

## VALVE DISEASE BENEFITS OF EARLY SURGERY FOR MR

Early surgery improves long-term survival and reduces the risk of heart failure among patients with severe mitral regurgitation (MR) owing to mitral valve flail leaflet when compared with medical management. These findings, from a study of patients enrolled in the Mitral Regurgitation International Database (MIDA) have been published in *JAMA*.

Degenerative mitral valve disease is the most-common cause of MR. Changes in valve connective tissue lead to loss of chordal support or to chordal rupture, which causes the leaflet to fall into the atrium during systole (flail leaflet). Management of patients with severe MR and flail leaflet is controversial. Although joint guidelines from the ACC and AHA recommend the consideration of early surgery, even in the absence of symptoms or left ventricular dysfunction, the importance of timing is unclear, and ESC guidelines do not strongly favour this strategy.

Suri *et al.* analyzed data from 1,021 patients enrolled in the MIDA registry. Those with a class I indication for mitral valve surgery (heart failure symptoms or left ventricular dysfunction), and those with nondegenerative mitral pathology or confounding diagnoses were not included. Early surgery was performed in 446 patients and 575 underwent medical management for at least the first 3 months of follow-up (surgery was performed in 59% of patients in this group at some point after this period).

At 3 months, mortality was low (early surgery 1.1% vs medical management 0.5%,  $P=0.28$ ), as was the rate of new-onset heart failure (0.9% for both,  $P=0.96$ ). However, new-onset atrial fibrillation was more common among those who underwent early surgery than in those who were managed medically (6.2% vs 1.2%,  $P<0.001$ ). Long-term outcomes (median follow-up 10.3 years) strongly favoured early surgery, with superior survival (adjusted HR 0.55, 95% CI 0.41–0.72,  $P<0.001$ ) and lower risk of heart failure (adjusted HR 0.29, 95% CI 0.19–0.43,  $P<0.001$ ). No difference between in the two treatment options in the rate of new, late-onset atrial fibrillation was observed. These results indicate that early mitral valve surgery for severe degenerative MR is preferable for patients where valve repair expertise can be offered with low surgical risk.

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**Original article** Suri, R. M. *et al.* Association between early surgical intervention vs watchful waiting and outcomes for mitral regurgitation due to flail mitral valve leaflets. *JAMA* 310, 609–616 (2013)