

### **Persistence of Left Atrial Appendage Thrombus in Patients with Atrial Fibrillation Treated with Anti-Coagulants**

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Background: Few studies using repeat transesophageal echocardiography (TEE) reported that LA/LAA thrombus might persist in spite of anticoagulation. There is no agreement whether clot resolution should be documented with a 2nd TEE before cardioversion in patients with atrial flutter-fibrillation (AF).

Patients and methods: From 12/1993 until 09/2009 1015 pts with AF lasting longer than 2 days underwent TEE before elective cardioversion. LAA thrombus was identified in 182 patients (18%). 66 of these pts (36%), mean age  $69.9 \pm 13.1$ , 36 male(55%), underwent a 2nd TEE 21-90 days after the 1st TEE, and all were treated with warfarin.

Results: LAA thrombus completely resolved in 36 of 66 pts (55%) and persisted in 30. The underlying conditions were: 39 pts had mitral incompetence, 11 had mitral stenosis, 8 had prosthetic mitral valves. Echo parameters (see table).

Echo Parameters on 1st TEE	Thrombus resolved (2nd TEE)	Thrombus not resolved (2nd TEE)
LA Dimension (cm)	5.15	5.29
Spontaneous echo contrast	24 (47%)	27 (53%)
Low velocity in LAA	19 (57%)	14 (43%)
Mitral stenosis	4 (34%)	7 (63%)
Mitral incompetence>mild	23 (59%)	16 (41%)
Mod-sev LV dysfunction	3 (27%)	8 (73%)

None of the echo measurements on 1st TEE were found to predict presence of LA/LAA thrombus on 2nd TEE.

Summary: We found persistence of LA/LAA thrombus in 45% of patients that underwent repeat TEE before cardioversion for AF in spite of treatment with anticoagulants. Most pts with persistence of LAA thrombus were not converted, while all patients with thrombus resolution underwent cardioversion. Thus we recommend routine 2nd TEE in pts with LAA thrombus considered for cardioversion.