

Meeting abstract

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2046 Results of long term follow-up of mitral regurgitation following aortic valve replacement for severe aortic stenosis by cardiac MRI

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Background

Mitral regurgitation (MR) frequently accompanies severe aortic stenosis (AS). To negate double valve replacement which increases the morbidity and mortality, it is clinically important to assess the long-term changes in MR following AVR.

Hypothesis

We hypothesize that extent and grade of MR decreases following aortic valve replacement (AVR) and remains stable in long-term follow-up.

Methods

Cardiac MRI (CMR) was performed on 10 patients with severe but compensated AS 3 ± 2 days prior and 10 ± 3 months post AVR and at up to 3 ± 1 years after the AVR. Semi-quantitative quantification of the grade of MR was determined. Pre and post AVR, mitral valve geometry, LV geometry, mass/volume index and function were measured and compared. $>2+$ AR and or structural mitral pathology were excluded.

Results

Pre AVR, the grade of MR was trace through $2+$. Post AVR the MR remained stable or decreased after 2 years in 80% of the patients and increased in two patients (0-trace in one pt and trace to $2+$ in another pt with late valve failure), (see graphs). LV mass and volume index decreased post AVR, ($p < 0.05$ for both) and were highly correlated

with MR improvement ($r = 0.51$ and 0.60). EF increased ($p < 0.05$) but was not well correlated ($r = 0.31$) with MR reduction post AVR. The LV sphericity improved following AVR ($p < 0.05$). Figure 1.

Conclusion

AVR achieves improvements in MR in severe AS that are detectable by CMR and remain stable in up to 4 years of follow-up. Favorable changes appear attributable to LV and mitral valvular geometry, LV mass regression and improved EF. Since considerable morbidity and mortality exists for simultaneous AVR and MVR, CMR suggests that AVR without MVR may be indicated in such patients.

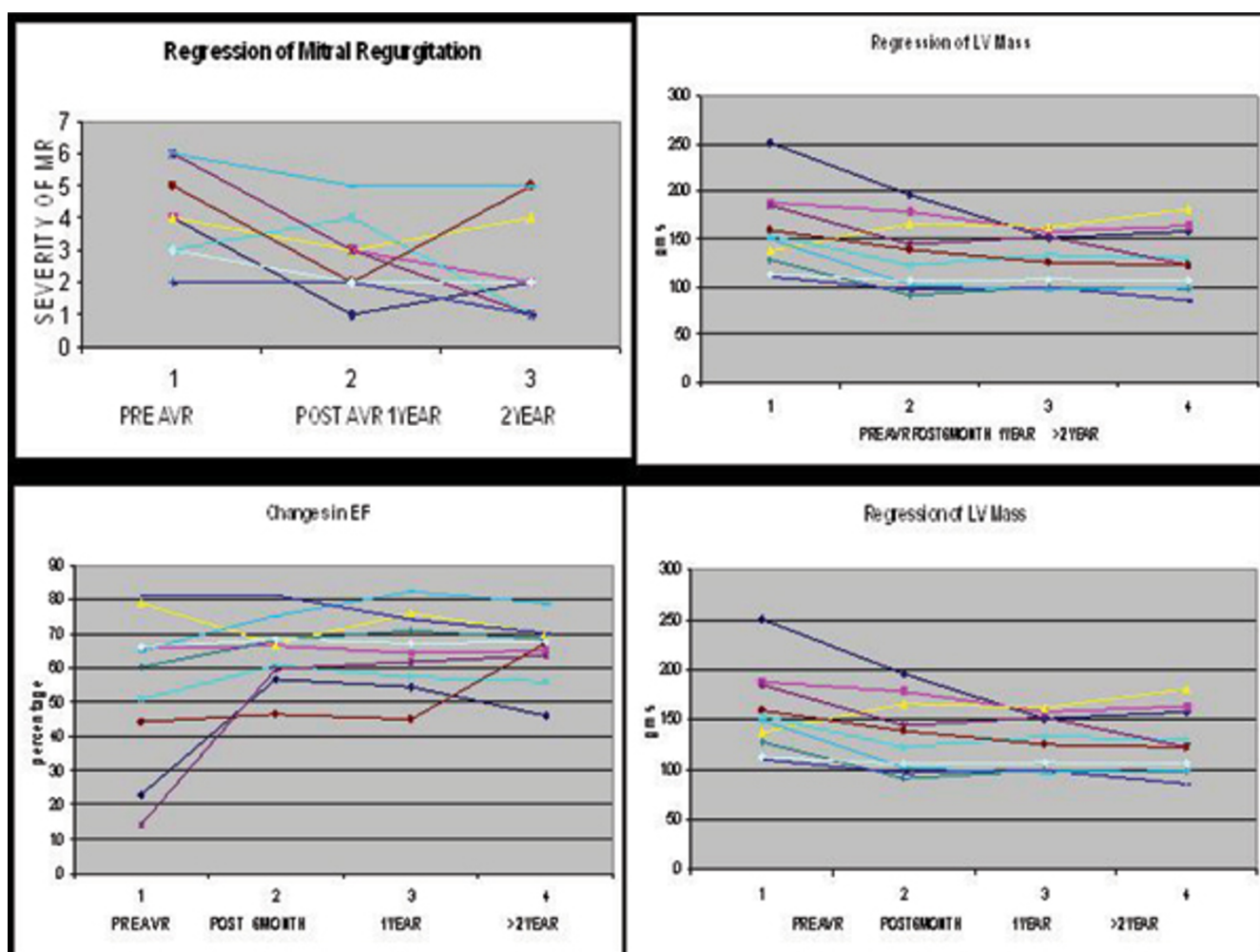


Figure 1

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