Echocardiographic Findings That May Help Identify Occult Intermittent Atrial Fibrillation in Hypertensive Patients at Risk for a Second (or First) Ischemic Stroke

To the Editor:

In their review, Liao et al found that Holter or event monitoring of patients after ischemic stroke identified 5% to 7% with intermittent atrial fibrillation not present on the admission ECG. They suggest that such monitoring is justified even if the yield is only 1 in 20. We recently studied the records of 827 patients with ischemic stroke and identified risk factors for atrial fibrillation in this population that might narrow the number of ischemic stroke patients requiring prolonged monitoring and might also be valuable in identifying patients with occult atrial fibrillation before their first stroke.

Of the 827 patients, 20.4% had atrial fibrillation on their admission ECG, another 7.5% were documented to have atrial fibrillation during the stroke admission and an additional 5.8% had atrial fibrillation on another admission before or after the stroke admission. Persistent atrial fibrillation (on all available ECGs after admission for stroke) was present in 149 patients (53.4% of atrial fibrillation patients) and intermittent atrial fibrillation (normal sinus rhythm on admission ECG or normal sinus rhythm occurring after atrial fibrillation noted on admission ECG) in 130 patients (46.6% of patients with atrial fibrillation). Hypertension was present in 86.7% of the atrial fibrillation patients and 77.5% of the patients without documented atrial fibrillation (P<0.01).

On review of the available echocardiographic findings in 233 hypertensive patients with atrial fibrillation and in 296 hypertensive patients with no documented atrial fibrillation, we found left atrial enlargement (>$4.0$ cm) in $93.7\%$ of the hypertensive patients with persistent atrial fibrillation, in $67.0\%$ of the hypertensive patients with intermittent atrial fibrillation, and in $43.7\%$ of hypertensive patients with no documented atrial fibrillation ($P<0.01$ between groups). Systolic dysfunction was present in $30.1\%$, $22.4\%$, and $11.8\%$ respectively ($P<0.01$), and in the patients with appropriate Doppler studies, diastolic dysfunction was present in $84.1\%$ of the patients with intermittent atrial fibrillation and $91.6\%$ of the patients with no documented atrial fibrillation (not significant). Left ventricular hypertrophy was highly prevalent in all groups. (A preliminary partial report of these data has been presented).

From these findings we suggest that ischemic stroke patients with hypertension who, on echocardiographic examination, have left atrial enlargement, systolic or diastolic dysfunction and left ventricular hypertrophy, should be extensively monitored to identify those with intermittent atrial fibrillation so appropriate measures can be taken to prevent a further stroke. Moreover, it might be worthwhile to consider prolonged event monitoring in all hypertensive patients with these echo findings to diagnose occult atrial fibrillation so appropriate preventive measures can be taken to prevent a first stroke.

Disclosures

None.

Jacob I. Haft, MD, FAHA, FHRS, FACC
Department of Cardiology
Hackensack University Medical Center
Hackensack, New Jersey

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Jacob I. Haft

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