



The Society of Thoracic Surgeons
633 N. St. Clair, Suite 2320
Chicago, IL 60611
www.sts.org

News

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

Earlier Intervention for Mitral Valve Disease May Lead to Improved Outcomes *Slow progression of disease may mask symptoms until damage cannot be fully repaired*

CHICAGO (July 19, 2018) — The number of patients undergoing mitral valve operations are at an all-time high, and new research posted online today in *The Annals of Thoracic Surgery* suggests that many patients don't undergo surgical intervention until it's too late to completely reverse damage caused by mitral valve disease.

"This study shows that a significant number of patients are still referred for mitral valve surgery later than they should be," said James S. Gammie, MD, from the University of Maryland School of Medicine in Baltimore. "In these cases, the malfunctioning mitral valve has caused significant damage to the heart and/or lungs, and while an operation can be performed, long-term outcomes will be compromised, to some extent."

Dr. Gammie, Vinay Badhwar, MD, from West Virginia University in Morgantown, and colleagues analyzed data from The Society of Thoracic Surgeons (STS) Adult Cardiac Surgery Database (ACSD) in order to determine trends related to current mitral valve operations in North America. The ACSD contains more than 6.5 million cardiac surgery procedure records, representing more than 90% of all adult cardiac surgery hospitals across the US and Canada.

KEY POINTS

- Contemporary outcomes for mitral valve operations are excellent.
- Earlier guideline-directed referral may further improve results of mitral valve operations.
- The number of operations performed for mitral valve disease is growing faster than any other category of heart operation.

The researchers identified 87,214 patients at 1,125 centers who had isolated primary mitral valve operations from July 2011 to September 2016. The average age of patients in this group was 64 years; half were female. During the study period, the number of mitral valve operations performed per year increased by 24%, from 14,442 in 2011 to 17,907 in 2016, with a 44% increase in primary mitral operations performed for degenerative disease, the most common form of mitral valve disease in the United States.

"This suggests that the mitral valve disease may have reached a chronic stage prior to referral for operation, which means that heart and lung damage may not be fully reversible," explained Dr. Badhwar. "In these patients, their symptoms may improve after surgery, but their life expectancy may be reduced."

The mitral valve—one of four valves in the heart—is the inflow valve between the lungs and the main pumping chamber of the heart (the left ventricle). This valve allows blood to enter the heart from the lungs when the heart

muscle is relaxing and also prevents backflow of blood when the heart squeezes. Mitral valve diseases include mitral regurgitation (leaking) and mitral stenosis (narrowing), which may cause fatigue and shortness of breath.

“Once the leakage is severe, heart damage may result, thus mitral valve operation is recommended,” said Dr. Badhwar. “The preferred operation is mitral repair, whenever possible. If performed in a timely manner, the patient’s heart function and life expectancy may return to normal.”

In this study, the data showed that the overall repair rate was 65.6% (57,244) and the replacement rate was 34.4% (29,970). Overall operative mortality was 2.0% (1,762).

“We found that the number of operations performed for mitral valve disease is growing faster than any other category of heart operation and that the results were excellent with low risks of death and complications,” said Dr. Gammie.

The researchers also revealed that while the prevalence of mitral valve disease and the number of mitral valve operations performed per year are increasing, overall aortic valve operations were performed 1.6 times more commonly than mitral valve operations during the study period.

“This may suggest important under-referral and under-treatment of mitral valve disease, which may be related to the slower progression of signs and symptoms of mitral compared to aortic disease, as well as potential lack of adherence to guidelines for intervention,” said Dr. Gammie. “So although contemporary outcomes are excellent, there remains an important and substantial opportunity to improve results for patients with mitral valve disease by following established guidelines and encouraging earlier referral for operation.”

###

Gammie J, Chikwe J, Badhwar V, Thibault D, Vemulapalli S, Thourani V, Gillinov M, Adams D, Rankin JS, Ghoreishi M, Wang A, Ailawadi G, Jacobs J, Suri R, Bolling S, Foster N, and Quinn R. Isolated Mitral Valve Surgery: Society of Thoracic Surgeons Adult Cardiac Surgery Database Analysis. DOI: 10.1016/j.athoracsur.2018.03.086.

Find comprehensive medical information presented for patients by leading experts in cardiothoracic surgery on the STS Patient Website (ctsurgerypatients.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 7,400 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 3.700.