



Valvular Heart Disease

RELATION OF LEFT ATRIAL SPONTANEOUS ECHO CONTRAST IN PATIENTS WITH MITRAL STENOSIS TO INFLAMMATORY MARKERS

ACC Moderated Poster Contributions

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Background: Spontaneous echo contrast (SEC) is a presence of smoke like echoes with a characteristic swirling motion of blood in echocardiography. Previous clinical studies have demonstrated that SEC is a risk factor for left atrial thrombus formation and an important indicator of potential systemic embolism originated from heart. There is an established relation between inflammatory status and prothrombotic state. Therefore, we aimed to investigate the role of inflammatory status on SEC in patients with mitral stenosis (MS).

Methods: 62 consecutive patients with MS who undergoing mitral balloon valvuloplasty were enrolled to the study. Patients were divided into 2 groups according to whether formation of SEC in left atrium.

Results: There were 32 patients (mean age 45 ± 12 and 75% female) in the SEC(-) group and 30 patients (mean age 45 ± 11 and 63% female) in SEC(+) group. High sensitive C-reactive protein (Hs-CRP) levels were significantly higher in SEC(+) group than in SEC(-) group (3.9 ± 2.2 vs. 10.6 ± 6.3 , $p=0.024$). Neutrophil levels (64.6 ± 9.4 vs. 72.6 ± 8.6) were significantly higher in SEC(+) group, while lymphocyte levels (24.4 ± 6.9 vs. 18.3 ± 6.0) were significantly higher in SEC(-) group ($p=0.001$ for each). Neutrophil/lymphocyte (N/L) ratio was also significantly higher in SEC(+) group (3.0 ± 1.8 vs. 4.5 ± 1.8 , $p=0.003$). In Receiver Operating Characteristics (ROC) curve analysis, a N/L ratio >3.1 mg/dl had a 80% sensitivity and 72% specificity in predicting SEC in patients with MS. At multivariate analysis, hs-CRP (OR 1.235, <95% CI 1.040-1.466; $p=0.016$), N/L ratio (OR 1.461, <95% CI 0.977-2.184; $p=0.02$), left atrial volume (OR 3.012, <95% CI 1.501-5.611; $p=0.001$) and mitral valve area (OR 0.135, <95% CI 0.020-0.503; $p=0.017$) were independent risk factors of SEC in patients with MS.

Conclusion: Hs-CRP and N/L ratio were independently associated with SEC in patients with MS.