



Healthcare
Improvement
Scotland

SHTG
Advice on health
technologies

Detection of paroxysmal atrial fibrillation in patients with newly diagnosed ischaemic stroke

Plain language summary | SHTG Assessment | 04-21

What is paroxysmal atrial fibrillation?

Atrial fibrillation is the term used to describe an abnormal, fast, irregular heartbeat. People with 'paroxysmal' atrial fibrillation have atrial fibrillation which comes and goes. Each episode comes on suddenly but will also stop suddenly, with the heartbeat going back to a normal rate and rhythm. Atrial fibrillation can increase someone's chances of having a stroke or transient ischaemic attack (sometimes called a 'mini-stroke').

Some people who have had a stroke or transient ischaemic attack will have undiagnosed atrial fibrillation. This increases their chances of having another stroke. For this reason, they may be given tests to see if they have atrial fibrillation. Standard tests monitor the heart for a few seconds and are good at detecting permanent atrial fibrillation. They are not so good at detecting paroxysmal atrial fibrillation, so to do this it may be necessary to monitor someone's heart for days or weeks.

What is ambulatory electrocardiogram (ECG) technology?

If it is thought that someone might have paroxysmal atrial fibrillation, they may be offered a technology which monitors the heart over a period of days or weeks. These technologies are called 'ambulatory ECG technologies'. This SHTG Assessment looked at Holter technologies, event recorder technologies and patch technologies.

Why is this important?

There is variation across NHSScotland in the type of ambulatory ECG technologies used, the patients they are offered to, and how long they are used for. There is also variation in the exact diagnosis of atrial fibrillation.

What we did

We looked at the evidence to assess which approach to prolonged heart monitoring was the most effective and the best value for money. We also looked at which patients should be offered prolonged heart monitoring, how long monitoring should be done for, and the length of atrial fibrillation episodes that should be treated.

What we found

Although ambulatory ECG technologies are useful for detecting paroxysmal atrial fibrillation, the evidence does not tell us the best way to use it.

For the three categories of ambulatory ECG technologies (Holter devices, event recorder technologies, and patch technologies), the evidence was not strong enough to tell us which is the most effective or the best value for money. In addition, the evidence does not tell us how long people should wear the ambulatory ECG technologies, and which people it should be offered to.

Advice from Canada recommends 7 days of continuous outpatient cardiac monitoring with either an ambulatory Holter monitor or an external loop recorder for patients who have been discharged from hospital after a stroke or transient ischaemic attack and who did not undergo continuous cardiac monitoring while in hospital.

The evidence is not clear on the length of atrial fibrillation (how long an episode of atrial fibrillation lasts) that requires treatment.

What next?

This SHTG Assessment will be considered by the National Planning atrial fibrillation group to inform more consistent practice across health boards.

This plain language summary has been produced based on
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