

Burden of Mitral Valve Regurgitation in Atrial Fibrillation

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Background:

Atrial fibrillation (AF) is the most common arrhythmia. Although it's known to be associated with valvular lesions no large community based trial has looked at the degree, severity and possible relations over time between atrial fibrillation and mitral regurgitation (MR).

Methods:

All residents of Olmsted County between 1980-2000 with first presentation of atrial fibrillation were identified and included in the Olmsted AF registry.

A comprehensive search was done to identify all patients with AF who had a full transthoracic echocardiogram (TTE) within 6 months of AF diagnosis and data was extracted.

A further search was done for all those who had at least one more TTE done 6 months post diagnosis or later and data was extracted.

Results:

Out of 4618 patients in the registry 2465 patients had a baseline TTE and 1323 patients had a follow up TTE.

A total of 14.4% of AF patients had moderate MR or more (significant MR) at baseline, a 3.5 times higher rate compared to the expected rate in age and sex matched population. The Rate of functional MR was 2.7 times higher than expected. Average follow up was 7 ± 5 years.

At the end of follow up the rate of new MR remained higher than in the general population, but was not significantly different than the rate at baseline. Multivariate analysis did not show relations between time in AF and development of MR

Conclusion:

Atrial fibrillation is associated with increased prevalence of significant MR, however it appears AF and specifically the burden of AF (time in AF) does not effect development of new functional MR.