IDA-TALLINNA KESKHAIGLA

AS Ida-Tallinna Keskhaigla
Ravi 18, 10138 Tallinn
Rg-kood 10822068
Tel 666 1900
E-post info@itk.ee
www.itk.ee

Electrical cardioversion

The purpose of this leaflet is to provide information on electrical cardioversion.

Electrical cardioversion is a procedure in which the heart rhythm is restored with the help of an electric pulse. This is done in the case of atrial fibrillation or flutter, when the restoration of rhythm with the help of drugs has not been successful or is preferable in a specific case.

Atrial fibrillation or flutter is usually perceived as an accelerated or irregular heartbeat. During a rhythm disorder, you may experience palpitations, shortness of breath, fatigue, loss of strength, intermittent chest pain, or tightness. When checking the pulse, the pulse wave is generally irregular and/or with a significantly faster frequency. In the course of electrical cardioversion, the heart is given an electrical impulse, which restores the normal rhythm of the heart. The procedure is performed with short-term anaesthesia to avoid pain and ensure a feeling of comfort and safety.

In atrial fibrillation, thrombi or blood clots can form in the heart's atria, and when these clots travel with the blood flow, they can block blood vessels, leading to a stroke or other serious circulatory problems in different organs. In order to reduce the risk of blood clots forming and to break down existing blood clots, it is necessary to regularly take a blood-thinning medicine called an anticoagulant.

- Without a prior course of blood-thinning medication, electrical cardioversion is allowed exceptionally for up to 24 hours from the onset of arrhythmia. If you are not sure that the arrhythmia has lasted less than 24 hours, you should inform your doctor.
- Cardioversion can be performed if you have taken your blood-thinning medicine as directed by your doctor and without missing any doses for at least three weeks before the procedure.
- If you are using Marevan (warfarin) for blood thinning, the INR[1] should be in the treatment range (INR 2.0–3.0) for at least three weeks before the cardioversion procedure.

If you have taken blood-thinning medicines (anticoagulants) irregularly (some doses have not been taken), you should always tell your doctor. In case of irregular blood thinning treatment or if your doctor suspects that there may be blood clots in your heart, echocardiography should be performed before the procedure. This study will determine whether there are blood clots in the heart and whether electric cardioversion is allowed. If blood clots are present, this procedure should not be carried out.

Before electrical cardioversion

- Your doctor will give you all the information about the procedure.
- The nurse will ask you to complete and sign the ‘Patient’s informed consent to the operation’ and to complete the ‘Pre-anaesthesia questionnaire on patient health’.
- You may not eat or drink dairy products or fruit juices for **six hours** before the procedure. You may not drink anything for **four hours** before the cardioversion.
- The medicines your doctor has asked you to take before the procedure should be taken with a little water at least two hours before the procedure.
- Remove metal objects (e.g. watch, bracelet) and dentures that affect electrical conductivity from the body.
- A blood sample will then be taken and an electrocardiogram (ECG) performed.
- Finally, you will be given a venous cannula, through which you will be given the medicines needed for the procedure.

Electrical cardioversion is carried out in an intensive care room. You will be treated by a cardiologist or an emergency medicine doctor, an anaesthetist, nurse, and caregiver.

During the procedure

- You will be given oxygen-enriched air through a mask.
- You will be administered medication through an intravenous line, which will provide short-term anaesthesia lasting 10 to 15 minutes.
- Electrodes from a defibrillator (a machine that generates electrical impulses) will be placed on your chest.
- While anaesthetised, your heart will be given an electric pulse.
- Your breathing rate, heart rate, blood pressure and oxygen levels in the blood will be monitored throughout the procedure.

After electrical cardioversion

- A new electrocardiogram is performed to assess the heart rhythm.
- You will remain in the hospital for up to four hours.
- Two hours after the procedure, you may eat, drink, and move again.
- You should not drive a motor vehicle for 24 hours after the procedure, as your reaction rate may be slowed down due to the effect of the administered medications.
- You should not consume alcohol-containing beverages, hypnotics or sedatives for 24 hours after the procedure.
- You should continue with blood-thinning treatment after an electrical cardioversion. Your doctor will provide information about the duration of treatment.

Risks

- The procedure can rarely be accompanied by new arrhythmias, which are monitored by a cardiologist who assesses the need for additional treatment.
- Mild, usually superficial, skin burns can occur in the electrode area, which heal without treatment.
- If blood clots were present in the heart during the procedure, they can cause a stroke or other acute circulatory disorder.

It is not always possible to restore a regular heartbeat during the procedure. In this case, your doctor will decide on further treatment tactics. If you have any questions or need more information, please contact your doctor or nurse.

ITK1268

Approved by the decision of the Medical and Nursing Care Quality Commission of *Aktsiaselts Ida-Tallinna Keskhaigla* on 04. June 2025 (Protocol No. 2.2-8/1-25)

---

[1] INR is the ratio of a patient's PT to a normal (control) sample, raised to the power of the international sensitivity index (ISI) value for the control sample used.