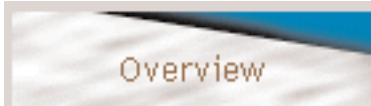


Atrial Fibrillation

Comparing different treatments In this edition we look at at cardioversion



What is atrial fibrillation?

If you are healthy and your heart is working normally you are likely to have a regular resting heart rate of around 60 to 90 beats per minute. If you are experiencing atrial fibrillation (AF), however, you may notice your heartbeat becoming irregular and speeding up for no apparent reason. These feelings or “palpitations” may occur constantly or only from time to time. They are unpleasant and worrying and they should not be ignored as they may mean that something is seriously wrong with your heart.

Atrial fibrillation happens when the electrical control of your heartbeat becomes disrupted. Normally your heartbeat is controlled by electrical signals from its own natural pacemaker, called the sino-atrial node. These signals cause the upper chambers of your heart (the atria) to squeeze blood into the lower chambers (the ventricles) which then squeeze blood out into your blood vessels. The regular boom-boom of a healthy heart is the sound of the contracting atria quickly followed by the contracting ventricles.

In atrial fibrillation, however, the electrical signals become erratic causing the atria and ventricles to contract out of sync. Instead of beating normally, the upper chambers, the atria, start making repetitive twitching movements known as ‘fibrillations’. This hampers the movement of blood from the atria into the ventricles. The ventricles respond by beating faster and more irregularly. It is this irregular ventricular beat you feel when you have a palpitation.

Common symptoms of AF include palpitations, dizziness, chest pains (angina) on exertion and breathlessness. For many people, drugs alone will not convert an arrhythmia to a normal heart rhythm. For these people, a procedure called cardioversion or electrical cardioversion may be necessary.

Treatment

Cardioversion is a treatment for heart rhythms that are irregular. During cardioversion, a special machine is used to send electrical energy to the heart muscle to restore normal rhythm. The procedure restores the normal heart rate and rhythm, allowing the heart to pump more effectively.

Cardioversion can be used to treat many types of fast and/or irregular heart rhythms. Most often, it is used to treat atrial fibrillation or atrial flutter. But cardioversion may also be used to treat ventricular tachycardia, another arrhythmia that can lead to a dangerous condition called ventricular fibrillation (a cause of sudden death.)

How Is Cardioversion Performed?

While your heart and blood pressure are monitored, a short-acting sedative is administered. Then an electrical shock is delivered to your chest wall through paddles or patches that stops the abnormal heartbeat and allows your heart to resume a normal rhythm.

Your doctor may want to give you blood thinners prior to the procedure.

In some people, a moderately invasive imaging test called transesophageal echocardiogram (or TEE) may be performed prior to the cardioversion to make sure that the heart is free from blood clots.

The TEE is performed by swallowing a narrow tube with a camera at its tip that can be placed against the back wall of the heart.

Internal cardioversion may be used in people whose heartbeat did not return to normal after external cardioversion. Internal cardioversion works by delivering an electrical shock through soft wires (catheters) placed in the heart.

Because the patient is sedated, the shock isn't felt. A successful cardioversion may take several electrical shocks.

What's the Difference Between Cardioversion and Defibrillation?

Cardioversion and defibrillation procedures both employ the use of a device to deliver an electrical shock to the heart. Electrical cardioversion, however, uses much lower electricity levels to administer the shock than defibrillation. Defibrillation is often used to treat much more difficult to convert arrhythmias.

What Happens After the Procedure?

Recovery from cardioversion only takes a few hours. After the procedure, you may also be required to take antiarrhythmia drugs to help your heart maintain its normal rhythm.