Early surgery for mitral regurgitation, before clinical triggers emerge, has best outcomes

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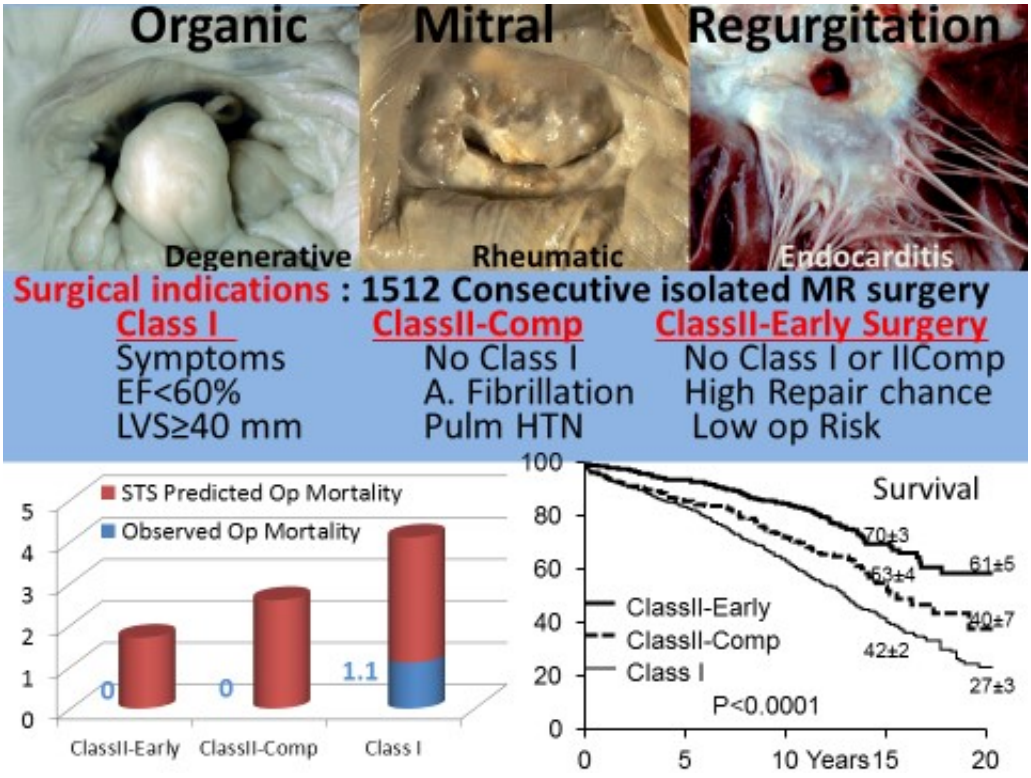

From top to bottom lesions of organic MR, classes of indications, and outcomes by indication. Credit: The *Journal of Thoracic and Cardiovascular Surgery*

About 2% of the U.S. population has mitral valve regurgitation, which left untreated, can remain mild or lead to arrhythmia or heart failure. Timing of surgery is a matter of controversy, with guidelines suggesting "watchful waiting" or medical treatment until heart failure or poor

function becomes apparent. Now a report in the *Journal of Thoracic and Cardiovascular Surgery*, the official publication of the American Association for Thoracic Surgery (AATS), finds that allowing patients to reach these "surgical triggers" doubles the risk of postoperative mortality and heart failure compared to those who undergo early surgery.

"Our study indicates that early repair should be preferred to rescue surgery in patients with mitral regurgitation (MR)," explained lead author Maurice Enriquez-Sarano, MD, of the Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic (Rochester, MN). "Guideline triggers for MR surgery based on symptoms and complications are linked to excess postoperative mortality and morbidity versus early surgery. Early surgery in this era of low operative risk and high repair rates provides the best long-term outcomes after MR surgery."

MR is a condition caused by blood leaking backwards through the partially closed mitral valve that connects the two left-sided chambers of the heart. For many people, symptoms may be mild and progress slowly over decades. The sign found on examination is a heart murmur and the symptoms include difficulty breathing and severe fatigue and swollen feet or ankles (heart failure) as well as heart palpitations (atrial fibrillation), but can lead to progressive deterioration of functional capacity associated with excessive pressure in the lungs (pulmonary hypertension).

This study analyzed data from 1,512 patients who were seen at Mayo Clinic between 1990 and 2000 for surgical correction of MR. The average age was 64 years, 89% had mitral prolapse (a condition in which the leaflets and tendons supporting the mitral valve weaken, preventing the valve from closing tightly), and 88% had their valves repaired, rather than replaced.

Patients were divided into three groups according to surgical indication. The first group of 794 patients had Class I triggers, such as heart failure symptoms, an ejection fraction of