

Can Lone Atrial Fibrillation Induce AV valve Regurgitation?

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Introduction: Primary structural valve abnormalities and ventricular geometrical alterations are mentioned as a potential causes for atrio-ventricular regurgitation (AVVR).

Aim: testing the hypothesis whether paroxysmal or permanent (> 6 months) lone atrial fibrillation (AF) may induce AVVR.

Material & Methods: Forty seven pts with lone AF were evaluated for the presence and severity of AVVR using echocardiographic color Doppler study. Nineteen of 47 (40%) with paroxysmal AF and 28/47 (60%) with persistent AF. Only 9/19 (47%) pts with paroxysmal AF and 17/28 (60%) pts with permanent AF could mention the time period (months) suffering from arrhythmia. Based on color mapping technique ,mitral and tricuspid regurgitation (MR/TR) were graded as: none, mild , moderate, and severe. Significant AVVR was defined as either moderate or severe .Pts clinical characteristics, and AVVR grade in each group are presented:

Results:

Lone AF	Paroxysmal	Permanent	P-value
Number of pts	19	28	
Age (years)	66±7	77±6	P<0.005
Female/Male	12/7	17/11	0.87
No MR/TR	10/13	7/7	0.55/0.003
Mild MR/TR	9/6	15/16	0.68/0.08
Moderate MR/TR	Non/Non	5/4	0.053/0.088
Severe MR/TR	Non/Non	1/1	

Significant AVVR was noticed only in pts with permanent AF. In this group AVVR was associated with mean follow up of 54± 13 months and no AVVR was associated with mean follow up of 13±5 month (p<0.005).

Conclusion: The presence of AVVR among pts with lone AF is quite common, but significant AVVR can be detected only in pts with long standing arrhythmia. Our data showed that lone permanent AF should be considered as a risk factor for AVVR.