

Queen Elizabeth Hospital Birmingham



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# Catheter Ablation for Ectopic Heartbeats

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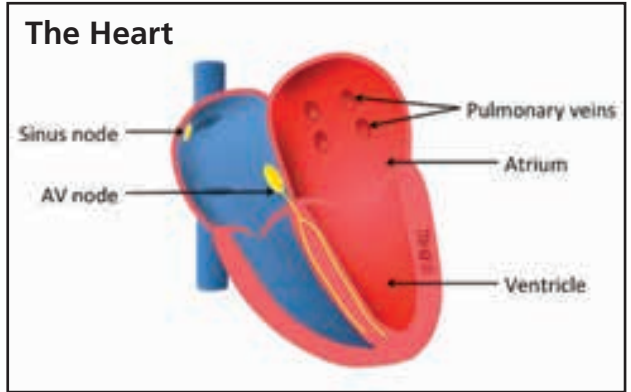
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## About this patient information leaflet

This patient information leaflet is about ectopic heartbeats, one of the main heart rhythm problems we treat with catheter ablation procedures. It is one of a series of leaflets that we have produced, written in everyday language that explains

what a particular heart rhythm condition is, what its symptoms are, why it occurs and how it is treated.

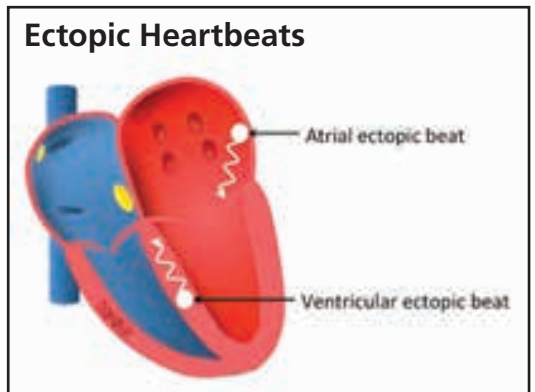
This booklet has been prepared for individuals preparing to undergo one of the procedures described or for individuals looking for more information about these procedures. The information provided within this booklet does not replace the consultation that takes place between the patient and the doctor.



## Ectopic heartbeats

### What are ectopic heartbeats?

Ectopic heartbeats are extra beats that occur for a short time between normal regular heartbeats. Most individuals with ectopic heartbeats do not have any symptoms but sometimes this short irregularity in the heart rhythm may produce a sensation of palpitations, missed beats or bumps in the chest. If the ectopic beats occur often they may produce dizzy spells, light-



headedness, shortness of breath or lethargy. The heart has an electrical system that controls the rhythm and speed of the heartbeat. It is an abnormal part of the heart that unpredictably and randomly inserts an extra heartbeat, interrupting the normal electrical system of the heart.

### **How are ectopic beats diagnosed?**

Individuals with palpitations often see their doctor or attend the emergency department where they have a recording of their heart rhythm (electrocardiogram or ECG) performed during their palpitations. The ECG may show that there are ectopic beats. In some cases, the palpitations don't last long enough to get a recording at the surgery or hospital. In these situations your doctor may have arranged for you to take a heart rhythm monitor (Holter monitor or loop recorder) home to record your palpitations. Individuals who do not have any symptoms may have ectopic beats detected when an ECG is performed as part of a routine medical check.

### **Are ectopic beats dangerous?**

In most cases these extra beats are not life threatening. They do sometimes make people feel anxious, especially during quiet times, when they can be felt more frequently. The symptoms of ectopic beats and anxiety can interfere with work, education and holidays. Rarely, ectopic beats are more serious. Their presence may be a sign that there is a problem with the heart. Additionally, the ectopic beats can cause the heart function to worsen. If this is the case, your doctor will discuss this with you.

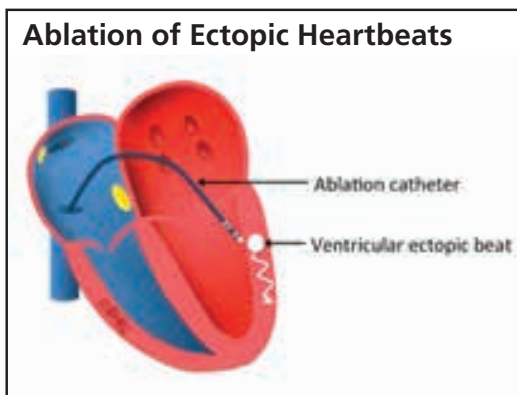
## **Catheter ablation for ectopic heartbeats**

### **What is catheter ablation for ectopic heartbeats and what does it involve?**

Catheter ablation is a term that describes the process of modifying the heart muscle so that it no longer transmits electrical signals. The procedure involves passing long fine wires (called catheters) into the heart via the blood vessels. Strong sedatives and local anaesthetic are used to make it comfortable and virtually painless. The procedure is performed as a keyhole operation through small punctures in the skin.

The punctures are made in the groin. Once in the heart, the catheter ends are placed in contact with the heart muscle.

The wires are used to seek out the abnormal heart muscle that may be responsible for causing the ectopic beats. The ablation energy (heat or freezing) is applied through the tip of one of the wires onto the abnormal connection for about 30 seconds. Sometimes the connection can be a little resistant to a single application so several energy deliveries may be necessary. Finding the abnormality and then delivering the energy can take anything from 1–4 hours.



### **How successful is catheter ablation for ectopic heartbeats?**

Catheter ablation for ectopic heartbeats is very effective at stopping the extra heartbeats. A successful ablation for ectopic beats depends on the ectopic beats being present at the time of the procedure. If the ectopic beats are very uncommon then it becomes difficult to seek them out with the wires. If the ectopic beats are very infrequent or absent at the time of the procedure then the procedure may be abandoned.

### **Who benefits from having catheter ablation for ectopic beats?**

- Individuals who have palpitations caused by ectopic beats
- Individuals who experience palpitations in those situations where drug therapy has either failed to control the ectopic beats, or where the side effects of those drugs have become undesirable. Catheter ablation can often offer a complete cure for this
- Individuals who are not keen to take medicines for long periods of time. Catheter ablation can often offer a complete cure for this
- Individuals who have worsened heart function as a result of the ectopic beats. Often the heart function will improve after catheter ablation

## **Are there any alternatives to having catheter ablation?**

Generally speaking ectopic beats are not life threatening although the symptoms can feel intense and interfere with everyday activities. In rare cases the ectopic beats can be dangerous. If your ectopic beats are dangerous your cardiologist will advise you of this. It is up to you to decide what treatment you want.

Your cardiologist will have discussed the following alternative treatments with you:

- Taking prescribed drugs continually to prevent the extra beats. These may have side effects, may not work and may need to be taken life-long
- Dealing with the symptoms as and when they appear by trying to ignore them or seeking psychological help, such as behaviour therapy, to learn to cope with the symptoms
- Using alternative therapies, for example aromatherapy, acupuncture or homeopathy. Your cardiologist will not be able to talk to you in detail about these methods and this kind of therapy will not prevent ectopic beats from occurring

## **What happens before the procedure?**

Once you have decided to have catheter ablation for the ectopic beats your cardiologist will explain the procedure to you in detail, go through the potential risks and answer all your questions.

During the week prior to your scheduled procedure you will be asked to attend a pre-admission clinic at the Queen Elizabeth Hospital. At this visit you will be asked what medication you are taking, your heart will be examined briefly and bloods tests will be done. You will be given further instructions in preparation for your procedure and you will have the opportunity to ask any questions. This is also a good time to inform the medical team of any of your allergies.

Three days before coming into hospital for your procedure, you will be asked to stop taking the medications prescribed to control your heart rhythm. Stopping the medication before the procedure will make it easier for us to identify the abnormal area in the heart that is producing

these extra beats. If the medication was effective in controlling your palpitations then for the few days before the procedure you may experience an increase in these palpitations. This is normal but may be uncomfortable. If we do not want you to stop the heart rhythm medication before your procedure, then your consultant will have discussed this previously with you.

On the day before your procedure it is helpful if you can prepare the right groin area by carefully shaving an area of about 15cm x 15cm (6in x 6in) as in the diagram. If you are unable to do this then we will do it either beforehand on the ward or at the time of the procedure.



### **What happens on the day of my procedure?**

On the day of your procedure you should to go to the Ambulatory Care Ward unless your appointment letter has requested you go to a different ward. We ask you to be there early, usually between 07:00 and 08:00. If you have not previously signed the consent form then you will have the opportunity to read it and ask questions before you sign it.

Unless you have been instructed differently, please ensure that you do not eat anything after 04:00 on the morning of your procedure. You may drink water up to 06:00.

Once you are at your bed and changed into a hospital gown, a small cannula (or tube) will be inserted into the back of your hand or arm veins. This is used to administer the sedative and any other medication needed before, during and after the procedure.

We are unable to give you an exact time your procedure will start as procedures are undertaken throughout the day and we cannot predict how long each will take. Although you may be admitted in the morning, you might only have your procedure in the afternoon. The team on the ward will keep you updated while you wait for your procedure.

## **What happens at the start of my procedure?**

A nurse or doctor will come and fetch you from the ward and either walk with you or take you on your bed to the operating room. You will notice that the theatre has large-scale X-ray equipment and many computer screens that are used for the procedure. The theatre staff will introduce themselves and help you onto the operating table. Usually a nurse, a radiographer, a cardiac physiologist and one or two doctors are present in the room with you. When you are lying down you will be attached to a heart monitoring system (ECG).

Before giving you any sedative we will observe your heart rhythm on the ECG to see how frequent the ectopic beats are occurring. Should the ectopic beats not be present at the time of the procedure we may give you some medication through the cannula in your arm to try and start the ectopic beats. If we are unable to see any ectopic beats then we will not continue with the procedure and you will be returned to the ward. We will discuss further options with you then.

If sufficient ectopic beats are present, the nurse will begin to give you the pain control medication and sedation using the cannula in your arm. An oxygen mask will be placed over your mouth and nose. The skin over the top of the right leg where you shaved will be exposed and cleaned with alcohol fluid. A sheet will be draped over you, which will cover you from the neck to your feet and only the small shaved area will be exposed. Local anaesthetic will be injected into your right groin as the sedative begins to take effect. The nurse will remain with you throughout the procedure ensuring that you are as comfortable as possible. We will try and keep you as sedated as possible but sometimes making you totally asleep makes the ectopic beats disappear. It is normal to be awake for periods during the procedure. If you are uncomfortable you can let us know and we will give you more pain relief medication.

Once your skin in the groin is numb, two tiny punctures will be made with a needle into your vein. Sometimes a third puncture is made into the artery. This will allow the insertion and movement of the catheters up into the heart under X-ray guidance. When all the wires are positioned in the heart we will begin finding the source of the ectopic

beats. When the abnormal area of the heart has been found we will ablate it. We will check that you are free from pain at regular intervals during the procedure.

When the ablation is complete the catheters will be withdrawn from the heart and removed from the groin. It is at this stage that you may start to wake up and feel us putting gentle pressure on the puncture sites. This is done for a few minutes to stop the bleeding. When the bleeding has stopped a small plaster will be placed over the puncture sites. From this point onwards we ask that you lie on your back for a few hours and avoid bending your legs, particularly the right leg as the groin punctures may still bleed. We will help you move back onto your bed from the operating table by sliding you on a sheet so that you don't need to bend your leg.

### **What happens after the procedure?**

You will be returned to the ward where you were admitted. It is possible that you may not remember anything from the operating room and might only wake up fully when you are back on the ward. This is normal. The person who accompanied you to the hospital can visit you as you get back to the ward. You may feel sleepy for the rest of the day and the evening as the sedative continues to wear off. We can give you more pain relief medication if you have any pain.

Once you are back on the ward you should lie on your back for 2 hours and after this, if there is no bleeding from the groin, we will allow you to sit up for a further 2 hours. If all has gone well then you will be able to walk 4 hours after the procedure. You can drink water (through a straw) within the first hour after the procedure and then you can eat and have other drinks after that as long as you are not too drowsy.

During the first 4 hours after the procedure you will be attached to a heart monitor and regular checks of your blood pressure and groin will be carried out. Your doctor will come and talk to you about the outcome of your procedure and check your recovery. You may be prescribed a small dose of aspirin for at least 6 weeks after the procedure unless you are taking a different anticoagulant.

The following day you may have a heart scan to check for fluid around



the heart. Your doctor will advise you about your medication and answer any questions you may have about the procedure.

You will be able to go home the following morning after your procedure if you are well enough to be discharged. A discharge letter with an updated list of your medication will be given to you to take to the GP. We will give you a supply of any new medication. One of the nursing team will discuss your medication with you again before you leave. We will make arrangements for a follow up consultation.

## What can I expect when I go home?

### **What can I expect when I go home?**

If your puncture site starts to ooze, then lie down to help slow the bleeding, and press firmly on the puncture site for 10 minutes. If the wound continues to bleed after 10 minutes of firm pressure, go to your nearest Emergency Department.

### **If your puncture site starts spurting a lot of blood, lie down and call an ambulance immediately.**

You may notice a small pea-sized lump develop under the puncture to the skin – this is normal. If the lump becomes larger than this, becomes tender or starts to develop a redness or discharge, contact Ambulatory Care on 0121 371 3125.

You can have a shower the day after you get home, and can remove your dressing at this point. You will only need to put a dressing back on if the wound starts to bleed. Avoid taking a hot bath for 2–3 days as this could cause further bleeding.

### **What happens when I go home?**

Once you get home you can go about your normal routine but there are a number of activities that should be avoided after your procedure to allow the puncture sites to heal.

- Avoid lifting heavy objects for 7 days
- Avoid rigorous exercise for 5 days. We suggest walking if you wish to exercise

- The DVLA recommends that you do not drive for 2 days
- You should not fly within 7 days

Most people are back to work within a week (it depends upon what job you do and how strenuous it is) and most are back to all their normal activities within 2 weeks.

### **What if I have ectopic beats after my procedure?**

You may experience what may feel like the start of palpitations within the first 6 weeks after the procedure. This is normal and does not mean the procedure has not worked. Over the following months this sensation will disappear.

The chance of the palpitations returning is low, about 1 in 20 (5%). The ectopic beats return because the abnormal area that has been ablated has healed or because a part was overlooked at the time of the procedure.

The procedure can be repeated if the ectopic beats return. The repeat procedure is usually shorter as the doctor will already have a clear knowledge of where the problem is. If your ectopic beats return then you can inform your GP or your local cardiologist and they will refer you back to us. It would be helpful but not essential to get an ECG whilst you are having symptoms of ectopic beats and to bring it along to the consultation. In the meantime, the medication that you were taking before the procedure to control the ectopic beats can be restarted while you are waiting for the consultation.

### **What symptoms should make me seek urgent medical help?**

If you experience any of the following then we urge you to contact your local hospital or GP:

- Increased swelling, pain or bleeding from the groin
- Increased shortness of breath
- Severe chest pain

If these occur you may need to be admitted to hospital for tests and observation. Your local hospital or GP should be able to deal with these in the first instance. If you get admitted to another hospital we would be very happy to give any advice to the doctors that are treating you at

the time and we encourage them to contact our team to let us know what has happened to you.

## What are the possible complications of catheter ablation for ectopic beats?

Although this procedure can be considered a “keyhole” procedure, it involves the heart and unfortunately, sometimes things can go wrong. Common complications are not dangerous but can be uncomfortable for a period of time. Dangerous complications are rare. If something goes wrong you may need to stay in hospital for a few more days.

### Common but not dangerous complications

#### **Pain**

Pain in the centre of the chest can occur during the ablation as a result of the heat produced by the catheter. Usually this is adequately controlled by the pain relief medication given to you before and during the procedure. Pain in the chest can also start after the procedure and remain for a few days. This is because there may be inflammation around the heart caused by the ablation. The areas where the punctures were made can also be painful after the procedure. Chest or groin pain after the ablation can be controlled with paracetamol or anti-inflammatory medication such as ibuprofen.

#### **Bleeding (haemorrhage)**

A small amount of blood oozing from the groin immediately after the procedure is common. Very rarely when the bleeding takes a little longer to stop we may need to push on the groin to stop the bleeding. By the time you are discharged the bleeding should have stopped.

#### **Groin bruising and swelling (haematoma)**

A small bruise may develop around the puncture sites. The bruise may increase in size after you have been discharged and form a pea-sized lump in the groin. It may take up to 3 weeks to improve or disappear and the bruising may change colour as time passes, usually to green

and yellow. If you are worried about your bruise then contact your GP who will be able to advise you.

### **Allergic reactions (anaphylaxis)**

During the procedure some patients may develop a rash from the medication or from the monitoring stickers that have been placed on the skin. If this happens then we can give you medication during the procedure to counteract the allergic reaction.

## **Uncommon but more serious complications**

### **Groin problems (haematoma and false aneurysm)**

In about 1 in 200 (0.5%) of cases there is more bleeding than we would expect in the groin where we performed the punctures. We may need to place tight bandages or a pressure clamp to control the bleeding until it stops. This may be because the artery next to the vein was inadvertently punctured. The bleeding may also spread under the skin and form a blood clot making a lump under the skin. Very rarely, in less than 1 in 1000 (0.1%) cases, an operation is needed to repair the blood vessels in the groin. Although these groin problems are noticed and treated before you go home, a swelling can occur once you are back home. You will need to be seen by a doctor should this happen.

### **Blood around the heart (pericardial effusion)**

Sometimes blood leaks out of the heart through a puncture made by one of the catheters. The blood accumulates around the heart. If the puncture does not seal off spontaneously and the blood leak is large then the blood must be removed. A thin tube is introduced through the skin in the front of the chest using local anaesthetic and placed near the heart to drain the accumulated blood. This drain can be removed 24 to 48 hours later. Should we recognise that blood has leaked out during the ablation procedure we will insert the drain while you are asleep. In most cases we are able to complete the ablation despite this leak.

Occasionally the blood leak is noticed later when you are back on the ward and a drain will be inserted then. The risk of needing a drain around the heart is about 1 in 500 (0.2%).

## **Permanent pacemaker**

One of the risks of catheter ablation for ectopic beats is that you may need to have a pacemaker inserted because the normal electrical system of the heart has been damaged by the ablation. The risk depends on how close the abnormal area is to the normal electrical connections. We may only know precisely how close the abnormal area is to the normal electrical system at the time of the procedure. Generally, the risk of needing a pacemaker is less than 1 in 200 procedures (0.5%). If at the time of the procedure we evaluate that the risk is higher than 0.5%, then we will not proceed further with the ablation. The alternatives to treat your ectopic beats will be discussed with you once you are back on the ward.

Patients who we assess as having a higher risk than 0.5% for needing a pacemaker will have this increased risk explained before they agree to the procedure.

## **Stroke**

This is a very rare complication during catheter ablation of ectopic beats. It happens in less than 1 in 1000 (0.1%) cases and occurs because a small clot or a small bubble of air blocks the blood supply to a part of the brain. During the procedure small clots can form on the catheters or become dislodged from inside the heart. The clots travel in the blood circulation to the brain.

Should you develop a stroke, in most cases, it will get better within 24 hours to a week. However, it can have permanent effects such as reduced mobility on the one side of the body or difficulty with speech. In some cases it may lead to coma or even death. If a stroke occurs we will ask stroke specialists to help with your treatment and recovery.

## **Death**

The risk of dying from this procedure or from one of the above complications is less than 1 in 1000 (0.1%). Although all the complications can be treated, in very rare cases the treatment may not be successful.

## Making comments or complaints

We hope that you have no cause for complaint during your stay at the Queen Elizabeth Hospital, however, should you have any problems please do not hesitate to tell the nurse, and we will try to resolve the matter there and then.

Alternatively, the Patient Advice and Liaison Service (PALS) will be happy to resolve any problems, concerns or complaints that you might have. The contact details for PALS are printed at the end of this booklet.

Please use the space below to write down any questions you may have and bring this with you to your next appointment.

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## How to contact us

### Queen Elizabeth Hospital Birmingham

Ambulatory Care Ward	0121 371 3115 0121 371 3125
Ward 304	0121 371 3049
Patient Advice and Liaison Service (PALS)	0121 371 3280
Cardiology Booking Clerk	0121 371 4037

## Where can I get more information?

Arrhythmia Alliance	<a href="http://www.rrhythmiaalliance.org.uk">www.rrhythmiaalliance.org.uk</a>
Atrial Fibrillation Association	<a href="http://www.afa.org.uk">www.afa.org.uk</a>
The British Heart Foundation	<a href="http://www.bhf.org.uk">www.bhf.org.uk</a>
Age UK	<a href="http://www.ageuk.org.uk">www.ageuk.org.uk</a>
British Cardiac Patients Association	<a href="http://www.bcpa.co.uk">www.bcpa.co.uk</a>
DVLA Medical Enquiries	0300 790 6806 (car, motorcycle) 0300 790 6807 (bus, coach, lorry) 0845 850 0095 (fax)



The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit [www.uhb.nhs.uk/health-talks.htm](http://www.uhb.nhs.uk/health-talks.htm) or call 0121 371 4323.

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