

ATRIAL FIBRILLATION RISK OF SYSTEMIC EMBOLI IN AF

The risk of stroke in patients with atrial fibrillation (AF) is well recognized, but data from a new study published in *Circulation* now indicate that AF is also associated with an increased risk of extracranial systemic embolic events (SEEs), and that these thromboembolic events confer high morbidity and mortality. Alan Hirsch, senior author on the paper, comments that “to know the real risk of AF, these non-brain events must be clinically recognized”.

Investigators retrospectively analysed data from four large, randomized studies of anticoagulation in nonvalvular AF: the ACTIVE-A, ACTIVE-W, AVERROES, and RE-LY trials. Suspected SEEs in these studies were independently adjudicated by four clinicians. In the 37,973 patients during 2.4 years of follow-up, 221 validated SEEs occurred in 219 individuals (incidence 0.24 per 100 patients years, compared with 1.92 per 100 patient years for stroke). SEEs accounted for 11.5% of all thromboembolic events in these patients.

SEEs occurred in the lower extremity (58%), visceral–mesenteric (31%), or upper extremity (10%) vasculature. In these patients, 64% were treated by an interventional procedure or amputation, 31% were hospitalized but did not undergo a procedure, and 5% were managed as outpatients. Within 30 days, 54% of patients fully recovered, 20% survived with deficits, and 24% died (compared with 25% of patients who died in the 30 days after a stroke). Over the full duration of follow-up, mortality was increased in patients with an SEE (HR 4.33, 95% CI 3.29–5.70) or stroke (HR 6.79, 95% CI 6.22–7.41) compared with patients with neither event. Risk factors for SEEs included age, female sex, and a history of smoking, stroke, SEEs, peripheral artery disease, or myocardial infarction.

According to Alan Hirsch, future clinical research should be designed “to determine how patients and physicians might better recognize these SEEs, to identify the ideal antithrombotic approach to prevent them, and to define the ideal vascular care approach to treat these dangerous events when they do occur”. Given the high morbidity, mortality, and financial health-care burden associated with these events, the investigators believe that “SEEs should be managed as aggressively as stroke”.

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Original article Bekwelem, W. *et al.* Extracranial systemic embolic events in patients with nonvalvular atrial fibrillation: incidence, risk factors, and outcomes. *Circulation* doi:10.116/CIRCULATIONAHA.114.013243