



Operation Information

Catheter Ablation

Introduction

Catheter ablation is an operation on the heart that aims at resolve arrhythmia. Catheter Ablation is a technique using a small amount of energy, either cryo (cold) or radiofrequency (heat), via a catheter directly onto the area responsible for the extra electrical circuit (short circuit) within the heart. This causes scar tissue to form which blocks the area from generating or conducting the fast impulses that cause arrhythmia, providing relief from the symptoms. This operation is commonly recommended for clients who have been diagnosed with an abnormal heart rhythm and have no responses to medications. Please discuss with your doctor to select the most appropriate treatment.

Outcomes

This operation has a high success rate of curing many different types of arrhythmias and the client can avoid taking long term anti-arrhythmic medications.

Procedures

1. This operation is performed under local anaesthesia in a cardiac catheterization center. The doctor may give you sedation to calm you down.
2. Electrodes are adhered to the chest to monitor the heart rate and rhythm. Blood oxygen and blood pressure are monitored through the devices on your fingertip and arm.
3. Small wounds are made over the groins, under the clavicle or around the neck for access to arteries or veins.
4. Catheters are advanced to the heart under X- ray guidance.
5. In some patient, abnormal electrical activities arise from left atrium, doctor may need to perform transseptal left heart catheterization, to allow the passage of catheters from the right atrium to the left atrium.
6. At specific sites inside the heart, the doctor records electrical information, then a tiny electric current is delivered to alter the heart rate and try to trigger arrhythmia.
7. You may experience discomfort when the heart is being excited to certain rate. When an induced arrhythmia persists, the doctor may use direct current cardioversion to convert it.
8. Energy is delivered to the target site via a special catheter. You may experience some chest discomfort during the delivery of energy.
9. After the ablation, electrophysiology study (EPS) is carried out to confirm if the operation is successful.
10. The doctor removes the catheters. The nurse puts pressure on the puncture site to stop any bleeding.
11. The duration of this operation could last for 2 hours or even more. It depends on the nature and complexity of the arrhythmia.
12. You are sent to a ward for close observation for 12 to 24 hours.

Possible Risks and Complications

Minor complications (4%) include:

- Puncture site infection or bleeding
- Blockage of blood vessel by clot
- Arrhythmia

Major complications include:

- Damage of blood vessels and the heart (3-5%) that may need surgical intervention (<1%)
- Death due to uncontrollable complications (extremely rare)
- Cardiac tamponade (<1%)
- Pulmonary embolism, deep vein thrombosis or stroke (<1%)
- Pneumothorax (<1%), or haemothorax (<1%) when the vein under the clavicle has been used

Other complications include:

- Recurrence of arrhythmia (5-10%)
- May not be able to improve symptoms in about 3-10% of cases
- Some client may require more than one catheter ablation
- About 0.3-0.7% of clients may need permanent pacemaker implantation due to damage to the normal conduction pathway

** The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all procedures are carried out with utmost professionalism and care, this does not rule out the possibility of complications from arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.

Pre-operative Preparations

1. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
2. Please inform the doctor and nurse of all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia.
3. If you are a female, please provide the date of your last menstrual period (LMP) and avoid pregnancy before the operation. This operation involves exposure to radiation.
4. You may be instructed to discontinue some or all of the anti-arrhythmic drugs and blood thinners (e.g. Warfarin, Xarelto or Pradaxa) before the operation.
5. You may need to undergo some investigations like blood tests, electrocardiogram, chest X-ray, computerized tomography (CT) or magnetic resonance imaging (MRI) of the heart and transesophageal echocardiogram to ensure there is no abnormal blood clot and rule out other structural heart diseases.
6. Shaving may be required on the puncture site(s).
7. Good hygiene can prevent surgical wound infection. Please clean up yourself on the day of operation.
8. No food or drink four to six hours before operation, or situation dependent.
9. Please change into a surgical gown after removing all clothing including undergarments, dentures, jewelry and contact lenses.
10. Please empty your bladder before the operation.

Post-operative Instructions

1. Vital signs and the wound are monitored closely by the nursing staff.
2. Please inform the nurse immediately if pain or bleeding from the puncture site, numbness or decrease sensation of the affected limb, difficult breathing or any other discomfort.
3. You are required to bed rest for at least 4 hours or more. Please do not move or bend the affected limb. Whenever you cough or sneeze, please apply pressure on the puncture site with your hand.

Advice on Discharge

1. The wound is covered with a waterproof dressing. Dressing can be removed on the day after the operation. Always keep the wound clean and dry.
2. Showers are allowed after removal of the dressing with no abnormality found on the wound. Be reminded to pat the puncture site and surrounding area dry afterwards.
3. Bruising or mild swelling around the puncture site is common and usually subsides within 2-3 weeks.
4. Avoid any lifting or strenuous activity for one week, to prevent increasing pressure which may cause puncture site re-bleeding.
5. It is not uncommon to experience palpitations on and off for a few weeks after the operation, until the small scars created in the heart heal. The palpitations often subside spontaneously. If the abnormal heart rhythm persists, please seek help from your doctor.
6. No driving for 1 week. Please strictly follow the doctor's instruction.
7. You may need to take blood thinner to prevent formation and dislodgment of blood clots from the heart for certain period of time. Depending on the likelihood of future stroke, your doctor will determine whether you need long-term blood thinner.
8. It is rare to have severe bleeding from the puncture site. If bleeding does occur, you must lie flat with the affected limb elevated, apply pressure to the site for at least 10 minutes. For the uncontrolled/ severe bleeding, please call 999 for emergency help.
9. Immediately consult your doctor or return to hospital for professional attention in the event of bleeding, pus discharge, increasing pain and swelling from the wound, chest pain, breathing difficulty, shivering, high fever over 38°C or 100°F, or any other unusual symptoms.
10. Any follow-up consultations should be attended as scheduled.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details
Our Hospital reserves the RIGHT to amend any information in this leaflet without prior notification