Family Medicine Clerkship
Plain Language Summary

Title: Atrial Fibrillation and Warfarin

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Plain Language Summary:

Atrial fibrillation is the most common type of heart arrhythmia. People with atrial fibrillation can be at higher risk of stroke from blood clots.

The atria (plural of atrium) are the upper two chambers of the heart. In a normal heart the atria squeeze with a coordinated contraction, but in atrial fibrillation the atria squeeze with quiver. Because of this the blood is not squeezed out of the atria as effectively. Blood can pool in the atria and blood clots can form on the wall of the atria. These clots can then travel from the heart to the brain, which blocks the blood flow to part of the brain. The brain uses a lot of oxygen, and since blood carries that oxygen, this blockage can cause what is called an ischemic stroke (ischemic = not enough oxygen). The part of the brain that is not receiving oxygen can die. An ischemic stroke can cause permanent disability or death.

To prevent these kinds of strokes, many people with atrial fibrillation are taking warfarin (coumadin). Warfarin thins the blood so it is less likely to clot, and therefore patients are less likely to have ischemic strokes. Because the blood is not clotting as well, warfarin can also makes bleeds more likely. Some of these bleeds can be serious, especially if they are inside the skull. Like an ischemic stroke, theses bleeds can lead to permanent disability or even death.

The risk of ischemic stroke increases with certain major risk factors, such as

- increased age
- diabetes
- hypertension
- congestive heart failure
- history of a previous stroke

The higher risk a patient is for ischemic stroke, the more that patient is likely to benefit from warfarin. For high risk patients, warfarin will reduce ischemic stroke more than it increases bleeds, so the benefit outweighs the risk. For low risk patients, the benefit of warfarin is lower, and patients with no major risk factors might not receive any benefit.

Being on warfarin requires regular blood checks with your doctor to make sure your blood is clotting the proper amount. The blood should be thin enough to prevent clots, but not so thin it could cause a bleed. Patients on warfarin also need be careful about other medications, supplements, and foods because they can affect how warfarin works in the body. Patients taking warfarin also should be aware that injury from a fall or other accident could more dangerous because of their risk of bleeding.

Balancing the benefits and risks of warfarin therapy can be difficult and complex. Talk with your doctor about what is right for you, and ask any questions you might have about atrial fibrillation, stroke, or warfarin therapy.

Additional Resources:

Medline Plus:

http://www.nlm.nih.gov/medlineplus/atrialfibrillation.html

http://www.nlm.nih.gov/medlineplus/tutorials/atrialfibrillation/htm/index.htm

National Institute of Neurological Disorders and Stroke:

http://www.ninds.nih.gov/disorders/atrial_fibrillation_and_stroke/atrial_fibrillation_and_stroke.htm

American Heart Association:

http://www.heart.org/HEARTORG/Conditions/Arrhythmia/AboutArrhythmia/Atrial-Fibrillation_UCM_302027_Article.jsp

Key Words:

Atrial Fibrillation
Warfarin
Stroke