Continuous heart rhythm monitoring, and treatment if indicated, does not prevent stroke

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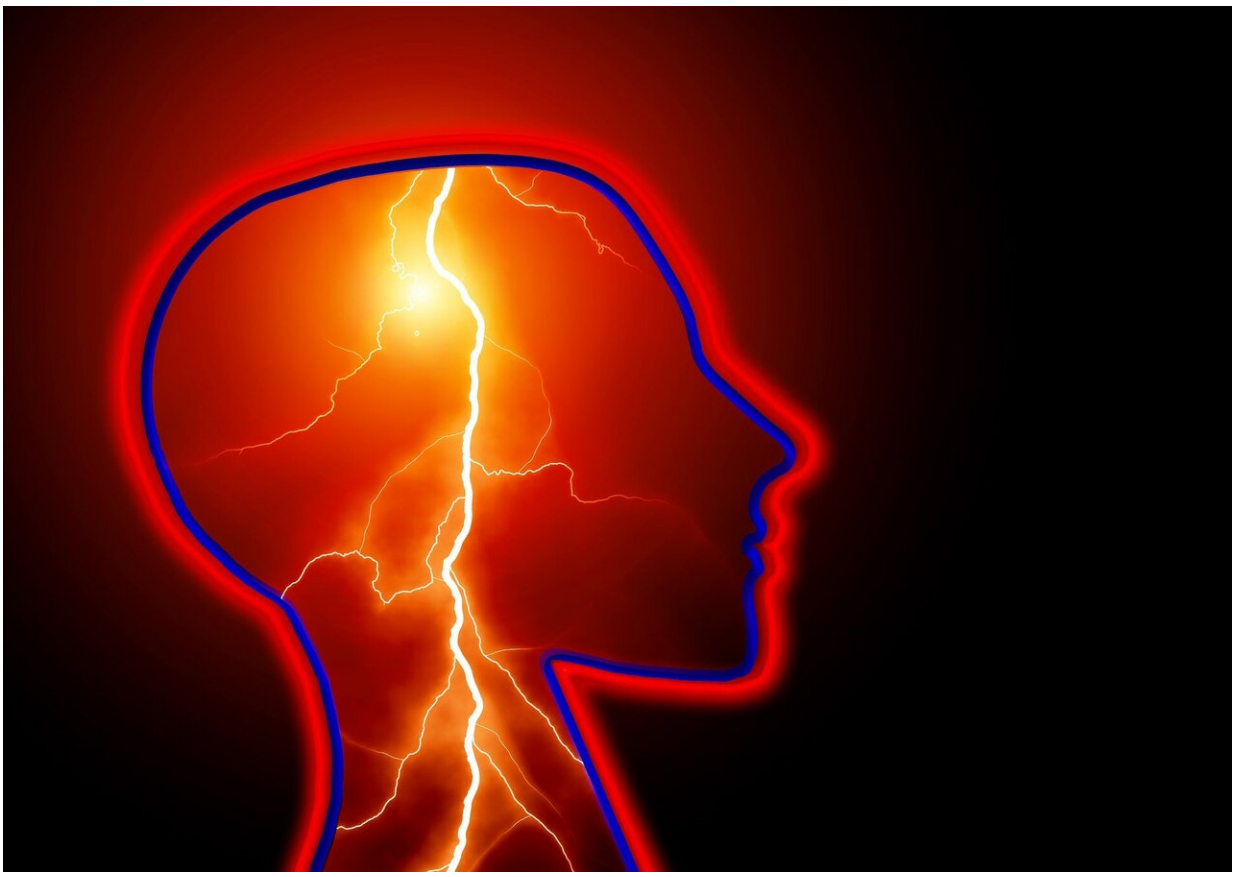

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Continuous heart rhythm monitoring—with anticoagulation if atrial

fibrillation is detected—does not prevent strokes in those at risk. That's the finding of late breaking research presented in a Hot Line session today at ESC Congress 2021 and published in *The Lancet*.

Atrial fibrillation is the most common heart rhythm disorder, affecting more than 33 million people worldwide. The disorder increases the risk of stroke by five-fold, but this risk can be reduced with anticoagulation treatment. The LOOP study was initiated because patients with atrial fibrillation are often asymptomatic and thus remain undiagnosed and untreated.

The study investigated whether continuous electrocardiogram (ECG) monitoring using an implantable loop recorder, and subsequent anticoagulation if atrial fibrillation was detected, would reduce the risk of stroke or systemic arterial embolism in patients at risk.

Danish national registries were used to identify individuals from the general population aged 70 years or older with at least one of the following additional stroke risk factors: hypertension, diabetes, heart failure or previous stroke. The exclusion criteria included any history of atrial fibrillation, currently using oral anticoagulation, a contraindication to oral anticoagulation, or a cardiac implantable electronic device (CIED).

Participants were randomized in a 1:3 ratio to receive continuous ECG monitoring or standard care. Those in the monitoring group had an implantable loop recorder inserted under the skin on the left side of the chest under local anesthesia. The device continuously (24/7) recorded the heart's electrical activity. Every night, any ECGs indicating heart rhythm abnormalities (such as atrial fibrillation) were transferred remotely to a server for evaluation by clinicians. If atrial fibrillation lasting more than six minutes was diagnosed, patients were advised to start oral anticoagulation. The standard care group had a telephone

consultation with a nurse once a year. The primary outcome was time to the combined endpoint of stroke or systemic arterial embolism.

A total of 6,004 participants were randomized: 1,501 to monitoring and 4,503 to standard care. The mean age was 74.7 years and 47.3% were women. The median duration of monitoring was 39.3 months, and the median follow-up period was 64.5 months.

Participants in the monitoring group were more likely to have atrial fibrillation detected and to start oral anticoagulation compared to those receiving standard care. Atrial fibrillation was diagnosed in 477 participants (31.8%) in the monitoring group and 550 (12.2%) in the control group (hazard ratio [HR] 3.17; 95% confidence interval [CI] 2.81–3.59; p