



Procedure Information – Direct Current Cardioversion

Visit No.: Dept.:
Name: Sex/Age:
Doc. No.: Adm. Date:
Attn. Dr.:

Page No:

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Patient No.: PN

*Please fill in /
affix patient's label*

Introduction

Heart rhythm is mainly controlled by the conduction system of the heart. Any abnormality in the conduction system may result in abnormal heart rhythm (arrhythmia). Arrhythmias with fast heart rate can cause syncope, heart failure or occasionally cardiac death. It may be necessary to stop arrhythmias as soon as possible. Direct current cardioversion (DCV) is the conversion of arrhythmias with fast heart rate to normal rhythm with the use of electric shock. Depending on the situation, it may be used as an elective or emergency procedure.

Importance of Procedure

DCV can quickly abolish arrhythmias to resume a normal rhythm. Common indications are atrial fibrillation, atrial flutter, supraventricular tachycardia and ventricular tachycardia. Depending on the type and duration of arrhythmia, the amount of energy used and successful rate may be different. Especially in case of ventricular tachycardia, if you refuse this procedure, the effect of arrhythmia may be detrimental or even fatal, especially in emergency situation. Alternative treatments include anti-arrhythmic drugs and radio-frequency catheter ablation of the arrhythmogenic substrate.

The Procedure

1. This procedure is performed at bedside or in a cardiac catheterization centre.
2. Electrodes are adhered to the chest to monitor the heart rate and rhythm. Blood oxygen monitor through your finger will be set up.
3. Two electrode pads are placed on your chest wall, either both on the front or one on the front and the other on the back
4. You will be sedated with medications and oxygen supplement may be given.
5. A pulse of electric current is delivered through these pads to the chest. The amount of energy used depends upon the type of arrhythmia to be cardioverted. You may experience pain during the electric shock.
6. If the initial shock fails to terminate the arrhythmia, the energy may need to be stepped up or electrodes may be repositioned.
7. In case of immediate recurrence of arrhythmia, the procedure may be repeated.

Risk and Complication

- Complications include transient low blood pressure, stroke, transient arrhythmias, pulmonary edema and painful skin burns.
- DCV of atrial fibrillation and atrial flutter may trigger dislodgement of any undetected existing blood clot inside the heart and there is a risk for stroke (5.3%). Use of blood thinning drug before and after DCV reduces the risk to 0.8%. Alternatively, before DCV, trans-esophageal echocardiogram can be used to exclude any existing blood clot in the heart.



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Before the Procedure

1. Your doctor will explain to you the reason, procedure and possible complications. You will need to sign a consent form.
2. In elective case, you will have to undergo some tests including electrocardiogram, chest X-ray and blood tests. A trans-esophageal echocardiogram may be performed before DCV. Fasting for 4-6 hours is necessary before DCV.
3. In emergency DCV, the preparatory work mentioned above may not apply.
4. An IV infusion will be set up.

After the Procedure

1. After the procedure, you will be kept on close monitoring in the ward.
2. Oral diet may be resumed when you are fully conscious.
3. You may feel mild pain or discomfort on the chest for a few days after the procedure.
4. You may need to take blood thinning drug for 4 weeks after DCV.

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. Should a complication occur, another life-saving procedure or treatment may be required immediately. For further information please contact your doctor.

Reference

Hospital Authority – Smart Patient Website

I acknowledge that the above information concerning my operation/procedure has been explained to me by Dr. _____. I have also been given the opportunity to ask questions and receive adequate explanations concerning my condition and the doctor's treatment plan.

Patient / Relative Name

Signature

Relationship (if any)

Date