Electrical Cardioversion for Atrial Fibrillation

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Treatment Overview

Electrical cardioversion is a procedure in which an electric current is used to reset the heart's rhythm back to its regular pattern (normal sinus rhythm). The low-voltage electric current enters the body through patches applied to the chest wall.

Before cardioversion for atrial fibrillation, you will be given medicine to control pain and cause relaxation.

For nonemergency cardioversion, the timing of when you have it depends on how long you have had atrial fibrillation and your risk of having a stroke.¹

• If you have had atrial fibrillation for less than 48 hours, your doctor might perform cardioversion right away.
• If atrial fibrillation has lasted for more than 48 hours, or you are not sure how long you have had it, cardioversion could cause a stroke. You will likely wait a few weeks before having the procedure. During this time, you will take an anticoagulant medicine to lower your risk of a stroke.

In some cases, such as an emergency, your doctor might do a transesophageal echocardiogram before a cardioversion to see if you have a clot in your heart that could cause a stroke. Then your doctor can decide when it is safe for you to have cardioversion.

For help deciding if you should have electrical cardioversion, see:

   Atrial Fibrillation: Should I Try Electrical Cardioversion?

See pictures of:

• The electrical system of the heart.
• Atrial fibrillation.
• Low-voltage electrical cardioversion.
What To Expect After Treatment

After cardioversion, you will be monitored to make sure that you have a stable heart rhythm.

You will likely take a medicine (called a blood thinner) that prevents blood clots for at least a few weeks after your cardioversion. This medicine lowers your risk of a stroke.

Additional medicines to help prevent the return of heart rhythm problems (antiarrhythmics) also may be given before and after the procedure. Your risk of having atrial fibrillation again is greater if antiarrhythmics are not used after cardioversion.

Why It Is Done

Cardioversion is used:

• As a nonemergency procedure to stop atrial fibrillation that has not stopped on its own. For people who have just started having episodes of atrial fibrillation, treatment typically includes cardioversion.
• As an emergency procedure if atrial fibrillation is causing your heart to pump dangerously fast or causing your blood pressure to drop dramatically.

How Well It Works

The success of electrical cardioversion depends on how long you have had atrial fibrillation and what is causing it. Cardioversion is less successful if you have had atrial fibrillation for longer than 1 year.

After this treatment, about 9 out of 10 people get back a normal heart rhythm right away. But for many people, atrial fibrillation returns. Normal rhythm may last less than a day or for weeks or months. It depends on your other health problems.

Staying in a normal rhythm is more likely when the cause of your rhythm problem is not another heart problem. But for most people, atrial fibrillation is caused by another heart problem and is very likely to return.

If your atrial fibrillation returns, you may be able to have cardioversion again. But you might not stay in a normal rhythm for very long. If atrial fibrillation comes back quickly (within a week or so), having cardioversion a third time, or more, is less likely to help you. Your doctor might recommend a different treatment, such as a rhythm-control medicine, to get your heart rhythm back to normal.
If you take antiarrhythmic medicines too, they can help you stay in a normal rhythm longer.

Cardioversion may be less successful or may not be recommended if you:

- Have had atrial fibrillation for more than a year.
- Have significant valve problems.
- Have an enlarged heart as a result of heart failure or cardiomyopathy.
- Have multiple recurrences of atrial fibrillation.

Cardioversion is more likely to be successful if:

- Atrial fibrillation has been present for less than a year.
- This is your first episode of atrial fibrillation.
- You are young.
- Antiarrhythmic medicines are used along with cardioversion.

**Risks**

Risks of the procedure include the following:

- A blood clot may become dislodged from the heart and cause a stroke. Your doctor will try to decrease this risk by using anticoagulants or other measures.
- The procedure may not work. You may need another cardioversion or other treatment.
- Antiarrhythmic medicines used before and after cardioversion or even the cardioversion itself may cause a life-threatening irregular heartbeat.
- You could have a reaction to the medicine given to you before the procedure. But harmful reactions are rare.
- You can get a small area of burn on your skin where the patches are placed.

**What To Think About**

Cardioversion can also be done with medicines. These medicines are called rhythm control medicines, or antiarrhythmics. These medicines can also help keep your heart in a normal rhythm after it has been reset. You may get pills, or the medicine may be put into your arm through a tube called an IV. If an IV is used, it will be done in the hospital. You may start pills in the hospital and continue taking them at home, or you may start the pills at home.

Complete the special treatment information form (PDF) to help you understand this treatment.
References

Citations


Credits

By Healthwise Staff
Primary Medical Reviewer  Rakesh K. Pai, MD, FACC - Cardiology, Electrophysiology
E. Gregory Thompson, MD - Internal Medicine
Martin J. Gabica, MD - Family Medicine
Specialist Medical Reviewer  John M. Miller, MD, FACC - Cardiology, Electrophysiology
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