Nik's Healthbeat

Living with Atrial fibrillation

By
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Atrial fibrillation [AF] is one of the most common cardiac arrhythmias or irregular heart rhythms seen in 2.2 million people in the US. It is the most puzzling problem for both the physician and the patient

This irregular cardiac rhythm arises from the upper chambers of the heart, namely the atria. The atria beat at a rate greater than 350 per minute, while the ventricles beat at a rate of 60 to 150 per minute. This disparity between the rates at which the upper and lower heart chambers beat, reduces the pumping efficiency of the heart. That is just one of the problems related to this rhythm disturbance.

Causes of AF

The most common cause of AF is the coronary artery disease and it manifests itself in people over the age of 50 to 60 years. Occasionally, it also can occur in younger individuals without coronary artery disease. Valvular heart disease such as mitral stenosis, mitral regurgitation, or aortic stenosis also can cause atrial fibrillation. Most patients with congestive heart failure develop AF. It is also seen in almost 30% of the people who undergo heart surgery. Other conditions causing AF include hypertension, thyroid disease, and emphysema.

Presentation

Some people may experience a sudden onset of AF without any warning. Others may notice palpitations or rapid heartbeats. When they visit their physicians, their EKG may reveal irregular heart rhythm. Occasionally, some may have no symptoms and a routine EKG may unravel the arrhythmia. With reduced heart function, patients may present with worsening heart failure symptoms. In older patients, the AF may be associated with slow ventricular rates, a condition known as sick sinus syndrome. These patients may notice weakness, lack of energy, dizziness, and fainting episodes. Very rarely, patients may develop blood clots that can cause stroke or lack of circulation in the legs, creating an emergency situation.

Diagnosis

Routine EKG may reveal the AF. It will also establish the ventricular rate which can be as low at 30 to 40 beats or as high as 150 to 170 per minute. Cardiac enlargement may be noted on examination and chest X-ray. Echocardiogram may confirm the presence of cardiac enlargement, especially the left atrium, from where most of the AF arises.

Medical Treatment

Most patients can be managed with medicines to control the heart rhythm and sometimes to convert to regular rhythm. The chances of conversion to sinus rhythm are good if the AF has been in existence for less than a year. The most common drugs used to control the rate include digoxin, beta-blockers such as (atenolol, metoprolol), calcium channel blocker (verapamil), flecanide, or propafarone. These drugs have to be taken on a long-term basis. These drugs also help to maintain sinus rhythm after conversion or interventions. They may at times slow the heart rate too much to a point where patients may require a pacemaker. When these drugs are ineffective, more expensive medicine such as amiodarone is considered. Amiodarone, though well tolerated, may cause lung fibrosis in rare cases.

Since people with AF along with enlargement of the left atrium have a tendency to develop blood clots in the atria and cause embolism to the brain or other parts of the body, patients may be advised to stay on long term blood thinner such as warfarin. These patients need constant monitoring to ensure that the blood does not get too thin as that condition could potentially cause serious bleeding. Patients under the age of 75 with low risk factors may be treated with aspirin.

Cardioversion

People with AF of less than one year in the absence of other significant cardiac problems may be candidates for cardioversion to revert the rhythm back to normal. These patients are lightly sedated. The defibrillator pads are applied to the chest and a small jolt of electrical energy is delivered to the cheat wall, which in most cases convert the AF to sinus rhythm. These patients should be on blood thinners in advance to prevent any clot from getting to the brain.

Interventional Treatment

People with chronic AF who have significant symptoms despite being on several medicines may be candidates for radiofrequency ablation for AF. This is done in the cardiac catheterization lab, where multiple catheters are introduced from the groin vein and advanced up to the left upper chamber. The electrical activity of the atrium is monitored and areas especially surrounding the vein that drain into the atrium are treated with radiofrequency waves that freeze and interrupt the abnormal electrical connections, thus abolishing the atrial fibrillation. In experienced hands it has a 70% success rate. These patients still need to maintain some medical regimen to reduce the recurrences.

Pacemakers

Some with AF with very slow ventricular rates may not be able to maintain adequate blood circulation. These people may need a pacemaker to address the slow heart rate and medicines to suppress the fast heart rates. The pacemaker is generally placed in the cardiac catheterization lab. It is a relatively simple procedure where a wire is introduce via a shoulder vein into the right ventricle. This wire is connected to a battery that weighs less than an ounce. The battery stays underneath the skin.

Surgical Procedure

When patients with coronary artery disease and AF go for bypass surgery, the surgeon may make an incision along the length to the atria to disrupt any abnormal electrical connections to prevent AF.

Prognosis

Atrial fibrillation is generally well controlled with medicines and well tolerated rhythm problem. The risk of blood clot formation must be addressed judiciously to prevent stoke or loss of limb function.

Disclosure: Information provided here is for educational purpose only. Please consult with your physician for any medical advice.

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