Degenerative Mitral Valve Disease is an Important, Common Accompaniment of Degenerative Calcific Aortic Stenosis with Clinical Implications

Oral Contributions
West, Room 2010
Sunday, March 10, 2013, 9:15 a.m.-9:30 a.m.

Session Title: Valvular Heart Disease: Year in Review, Functional MR, E-Clip Updates and MR in the Context of AS
Abstract Category: 31. Valvular Heart Disease: Clinical
Presentation Number: 922-8

Authors: Alamelu Ramamurthi, Natesa Pandian, Jeffrey Kuvin, Ayan Patel, Tufts Medical Center, Boston, MA, USA

Background: There is increasing realization that degenerative calcific aortic stenosis (DCAS) is not just valve stenosis, but part of a diffuse atherosclerosis and calcium disorder, affecting structures beyond the aortic valve. Fibrocalcific abnormalities in mitral apparatus have been noted in patients with DCAS. How often significant mitral valve (MV) disease coexists with DCAS, and its clinical implications are unclear.

Methods: We studied 198 patients greater than 60 years of age, with moderate and severe DCAS based on indexed aortic valve area < 0.85. Echocardiograms of these patients were analyzed for the presence and severity of mitral annular calcium (MAC), mitral stenosis (MS), and mitral regurgitation (MR). The severity of MV annular calcium was assessed semi-quantitatively. The gradient across the MV was measured using the average of 2 beats in sinus rhythm, or average of 5 consecutive beats in atrial fibrillation. Severity of MR was graded based on flow convergence and vena contracta size. Significant MV disease was defined as moderate/severe MS (mean gradient > 5 mmHg), and moderate/severe MR. The clinical records of these patients were analyzed for the presence of symptoms, and comparison was made between groups of AS, with and without co-existent MV disease.

Results: Out of 198 patients with moderate and severe DCAS, 115 (58%) patients had some form of MV disease, mostly mitral annular calcification. However, significant MV disease was present in 24%, hemodynamically significant MS in 4.4% and moderate or severe MR in 21.8%. In these patients mitral leaflets were thickened and fibrocalcific process extended beyond the annulus to a variable degree onto the leaflets. When we compared groups of patients with moderate/severe DCAS with and without significant MV disease, we found that 65.4% of the former had symptoms, as opposed to 53.2% in the latter (p<0.05). LV ejection fraction (%) was similar among the two groups (52 + 15 and 56 + 11, p=NS)

Conclusion: Significant number of patients with DCAS have co-existent fibrocalcific mitral valve disease, potentially influencing the assessment and symptom expression in these patients.