

# When the cause of stroke is mystery, patent foramen ovale (PFO) could be the answer

October 31 2016, by Laura Dawahare

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A stroke occurs when a blood vessel to the brain is either blocked by a clot or bursts, preventing the brain from receiving the oxygen it needs to survive or directly damaging brain tissue.

A [stroke](#) can be devastating, with possible paralysis, speech or vision problems, and/or memory loss. Outcomes can sometimes be improved with immediate treatment, with additional efforts directed at enhancing recovery and reducing the likelihood of another stroke.

To assess a patient's stroke risk, doctors look at factors such as [high blood pressure](#), narrowing of the [blood vessels](#), and heart conditions such as [atrial fibrillation](#) (an irregular beating of the upper chambers of the heart). Despite a thorough evaluation, in about 30 percent of patients who have had a stroke, the specific cause remains uncertain (called a [cryptogenic stroke](#)).

In some cases, a patent foramen ovale (PFO) is a possible explanation. Between 20-30 percent of adults have a PFO, which occurs when a flap of tissue between the upper chambers of the heart fails to seal after birth. This can allow [blood clots](#) or other material to divert into the arteries supplying the brain.

An echocardiogram (a sound picture of the heart) can detect a PFO. When another cause of stroke is not apparent, these patients should then have tests to exclude a source of a blood clot that could have passed through the PFO. Although some studies indicate that a PFO can be

found more frequently in patients initially diagnosed with cryptogenic stroke, whether the PFO is the cause of the stroke is often uncertain, especially when other risk factors are present.

Although PFOs can be closed with a device placed via a catheter, doing so may not decrease the risk of another stroke. Recent evidence-based guidelines from the American Academy of Neurology state that, "Clinicians should not routinely offer PFO closure to patients with cryptogenic ischemic stroke outside of a research setting."

Patients who have had a stroke and are found to have a PFO should have a complete evaluation for other or additional stroke risks. This should include at least 30 days of heart rhythm monitoring to identify possible episodes of atrial fibrillation (AFib is found in up to a quarter of patients initially diagnosed with cryptogenic stroke). In the absence of a specific cause such as atrial fibrillation warranting treatment with an anticoagulant blood thinner, treatment with an antiplatelet drug such as aspirin is a reasonable choice. PFO closure may still be considered as an option for patients who have a second stroke of uncertain cause despite adequate medical therapy.

Provided by University of Kentucky

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