



**University
Hospitals Sussex**
NHS Foundation Trust

Endo-epicardial ablation

Cardiac

Patient information

What is an endo-epicardial ablation?

Endo-epicardial ablation is a way to treat arrhythmia, effectively ablating (delivering radiofrequency energy) to both the inside and outside of the heart.

This procedure involves a puncture to the vein in the groin and a puncture in the chest wall (just underneath the breastbone) with a needle.

This type of ablation is only performed when at least one, often two, standard ablation procedures have failed to get rid of the arrhythmia.

What happens during an endo-epi ablation procedure?

Endo-epicardial ablation is performed under general anaesthetic because the procedure takes a long time, and to make sure that you feel comfortable.

A standard ablation technique accesses the heart via a vein in the right groin. With an endo-epicardial ablation the inner surface of your heart is accessed by a needle in the right groin vein, and the outer surface is accessed using a needle underneath your breastbone.

To safely access the outer surface of the heart, a gas (carbon dioxide) is used to inflate the sac the heart lies in (the pericardium). This allows a space for the needles to be inserted safely into the heart sac without puncturing the heart itself.

Catheters can now be placed in the space surrounding the heart and used to perform ablation to both the outside and inside of the heart.

To reduce the risk of inflammation of the heart sac (pericarditis) following the procedure, we will:

1. Inject steroids directly into the heart sac at the end of the procedure.
2. Give you a single dose of antibiotic to reduce the risk of any infection with the chest wall puncture.

Is an endo-epicardial ablation safe?

Endo-epicardial ablations have been around for a few years. This procedure was first used for ventricular arrhythmias (bottom chambers). More recently, it has been used for atrial arrhythmias (top chambers) as well.

With every invasive procedure there is a risk of complication, but there is no more risk with this procedure than another.

Common complications (not-life threatening)

Pain

- The heat of the catheter may cause you central chest pain.
- You may feel chest pain after the procedure because of inflammation around the heart.
- You may feel groin and chest pain from the puncture sites. Regular paracetamol is recommended to help with pain from both sites.

Bleeding

It is common to have some blood loss from the wound in your groin immediately after the procedure. It is unlikely that you will need surgery to stop the bleeding.

Groin bruising/swelling

- Your groin will be regularly observed during your recovery and after you start to walk around before your discharge home.
- Bruising can take several weeks to disappear because of your medication (blood thinners).
- Swelling should be monitored and any hard lumps (haematomas) around the groin area should be reported.

Pericarditis/Heart sac inflammation

Pericarditis/ Heart sac inflammation is chest pain that catches when you breathe in or becomes worse when you change position may be caused by inflammation around the heart sac. You can take paracetamol to help with the pain. If this does not help, you can get some anti-inflammatory medications prescribed by the doctor.

Uncommon complications (potentially life threatening)

Stroke

This can happen if a small clot or air bubble blocks blood supply to a part of the brain.

Blood around the heart

If the heart is punctured by mistake whilst obtaining access to the outside of the heart it can cause blood to leak out. If a leak happens a drain may need to be inserted to remove the blood leakage, and in rare cases this may require open heart surgery to correct.

Coronary artery damage

When performing ablation on the outer surface of the heart, there is a small risk that one of the main arteries supplying the heart with blood could be damaged. If this happens it will lengthen your hospital stay, and on rare occasions may require either a stent to be fitted to a coronary artery or very occasionally open-heart surgery.

What symptoms should I look out for?

Seek medical help via the hospital if you have:

- Increased swelling or increase pain from the groin where the catheter was put in.
- Increased breathlessness.
- Severe chest pain.

Useful contacts and websites

Arrhythmia nurses

01273 067041

uhsussex.arrhythmia.nurses@nhs.net

Cardiac Ward L6a

01273 664484

Arrhythmia Alliance

<http://www.arrhythmiaalliance.org.uk/>

British Heart Foundation

<https://www.bhf.org.uk/>

This information is intended for patients receiving care in Brighton & Hove or Haywards Heath.

Ref. number: 2427

Publication date: 12/2024

Review date: 12/2027

© University Hospitals Sussex NHS Foundation Trust Disclaimer:

The information in this leaflet is for guidance purposes only and is in no way intended to replace professional clinical advice by a qualified practitioner.

