



## STS Press Release

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## Heart Valve Repair Significantly Improves Emotional Wellbeing in Patients with Mitral Regurgitation

*After surgery, patients experience lower rates of anxiety and depression*

Chicago – Patients with severe mitral regurgitation (MR) often suffer from psycho-emotional symptoms, such as depression and anxiety, but after undergoing mitral valve repair surgery patients experience a marked improvement in emotional and physical wellbeing, according to an article in the March 2015 issue of *The Annals of Thoracic Surgery*.

Previous research has shown that one in four patients with severe MR (caused when the heart's mitral valve doesn't close tightly, allowing blood to flow backward into the heart) suffer from poor psycho-emotional status (PES), elevated anxiety, and traumatic stress levels. Other challenging symptoms, such as dyspnea (shortness of breath or breathlessness) and fatigue also have been found in patients with poor PES.

Maurice Enriquez-Sarano, MD, from the Mayo Clinic in Rochester, Minn., and Tali Bayer-Topilsky, PhD, from JDC-Myers-Brookdale Institution in Jerusalem, Israel, led a questionnaire-based analysis to assess PES and health-related quality of life in 131 patients before and 6-months after surgery for MR. Results were compared to 62 patients with MR who did not undergo surgery and to 36 control patients.

### Key Points

- Patients with severe mitral regurgitation, who had suffered from anxiety and post-traumatic stress symptoms prior to mitral valve surgery, experienced a marked improvement in emotional and physical wellbeing by 6-months after surgery.
- No improvement was shown in patients with mitral regurgitation and psycho-emotional issues who did not undergo surgery.
- The type of mitral valve surgery (standard vs minimally invasive) did not make a difference in psycho-emotional improvement.

In this study, PES was defined by the levels of a patient's emotional distress (depression and anxiety) and by traumatic-stress-related symptoms.

Preoperative questionnaire results showed that PES was poorer among patients who ultimately underwent valve repair surgery, compared with the other two groups. Health-related quality of life showed similar baseline results.

“Interestingly, at the 6-month follow-up examination, psycho-emotional symptoms and quality-of-life measurements in patients who underwent mitral valve correction improved and normalized to levels observed in controls; however, there was no improvement of these symptoms in MR patients who were not referred to surgery,” said Dr. Bayer-Topilsky. “Another important finding of our study relates to ‘asymptomatic’ MR patients, who did not experience any physical symptoms— like shortness of breath or fatigue—prior to the surgery, yet suffered from elevated psycho-emotional symptoms. Asymptomatic patients indeed improved after the surgical correction, thus exhibiting a better and normalized psycho-emotional status.”

Additional results showed that the type of MR repair surgery (standard vs minimally invasive) did not make a difference in patient PES improvement.

“Early surgery in patients without symptoms or left ventricular dysfunction has been previously considered as providing no direct patient benefit, but our study results show how wrong this concept is,” said Dr. Enriquez-Sarano. “Patients with a serious valve disease often suffer from the psychological consequences of leaving that disease untreated. Eliminating the valve disease reduces this suffering, further supporting the concept of early MR repair.”

### **Surgical Repair in Asymptomatic Patients**

In an invited commentary in the same issue of *The Annals*, Daniel J. Ulliyot, MD, from the University of California in San Francisco, noted the inherent conflict of early surgical intervention among asymptomatic patients, “The admonition ‘do no harm’ counsels restraint, especially in asymptomatic patients for whom the clinical benefit may be far in the future.”

However, he said that the survey findings are important and require more investigation, “We need to know if improved mental health is sustained beyond 6 months after surgery, and if the favorable impact of surgery is the result of restoring normal valve function or some other effect of surgical intervention.”

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For a copy of the article or commentary contact Cassie McNulty at 312-202-5865 or [cmcnulty@sts.org](mailto:cmcnulty@sts.org).

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*The Annals of Thoracic Surgery* is the official journal of STS and the Southern Thoracic Surgical Association.