

Transient Atrial Fibrillation in Acute Myocardial Infarction: Implications for Future Risk of Stroke

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Background: Atrial fibrillation (AF) is a frequent complication of acute myocardial infarction (AMI). In the AMI setting, transient AF is frequently attributed to acute hemodynamic changes, inflammation or ischemia. Oral anticoagulation (OAC) is generally recommended for post-AMI patients with previously known AF, or AF at hospital discharge. However, it remains uncertain whether transient AF episodes are associated with a subsequent increased risk of ischemic stroke.

Methods: We studied the impact of transient new-onset AF on the 1-year risk of ischemic stroke and recurrent AF episodes in 2484 consecutive patients with AMI (mean [SD] age, 64 ± 10 years; 74% men). Patients with previous AF or AF at hospital discharge were excluded.

Results: Transient AF was observed in 227 patients (9.1%) during their initial hospitalization for AMI. At hospital discharge, all patients were in sinus rhythm and had been prescribed single or dual-antiplatelet therapy (n=172; 75.8%) or oral anticoagulation (OAC) with or without antiplatelet agents (n=55; 24.2%). At 1-year follow-up, the incidence of ischemic stroke was higher in patients with transient AF than in those without transient AF (7.9% vs. 3.0%, respectively; $p < 0.001$), with higher stroke rates in patients receiving antiplatelet agents alone (Figure). Cox regression analysis demonstrated that the adjusted hazard ratio for ischemic stroke at 1-year was 1.9 (95% CI 1.1 to 3.2; $p = 0.03$). In addition, the incidence of recurrent AF was higher (20.7% vs. 1.3%, respectively; $p < 0.001$).

Conclusion: Most patients with AMI-related transient AF are discharged without OAC therapy. Transient AF complicating AMI is associated with an increased future risk of ischemic stroke in patients treated with antiplatelet agents alone. High AF recurrence rates in these patients also suggest that OAC should be considered.