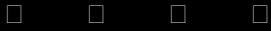




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ORIGINAL RESEARCH ARTICLE

Subclinical Atrial Fibrillation in Older Patients

Jeffrey S. Healey, Marco Alings, Andrew C. Ha, Peter Leong-Sit, David H. Birnie, Jacob J. de Graaf, Michel Freericks, Atul Verma, Jia Wang, Darryl Leong, Hisham Dokainish, Francois Philippon, Walid Barake, William F. McIntyre, Kim D. Simek, Michael D. Hill, Shamir R. Mehta, Mark Carlson, Frank Smeele,

A. Shekhar Pandey, Stuart J. Connolly

and on behalf of the ASSERT-2 Investigators

 <https://doi.org/10.1161/CIRCULATIONAHA.117.028845>

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Abstract

Background—Long-term continuous electrocardiographic monitoring shows a substantial prevalence of asymptomatic, subclinical atrial fibrillation (SCAF) in patients with pacemakers and patients with cryptogenic stroke. It is unknown if SCAF is also common in other patients without these conditions.

Methods—We implanted sub-cutaneous electrocardiographic monitors (St. Jude CONFIRM-AF) in patients ≥ 65 years attending cardiovascular or neurology outpatient clinics if they had no history of atrial fibrillation (AF) but did have any of: CHA₂DS₂-VASc score of ≥ 2 , sleep apnea, or body mass index > 30 . Eligibility also required either left atrial enlargement (≥ 4.4 cm or volume ≥ 58 mL) or increased serum NT-ProBNP (≥ 290 pg/mL). Patients were monitored for SCAF lasting ≥ 5 minutes.

Results—256 patients were followed for 16.3 ± 3.8 months. Baseline age was 74 ± 6 years, mean CHA₂DS₂-VASc score was 4.1 ± 1.4 , left atrial diameter averaged 4.7 ± 0.8 cm, and 48% had a prior stroke, transient ischemic attack or systemic embolism. SCAF ≥ 5 minutes was detected in 90 patients (detection rate 34.4% per year; 95% confidence interval [CI], 27.7-42.3%). Baseline predictors of SCAF were increased age (HR per decade: 1.55; 1.11-2.15), left atrial dimension (HR per centimeter diameter: 1.43; 1.09-1.86), blood pressure (HR per 10 mmHg 0.87; 0.78-0.98), but not prior stroke. The rate of occurrence of SCAF in those with a history of prior stroke, systemic embolism or TIA was 39.4% per year versus 30.3% per year without ($p=0.32$). The cumulative SCAF detection rate was higher (51.9% per year) in those with left atrial volume above the median value of 73.5 mL.

Conclusions—SCAF is frequently detected by continuous electrocardiographic monitoring in older patients without prior history of AF who are attending outpatient cardiology and neurology clinics. Its clinical significance is unclear.

Clinical Trial Registration—URL: www.ClinicalTrials.gov Unique Identifier: **NCT01694394**

atrial fibrillation

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