

## **Comparative study of transesophageal to transthoracic in detecting thrombus and spontaneous echo contrast in mitral stenosis**

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### **Abstrak**

**Background.** Spontaneous Echo Contrast (SEC) appears as a curling motion of echo in real time and this indicates Wood stasis, it is therefore predictive for thrombus formation and higher risk for thromboembolic phenomenon. Accumulating evidence showed higher incidence of thrombus formation in mitral stenosis (MS) patients if they presented with positive SEC. Detection of left atrial thrombus is even more important before mitral valvuloplasty procedure to prevent systemic and especially cerebral embolism. The aim of this study was to compare the utility of transthoracic echocardiography (TTE) to transesophageal echocardiography (TEE) in detecting SEC and thrombus in patients with MS.

**Method.** Forty-eight patients with MS were studied with TEE and TTE. The diagnosis of MS was established by TTE.

**Result.** With TTE, 15 patients (31,3%) had positive SEC, 33 patients (68, 7%) had negative SEC and 6 patients (12,5%) of the SEC positive patients had thrombus in LA. On the other hand with TEE, SEC were positive in 36 (75%) patients, negative in 12 (25%) patients and 17 (35,4%) of the SEC positive patients showed LA thrombus. This study confirmed the strong association between SEC and thrombus formation, as thrombus was only observed in SEC positive patients.

**Conclusion.** TEE is superior to TTE in detecting SEC and LA thrombus in patients with MS, because of the better acoustic window of TEE. TEE should be considered in every patient with MS where thrombus formation has to be ruled out, particularly before balloon mitral valvuloplasty procedure.