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**Left Ventricular Thrombus Formation and Bleeding Complications During Continuous In-Hospital Anticoagulation for Acute Anterior Myocardial Infarction**

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Background: The reported 20-60% occurrence of post-AAMI LVT decreased with thrombolysis and further with primary percutaneous coronary intervention (PCI) to 10-20%. We reasoned that prolonged anticoagulation following primary PCI will even further reduce the incidence of LVT.

Methods: Our practice for patients who undergo PCI for ST-segment elevation MI (STEMI) is to continue heparin anticoagulation for 48 hours, followed by adjusted doses of low molecular weight heparin for 5 days. The admission echocardiogram is repeated before discharge for patients with an AAMI. We reviewed the records of all patients with an AAMI admitted between January 2006 and November 2009 for the presence of LVT and for the occurrence of bleeding complications

Results: 278 consecutive patients (mean age  $61 \pm 13$  years, range 29-92; 82% male) were included. The first echocardiogram was performed within  $1.2 \pm 0.9$  days of admission and the second after  $5.8 \pm 3.6$  days. Their mean admission LV ejection fraction was  $41 \pm 6.0\%$  (range 20-60%). LVT was already demonstrated on the initial echocardiogram of 6 patients (2%). Evidence of LVT on the second echocardiogram of another 6 patients yielded an LVT rate of 2.2% (6/272) on our prolonged anticoagulation protocol. There were six major bleeding episodes (requiring blood transfusion), two on day 1, one on day 4 and one each on the 11th, 14th and 30th day from admission. Ten patients had minor bleeding.

Conclusion: Primary PCI followed by continuous anticoagulation therapy throughout hospitalization markedly reduced the occurrence of LVT in patients presenting with AAMI-STEMI.

Abbreviations:

LVT - left ventricular thrombus

AAMI - acute anterior myocardial infarction

STEMI- ST-segment elevation MI

PCI - percutaneous coronary intervention