

Telemetry Spots Silent Arrhythmia in Stroke Patients

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ORLANDO — All patients hospitalized for stroke should receive at least 24 hours of continuous cardiac rhythm monitoring upon admission to detect silent arrhythmias, Dr. Michael J. Schneck said at the 31st International Stroke Conference.

Dr. Schneck found that 17% of stroke patients developed a change in cardiac rhythm—most often atrial flutter or fibrillation—during the acute poststroke period.

“Of the 30 patients who had atrial fibrillation, only 8 had it detected upon admission,” Dr. Schneck said in an interview. “The other 22 were identified only with telemetry after they converted from normal sinus rhythm.”

Identifying such rhythm conversions can help pinpoint the cause of the stroke and any underlying cardiac disease. It also can help target patients who need an-



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DR. SCHNECK

ticoagulation therapy, but who might otherwise have been overlooked.

Dr. Schneck and his colleagues at Loyola University, Maywood, Ill., performed a retrospective chart review of 337 stroke patients, of which 289 received continuous cardiac monitoring. The patients’ average age was 67 years; 29% had a history of coronary artery disease, and 72% had hypertension.

After initiating telemetry, 80% of the patients had a normal sinus rhythm, and the remaining 20% had atrial fibrillation or flutter, a paced rhythm, junctional rhythms, second-degree heart block, or tachycardic runs.

Within 24 hours, new rhythms developed in 49 patients (17%). About half of these new rhythms developed in patients who had previously normal rhythms.

Most of the new rhythms (in 22 patients) were atrial fibrillation or flutter, a predictive factor for severe stroke and early death in acute ischemic stroke. Of these patients, 9 were discharged on warfarin therapy, and anticoagulation was contraindicated for the other 13 patients.

“Although many of the patients with new onset atrial fibrillation could not be anticoagulated, we still found nine more patients who would otherwise not have been treated with anticoagulation,” Dr. Schneck said at the conference, which was sponsored by the American Stroke Association.

Other new rhythms identified were ectopic atrial rhythm (in six patients), premature ventricular contractions (in five), sinus block with first-degree atrioventricular block (in four), junctional rhythms (in three), ST-segment depression (in two), second-degree atrioventricular block (in two), premature atrial contractions (in

one), ventricular tachycardia (in one), and sinus arrhythmia (in one).

“The number of patients with some of these other significant rhythm changes may be small, but some of these rhythm disturbances—such as ventricular tachycardia and heart block—require immediate action,” Dr. Schneck said.

Intracerebral hemorrhage was twice as common in patients who developed a new rhythm than it was in those whose rhythm didn’t change (24% vs. 12%).

In a risk factor analysis, only hypercholesterolemia and a previous hemorrhagic stroke were significantly associated with the risk of conversion to an arrhythmia. No other cardiovascular risk factors (prior stroke or coronary artery disease, hypertension, or diabetes) had a significant association, Dr. Schneck said.

This emphasizes the importance of telemetry in this population, he said. “The patient with occult atrial fibrillation may not walk in with a history of myocardial

infarction, high cholesterol, or diabetes. Simply based on cardiovascular risk factors, you don’t know on admission who is at risk for development of an arrhythmia.”

No one can be sure about the mechanism behind these rhythm changes, Dr. Schneck said. “The stress of the stroke, with its surges of catecholamines, may predispose some to develop an arrhythmia. The other possibility is that the arrhythmia reflects underlying cardiac disease that may then contribute to stroke risk.” ■

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CB₁ receptor

Decreased neurotransmitter release

Endocannabinoid

Ca²⁺

POSTSYNAPTIC

An endocannabinoid binds to a CB₁ receptor, triggering a cascade of events.