Prolonged Holter-ECG Monitoring Found to Improve Detection of Atrial Fibrillation After Acute Stroke

BY EVE BENDER

Enhanced and prolonged monitoring with a Holter-electrocardiogram (ECG) initiated early in patients aged 60 years or older with acute ischemic stroke was found to be superior to standard care for detecting atrial fibrillation (Afib), according to the results of a randomized, open-label study published in the April issue of The Lancet Neurology.

The improved detection rates and subsequent intervention in the form of anticoagulation treatment also led to a lower rate of ischemic stroke in the group that received extended monitoring sessions of Holter-ECG, the study authors reported.

Lead study author Rolf Wachter, MD, told Neurology Today that the usual care in the study was actually pretty good: “Ninety-five percent of patients had stroke unit telemetry for a median duration of three days, and 75 percent had an additional Holter-ECG for 24 hours.”

“Despite this excellent usual care monitoring, we were still able to pick up more atrial fibrillation — a three-fold increase — with our intervention,” said Dr. Wachter, professor of cardiology at the University Medical Center in Göttingen and deputy director of the clinic for cardiology and pneumology.

STUDY DESIGN

The Find-AF study was conducted at four centers in Germany; study participants were at least 60 years of age, had had a stroke, and did not have a known history of Afib. Researchers randomized 200 patients to an enhanced intervention with three 10-day Holter-ECG monitoring sessions started at baseline (a median of 3.5 days after symptom onset) and at three months, six months, and/or until they detected Afib. The

ARTICLE IN BRIEF

Researchers reported that prolonged monitoring sessions with a Holter-ECG detected more atrial fibrillation after stroke at three and six months compared with standard care (24-hour or more ECG monitoring).

EXPERTS: ON PROLONGED MONITORING FOR AFIB WITH HOLTER-ECG

DR. SEECHANT CHATURVEDI said the nearly 14 percent finding of atrial fibrillation in the group receiving extended monitoring was significant, adding that “the majority of these patients will likely benefit from anticoagulation, so neurologists should consider prolonged monitoring in older stroke patients with no atherosclerotic cause for the stroke.”

DR. MARK FISHER said the Holter-ECG is rarely used in the US any longer; instead, more advanced technology is being used to detect atrial fibrillation in patients with ischemic stroke. “No matter the paradigm of ECG monitoring, these findings support the idea of monitoring, because the more they looked, the more cases of atrial fibrillation they detected.”

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control group, comprising 198 patients, received standard care, including routine work-up and 24-hour or longer ECG monitoring, at the same time points — at baseline, three months, six months, and/or until they detected Afib.

By the six-month follow-up mark, researchers detected Afib in 13.5 percent, or 27 of 200 patients in the intervention group, compared with just 4.5 percent or nine of 198 patients in the control group (95 percent CI 3.5-14.6; p=0.002.) Researchers detected atrial fibrillation in most (18) of the 27 patients during the first 10-day episode of prolonged Holter-ECG monitoring. Six cases of atrial fibrillation were detected during the second 10-day monitoring session, and one was detected during the third 10-day episode. Researchers found atrial fibrillation in two patients during routine clinical visits between hospital discharge and the first three-month follow-up visit.

Among patients in the control group, seven received a diagnosis of atrial fibrillation during the first month after the index stroke, one patient at the three-month mark, and one at the six-month mark. After 12 months of follow-up, three additional cases of atrial fibrillation were detected in the control group.

Holter Monitor, Atrial Fibrillation
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The researchers recommend that neurologists employ ‘non-invasive monitoring for 10 days early after stroke.’

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Researchers started oral anticoagulation medication in all patients with detected atrial fibrillation.

Based on the study findings, Dr. Wachter and his colleagues recommend that neurologists employ “non-invasive monitoring for 10 days early after stroke. If the monitoring does not show atrial fibrillation, but there are some high-risk features (for example, increased supraventricular ectopy), we see these patients as ideal candidates for implantable loop recorders.”

**EXPERTS COMMENT**

Seemant Chaturvedi, MD, FAAN, FAHA, professor of clinical neurology and vice chair for VA programs at the University of Miami Miller School of Medicine, said the nearly 14 percent finding of atrial fibrillation in the group receiving extended monitoring was significant, adding that “the majority of these patients will likely benefit from anticoagulation, so neurologists should consider prolonged monitoring in older stroke patients with no atherosclerotic cause for the stroke.”

“They should especially consider monitoring patients with risk factors for AFib, such as previous congestive heart failure,” said Dr. Chaturvedi.
heart failure or left atrial enlargement,” he said.

Marc Fisher, MD, FAAN, professor of neurology at Harvard University, noted, however, that the Holter-ECG is rarely used in the US any longer; instead, more advanced technology is being used to detect atrial fibrillation in patients with ischemic stroke. But, he said, “No matter the paradigm of ECG monitoring, these findings support the

idea of monitoring, because the more they looked, the more cases of atrial fibrillation they detected.”

In lieu of Holter-ECG monitors, Dr. Fisher said that patients may wear mobile cardiac telemetry monitoring devices for 30 days; the devices are worn around the neck and have leads measuring and recording cardiac activity. “I would say this is the standard of care for cryptogenic strokes,” he noted, adding that these monitors record and transmit cardiac activity continuously for two to three years.

According to Dr. Fisher, the results of several clinical trials of some of the newer anticoagulant medications comparing their effects to aspirin in patients with embolic stroke of undetermined source may be a “game changer” in terms of how stroke neurologists practice medicine.

RESEARCHERS detected atrial fibrillation in most patients during the first 10-day episode of prolonged Holter-ECG monitoring.

“Despite this excellent usual care monitoring, we were still able to pick up more atrial fibrillation — a three-fold increase — with our intervention.”

“If the trials show that these drugs significantly reduce the risk of recurrent stroke and the safety profile is reasonable compared to aspirin, then this whole monitoring thing may become obsolete because if we have a patient who looks embolic on the imaging pattern, we will just treat them.” •

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