

Characteristics and Outcomes of Patients with Suspected Vs. Certain Left Ventricular Thrombus

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Background: Left ventricular thrombus (LVT) and anticoagulation treatment for LVT are hazardous conditions that are associated with potential embolic or hemorrhagic complications, respectively. Due to the limited diagnostic performance of transthoracic echocardiography (TTE) for the detection of LVT, a diagnosis of suspected LVT (SLVT) is often used. Since the rate of true LVT is lower in this group and presumably unnecessary anticoagulation is associated with potential complications, we sought to compare the clinical characteristics and outcomes of patients with certain LVT (CLVT) vs. patients with SLVT.

Methods: Using the Heart Institute computerized database we retrospectively identified 136 patients who were diagnosed with SLVT (N=109) or CLVT (N=27) between the years 2007 to 2010. Demographic, clinical, including anticoagulation treatment and echocardiographic data were collected. Follow-up events were defined as: embolic event, hemorrhagic event, CHF, MI or combined endpoint of any event.

Results: There was no difference in baseline, clinical and echocardiographic findings between SLVT and CLVT patients. The rate of the combined endpoint was 16.1% and 48.1% for the SLVT group vs. CLVT group, respectively ($p<0.05$). Among patients treated with anticoagulation the rate of either hemorrhagic or ischemic events was 13% and 37 % for the SLVT vs. the CLVT, respectively ($p=0.03$). Among patients not treated with anticoagulation the rate of either hemorrhagic or ischemic events was 5.7% and 6.25 % for the SLVT vs. the CLVT, respectively ($p=NS$). In a multivariate model, CLVT vs. SLVT predicted combined event with OR of 4.6 (95%CI=2.2-9.8).

Conclusion: The diagnosis of SLVT is more frequent than CLVT. Patients with SLVT have fewer complications than patients with CLVT suggesting that sweeping anticoagulation therapy for this group maybe be unjust. The findings imply for the use of contrast echo agent to enhance the diagnostic performance of TTE.