know that surgery carries a small risk and that has been one of the reasons to wait until a patient is experiencing symptoms,” said S. Chris Malaisrie, MD, of Northwestern Medicine in Chicago. “However, our data support the role of early valve replacement for asymptomatic severe aortic stenosis.”

Dr. Malaisrie and colleagues evaluated data from echocardiograms performed at Northwestern Medicine from January 2005 to December 2013. The researchers identified 265 patients who had severe aortic stenosis and were asymptomatic. Of these patients, aortic valve replacement (AVR) was recommended in 104 (39%), while watchful waiting (WW) was suggested for 161 (61%).

The researchers found that 2 years after the recommended approach, survival in the AVR group was 92.5% compared to 83.9% in the WW group. In addition, the probability of the patients in the WW groups either dying or undergoing surgery was 43.9% by 2 years. While this study demonstrated a “safe” period for WW (for up to 1 year), the data at 2 years also suggest a benefit to early AVR.

“For both the AVR and WW groups, undergoing AVR was associated with significantly higher overall survival,” said Dr. Malaisrie. “It is important for patients to know that severe aortic stenosis, even when there are no symptoms, carries a poor outcome, if left untreated.”

Aortic stenosis—one of the more serious and most common valve diseases in the United States—occurs when the heart's aortic valve narrows, preventing the valve from opening fully. Blood flow into the main artery of the body (aorta) is blocked or reduced and the heart is forced to work harder as it pumps blood to the body. Symptoms associated with severe aortic stenosis include shortness of breath, chest pain or tightness, fainting, dizziness, and palpitations or heart pounding.

KEY POINTS

- Traditionally, aortic valve replacement (AVR) for severe but asymptomatic aortic stenosis is delayed until symptoms develop.
- The strategy of early AVR could potentially improve survival in patients with severe aortic stenosis who have no symptoms.
- Watchful waiting (WW) may be safe for up to 1 year, but AVR is associated with higher survival whether WW or AVR was the initial treatment.

“If confirmed, these findings would reflect a dramatic potential difference in survival affecting tens of thousands of Americans,” said Todd K. Rosengart, MD, of Baylor College of Medicine in Houston, who was not directly involved with this study. “The results of this study suggest a fundamental change is needed in how we care for patients with narrowing of the aortic valve. This advance would mirror what we already know and practice in caring for disease of the other major heart valve—the mitral valve—that you don’t need to and probably shouldn’t wait until symptoms develop to correct significant dysfunction of the heart valves.”

Clinical guidelines from the American Heart Association and the American College of Cardiology recommend “active surveillance” in asymptomatic patients, unless stress testing can expose symptoms. In this study, less than 30% of patients were referred for stress testing. Dr. Malaisrie agrees that stress testing can be a key differentiator when considering early surgery for asymptomatic patients and he encourages clinicians to continue utilizing it when determining treatment strategies.

Historically, the management for asymptomatic patients includes the accepted practice of WW and delaying AVR until the development of symptoms. However, the WW strategy requires that patients recognize and promptly report any symptoms and that they return to the hospital for a follow-up echocardiogram.

“The onset of symptoms often can be subtle and patients may attribute important changes to old age without notifying their doctors,” said Dr. Malaisrie. “They need to know the symptoms and report them to the heart team right away. Also, if patients fail to follow-up with recommended imaging, progression of stenosis and features of heart failure can be missed.”

For patients with severe aortic stenosis who have symptoms, the traditional treatment is minimally-invasive AVR—either surgical or transcatheter—which reduces the risks associated with open heart surgery and decreases the recuperation time, explained Dr. Malaisrie, making it a viable option for earlier treatment of patients who have no symptoms.

“Patients with asymptomatic severe aortic stenosis need to maintain close follow-up with their heart team and have a discussion about all of the available treatment options,” said Dr. Malaisrie. “We hope that our study will influence guidelines and discussions about the earlier treatment of severe aortic stenosis, especially in asymptomatic patients.”

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Campo J, Tsois A, Kruse J, Karim A, Andrei AC, Liu M, Bonow RO, McCarthy P, and Malaisrie SC. Prognosis of Severe Asymptomatic Aortic Stenosis With and Without Surgery. DOI: 10.1016/j.athoracsur.2019.01.031.

Find comprehensive medical information presented for patients by leading experts in cardiothoracic surgery on the STS Patient Website ([ctsurgeypatients.org](https://www.ctsurgeypatients.org)). For a copy of *The Annals* article, contact Jennifer Bagley at 312-202-5865 or jbagley@sts.org.

Founded in 1964, The Society of Thoracic Surgeons is a not-for-profit organization representing more than 7,500 cardiothoracic surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lung, and esophagus, as well as other surgical procedures within the chest. The Society’s mission is to enhance the ability of cardiothoracic surgeons to provide the highest quality patient care through education, research, and advocacy.

The Annals of Thoracic Surgery is the official journal of STS and the Southern Thoracic Surgical Association. It has an impact factor of 3.779.