Advara HeartCare

Cardioversion

Patient Information

What is it?

Cardioversion refers to the process of restoring normal heart rhythm from an abnormal rhythm.

Most elective cardioversions are performed to treat atrial fibrillation, a heart rhythm disturbance originating in the upper chambers (atria) of the heart. It involves delivering an electric shock to the heart while you are under an anaesthetic.

The shock is delivered through special electrodes or paddles placed on the chest and sometimes on the back. The purpose of cardioversion is to interrupt the abnormal electrical circuit(s) in the heart and restore a normal heartbeat. The delivered shock causes all the heart cells to contract simultaneously, interrupting and terminating the abnormal electrical rhythm without damaging the heart. The heart's electrical system then restarts a normal heartbeat in its place, like rebooting a computer.

You may also hear cardioversion referred to as electrical cardioversion, direct-current cardioversion or DC cardioversion.

What should I expect?

You will usually be admitted to the hospital on the morning of the cardioversion procedure. The cardioversion is performed in a specialised room with appropriate equipment. The procedure will be performed under a light general anaesthetic. You will have an intravenous drip put in one of your arms. Special cardioversion pads will be used to minimise any skin burning or irritation from the electrical shock. You will be connected to an external defibrillator so we can monitor your heart rhythm and deliver the shock.

Preparation

You need to fast for at least six hours prior to the cardioversion. In many cases you will have been on warfarin or an alternative blood thinner prior to the cardioversion.

- If you are on warfarin, it is important that the level of the blood thinning (the INR) is checked prior to the cardioversion, usually the day before or the morning of the procedure
- If you are on an alternative blood thinner (dabigatran, apixaban or rivaroxaban), you should continue taking these without skipping any doses

Make sure you read the consent form and understand the risks involved with this procedure. Please clarify any concerns or queries with your cardiologist before signing the form.

What happens after the procedure?

The success rate depends upon a number of factors, but there is a good chance that the normal rhythm (sinus rhythm) will be restored.

Patients generally wake up quickly from the anaesthetic and without any recollection of the shocks being delivered. Even if the cardioversion is successful, warfarin or alternative blood thinners are usually continued for at least a month after the procedure. In some patients, the arrhythmia subsequently recurs, and repeat cardioversion may be required.

- You will not be able to drive yourself home from the procedure and you will need someone to stay with you overnight after the procedure
- You should not drive or make any important decisions for 24 hours after the procedure

Risks

Cardioversion is a safe and effective treatment option for atrial fibrillation.

The main risk is that of embolisation, where a blood clot is dislodged from the heart into the bloodstream. If the clot travels to a major organ, it can cause problems such as a stroke or heart attack. For this reason, if atrial fibrillation has been present continuously for more than 48 hours, or if its duration is unknown, the blood must be thinned prior to the cardioversion. Imaging of the heart with a transoesophageal echo may be performed to rule out a blood clot. If adequate blood thinning is undertaken, the risk of embolisation is less than one in 100.

- There is a very small risk associated with the administration of the anaesthetic required for the cardioversion, but the likelihood of a significant anaesthetic complication is also less than one in 100
- This treatment is only undertaken by trained cardiologists, who will make every effort to minimise risks. If complications occur, emergency equipment is readily available to help deal with them