

CRYPTOGENIC STROKE: IMMEDIATE ANTICOAGULATION OR LONG-TERM ECG RECORDING? - LONG-TERM ECG RECORDING

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The majority of ischemic strokes are due to cardioembolism, large vessel atherothrombosis, small vessel occlusive disease, or other mechanisms. However, 30 to 40 percent of ischemic strokes remain unexplained despite a comprehensive evaluation and are classified as cryptogenic. Several important mechanisms have been associated with cryptogenic stroke, including unrecognized paroxysmal atrial fibrillation, aortic plaques, patent foramen ovale, hypercoagulable states, cerebrovascular disease and inflammatory processes. Paroxysmal atrial fibrillation detection is currently pursued after ischemic stroke with at least 24 hours of ECG monitoring. However, current guidelines recognize that optimal duration is undetermined. A recent meta-analysis of studies investigating the incidence of atrial fibrillation after ischemic stroke gave heterogeneous and conflicting results. Even though recent studies with long-term monitoring found a high incidence of AF in patients with cryptogenic stroke, the ability to predict atrial fibrillation in individual patients is limited. In patients with atrial fibrillation, the superiority of anticoagulation with warfarin and novel oral anticoagulants over aspirin in preventing ischemic stroke has been convincingly demonstrated. Conversely, the advantage of anticoagulation in patients with ischemic stroke without a diagnosis of atrial fibrillation is less clear. The most relevant study comparing aspirin vs. anticoagulation in ischemic stroke comes from the WARSS trial, where patients with stroke of heterogeneous etiologies were prescribed aspirin or warfarin in a randomized fashion (target INR 1.4-2.8). The study failed to demonstrate an overall advantage of anticoagulation over aspirin in reducing recurrent strokes or death. Also in the pre-specified subgroup of patients with cryptogenic stroke, the incidence of events in patients randomized to warfarin was comparable to that observed in patients randomized to aspirin (15.0 vs. 16.5 HR 0.92 [0.61–1.39] p=0.68). While novel anticoagulants have been extensively studied in patients with atrial fibrillation and have shown a favorable profile of efficacy and safety in preventing ischemic stroke, the hypothesis that they offer any advantage over aspirin in patients with cryptogenic stroke without atrial fibrillation has not been tested in randomized controlled studies and, even if it appears as plausible, is currently unproven.

In conclusion, the prescription of anticoagulants in place of aspirin in cryptogenic stroke without evidence of atrial fibrillation is currently unsupported by published evidence and should be tested in head-to-head comparisons before widespread use. As long as the prescription of anticoagulants in cryptogenic stroke without evidence of atrial fibrillation remains unsupported by randomized controlled studies, long term monitoring for the detection of atrial fibrillation is required to guide anticoagulation prescription.