



# Atrial Fibrillation and Stroke Prevention

**A**trial fibrillation is the most common rhythm disturbance of the heart resulting in hospitalization. Fortunately, both prevention and treatment of atrial fibrillation has improved significantly. Common presenting symptoms include a racing heart, irregular heart rhythm, dizziness, fluid congestion, near fainting, and most serious of all, stroke. Atrial fibrillation causes the upper chamber of the heart to beat very fast and irregular. This in turn causes the lower chambers of the heart to also beat fast. In addition because the upper chamber of the heart is not contracting properly there is an increased risk of blood clot forming in an area called the atrial appendage. If the blood clot dislodges it can go to the head and cause an ischemic stroke.

The first step in the treatment of atrial fibrillation is to control the heart rate. This can be done by three different medications – beta blockers, calcium channel blockers, and digoxin. Ideally the heart rate at rest should be brought down to less than 100 beats/min.

Once the heart rate is controlled, an attempt to get back into regular rhythm should be made. This can be done with medications such as flecainide, propafenone, sotalol, amiodarone, or dronedarone. If these medications are not successful or if there is a need to convert back more urgently, then an electrical shock

under anesthesia can be delivered. This will usually reset the heart back to normal rhythm immediately.

To determine the cause of atrial fibrillation, blood work, an ultrasound of the heart (echo) and a stress test are often performed. Unfortunately in many patients, atrial fibrillation keeps recurring despite medications. In those individuals a procedure called ablation can be performed. Under x-ray guidance catheters are advanced to the left side of the heart and an electrophysiologist burns portions of the upper chamber of the heart from where atrial fibrillation originates. These procedures are successful 65–75% with the first attempt. Additional attempts are sometimes required and should only be done in individuals in whom the atrial fibrillation is highly symptomatic.

In all patients who have atrial fibrillation, the risk of a stroke is determined by calculating a CHADSVASC score. Individuals having a score of one or more should be considered for treatment with a strong blood thinner called an anticoagulant. In the past this meant using warfarin, which is a drug that is very difficult to take as it requires repeat blood tests to monitor, multiple dose adjustments, dietary restrictions,

and drug interactions. Fortunately three new alternative oral anticoagulants have come on the market in recent years. These include dabigatran (Pradaxa), rivaroxaban (Xarelto), and apixaban (Eliquis) and in the near future edoxaban (Lixiana). Although these drugs are more expensive, in general they are easier to take and safer to use and in the case of dabigatran and apixaban, superior to warfarin in reducing strokes.

*If you have atrial fibrillation it is important to be followed by both a cardiologist and a primary care physician. As always, prevention is the key. Controlling your blood pressure, reducing stress, and avoiding strong stimulants will reduce your chances of developing these unwanted heart beats.*

By: Narendra Singh, MD



Narendra Singh MD FRCPC FACC FAHA, is a Clinical Assistant Professor, Georgia Regents University in Augusta, and the Director-Clinical Research, Atlanta Heart Specialists, LLC. Dr. Singh studied at the Dalhousie Medical School in Halifax, Nova Scotia and went on to complete a residency and cardiology fellowship at the University of Toronto. He may be reached at 678-679-6800.