

Catheter Ablation for Atrial Fibrillation

(also known as
pulmonary vein isolation)

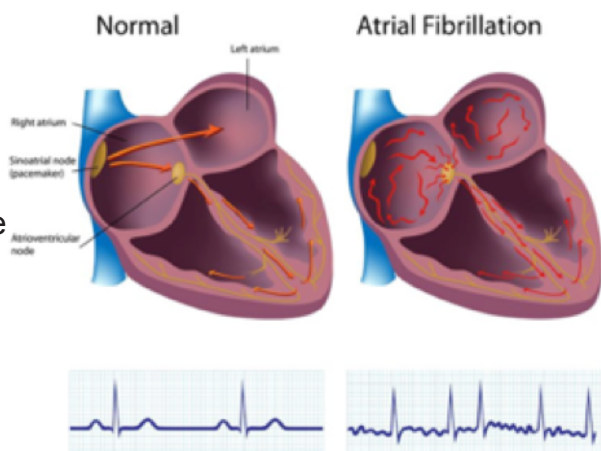
i Important information
for all patients requiring
Atrial Fibrillation

About this booklet

This booklet tells you about Catheter Ablation for Atrial fibrillation. It also tells about the patient journey and what to expect before, during and after the procedure.

What is Atrial Fibrillation?

Atrial Fibrillation is the most common heart rhythm disorder in the world. It is estimated that over one million people in the UK have the condition. It is a type of irregular heartbeat which affects the electrical conduction within the heart.



During an episode of atrial fibrillation, the heart beat is often rapid, irregular and of varying intensity. This can cause unpleasant symptoms of palpitations, lightheadedness, breathlessness, chest pain and may even lead to a collapse.

- If these episodes are intermittent, then this is called paroxysmal atrial fibrillation.
- If the heart is continuously in an irregular rhythm, this is called persistent, permanent or chronic atrial fibrillation. In this situation patients also often complain of tiredness and lack of energy.

What causes Atrial Fibrillation?

Atrial Fibrillation occurs when the sinus node loses control of the heart rhythm, causing rapid and chaotic quivering of the atria.

- In paroxysmal Atrial Fibrillation, this is due to other areas of the atrium producing rapid, uncontrolled electrical impulses, often from the four pulmonary veins which bring blood back from the lungs to the atria.
- In permanent or persistent Atrial Fibrillation, the cells do not conduct the normal impulses smoothly, causing them to break up and be discharged rapidly in many different directions.

How do you treat Atrial Fibrillation?

The symptoms of Atrial Fibrillation can be treated with medication (beta blockers and anti-arrhythmic drugs) or a surgical procedure known as catheter ablation.

What is Catheter Ablation for Atrial Fibrillation?

Catheter Ablation for your Atrial Fibrillation is also known as pulmonary vein isolation.

Catheter Ablation for Atrial fibrillation is not suitable for everybody. It is currently a treatment for patients who have symptoms which significantly affect their quality of life. It is for patients who have either failed to feel better on medication or have had side effects from medication. The procedure is only used to treat symptoms and may not increase life expectancy or reduce the risk of stroke.

Most patients tolerate the procedure very well, but some people can find it uncomfortable. You will be monitored closely throughout the procedure and given more sedation or painkillers if needed.

You will need to take blood thinning medication for at least one month before your procedure and for several months, if not indefinitely, to reduce the risk of blood clots.

There are two types of procedure to treat the symptoms of Atrial Fibrillation.

- Radio-frequency (RF) - heat energy is applied through catheters to the heart muscle, making small consecutive burns or larger circular burns around the four pulmonary veins to isolate them.
- Cryoablation – a balloon at the end of a catheter is inflated with cold gas to freeze the heart muscle around the entrance of the veins.

We feel it is important to share decision-making about your treatment options. Your cardiologist will discuss these with you and you will both agree the most suitable treatment for you. Important questions to consider are:

- Is this test, treatment or procedure really needed?
- What are the potential benefits and risks?
- What are the possible side effects?
- Are there simpler or alternative treatment options?
- What would happen if I did nothing?

What are the risks of ablation?

As with all procedures there are some risks. It is important that you understand the risks so that you can make a decision whether you want to have the procedure performed. In a planned procedure, the benefits should outweigh the risks.

High blood pressure and valvular heart disease are the most common alterable risk factors for Atrial Fibrillation. Heart related risk factors include heart failure, coronary artery disease, cardiomyopathy, and congenital heart disease are other.

Lung related risk factors include: Chronic Obstructive Pulmonary Disease, obesity and sleep apnoea. Other risk factors include excess alcohol intake, smoking, diabetes mellitus and thyrotoxicosis. However, half of cases are not associated with any of these risk factors.

The success rates of ablation for Atrial Fibrillation are not as good in patients who are severely overweight (Body Mass Index above 40) and many patients who have weight problems will be advised to try to lose weight before being admitted for the procedure. People who manage to lose a significant amount of weight are more likely to have a successful outcome and less likely to require repeat ablation procedures or further medication after the ablation. If you need help with this while you are on the waiting list for ablation, please speak to your General Practitioner to find out what services are available in your area for people with weight problems.

Common Complications (1% or greater – this means that for every 100 procedures one patient will experience the complication):

- **Blood leak round the heart (Tamponade)** – there is a 1-3% (one to 3 in 100) chance of puncturing the heart and blood leaking round the heart. This can heal on its own without any treatment. Occasionally the escaped blood may need to be removed by placing a small drain (tube) under the ribs into the sack round the heart. Very rarely (less than 1 in 500) you may require surgery to stop the bleeding.
- **Phrenic Nerve Damage** – there is a 1-5% (one to five in 100) chance of damaging one of the breathing nerves on the right side. In almost every case this recovers its function within a few minutes to weeks. We pace this muscle when we freeze round the veins on the right side.
- **Damage to Blood Vessels (Pseudoaneurysm or fistula)** – there is a 1% (one in 100) risk of damaging the artery, which is a blood vessel that runs beside the vein at the top of the leg. If there is damage, then this usually heals up without any treatment. Very rarely (less than 1 in 500), you may need surgery or an injection to treat it.

- **Unable to Place Catheters or Perform Ablation** – There is a 5% (five in 100) chance we may be unable to place one of the tubes or catheters into the blood vessels or heart. If this is the case, we will stop the procedure and discuss the options with you after the procedure.

Uncommon complications (less than 1%):

- **Stroke or Heart Attack** – there is a 1 in 500 risk of a blood clot or air bubble causing a stroke or heart attack.
- **Atrio-Oesophageal Fistula** – There is a 1 in 1000 (0.1%) chance of causing a hole between the back wall of the heart (left atrium) and swallowing tube (Oesophagus). It is a very rare but serious complication that can occur a few days to weeks after the procedure. Symptoms include fever, chills, vomiting or trouble swallowing – you must report immediately to hospital or your GP.
- **Pulmonary Vein Stenosis** – There is a 1 in 500 (0.5%) chance of narrowing of one of the veins on the left side of the upper heart chamber (pulmonary vein). Most patients have no symptoms but occasionally this can cause breathlessness.
- **Death** – fortunately this is extremely rare. Reported figures round the world suggest this is 1 in 1000 chance.

Patient journey

Pre assessment

You will receive a phone call from the booking office (with as much notice as possible) with a date for the procedure. Once this is confirmed, your pre assessment will take place by telephone within a week of admission. This is carried out by an Arrhythmia Nurse Specialist. Advice will be given regarding medication, procedure information and post procedure advice. Any questions you have regarding admission/procedure can be asked at this time.

You may need to have an electrocardiogram carried out at your local hospital prior to being appointed and this will be arranged for you.

Please consider any questions you may have during the telephone pre assessment:

Questions:

Admission

On arrival at hospital you should report to ward 2C on level 2. You will be allocated a bed/chair in 2C, 2D, the cardiac day unit or the coronary care unit and will be asked to change into a hospital gown.

An electrocardiogram (ECG) test will be carried out.

A nurse will insert a small tube (cannula) into a vein in your arm or back of your hand in order to give you drugs during the procedure.

A doctor will explain the procedure and the associated risks – if you have any concerns or questions, please ask. You will then be asked to sign the consent form.

Procedure

The procedure will take place in a cardiac catheterisation laboratory (cath lab). It will likely be carried out under local anaesthetic and conscious sedation (you will feel drowsy and may fall asleep).

Once you are on the procedure table, you will have monitoring equipment attached and an oxygen mask placed over your mouth and nose. The skin at the top of your right leg will be cleaned with anti-bacterial solution.

You will be covered by drapes and pain control medication and sedation will be injected via the cannula in your arm or hand.

The right groin area will be exposed and local anaesthetic injected to numb your leg. This may sting a little.

The doctor will insert two or three small tubes (sheaths) into your groin. This will allow the insertion of catheters into the heart under X-ray guidance.

When all the wires are positioned in the heart, the doctors will start to identify the abnormal heart tissue and ablate it.

If your heart rhythm is still in atrial fibrillation at the end of the ablation procedure, you might require a treatment called cardioversion to restore a normal heart rhythm. This will be done under heavy sedation or a brief general anaesthetic. Once you are asleep the doctor will deliver a small electric shock to the heart in order to get the rhythm back to normal.

At the end of the procedure, a heart scan (ECHO) may be performed to check that there is no fluid around the heart.

Recovery

Once back on ward you should lie flat for one – two hours and avoid bending your right leg to prevent bleeding. Your heart rhythm and vital signs will be monitored and you can have sips of water. Nurses will regularly check your groin area and observe your circulation on both legs.

You will be allowed to sit up after two hours. If there is no bleeding from your groin site, your stitch will be removed.

You will be advised when you can sit up. There may be a stitch at the top of your right leg and if there is no bleeding, this will be removed approximately one hour post procedure.

You will be observed for a minimum of four hours post procedure.

Your doctor will talk to you about the outcome of your procedure and check your recovery. You will be advised to continue your anticoagulant medication that evening unless you have had a bleeding complication. You will also be advised about your other medication.

Relatives and visiting

Your relatives can accompany you on admission. The hospital has an open visiting policy.

Going home

You will be discharged home on the day of your procedure if you have had a straight forward recovery and been back in ward for a minimum of four hours.

You will need to arrange for somebody to take you home and stay with you overnight.

A letter will be posted to your General Practitioner outline your admission. This will be followed by a more detailed letter from the Consultant.

You will be given a supply of any new medication if required.

You will be give you a wound advice sheet.

Follow up arrangements if required will be made by us if necessary.

What to expect once you are home

You can go about your normal routine, but to allow the groin to heal you must not:

- do any heavy lifting for seven days,
- do rigorous exercise for five days,
- drive for two days in line with DVLA guidance, and
- fly within seven days.

During the recovery period you may feel lethargic and tired. It may take up to two weeks to feel back to normal.

Chest pain or discomfort is very common. Inflammation caused by the ablation can make breathing or moving worse. If taking paracetamol does not control the pain, taking an anti-inflammatory such as ibuprofen can help, if you are able to take them.

Atrial Fibrillation can sometimes return within the first six weeks after the ablation. This does not mean the procedure has not worked. It may be due to inflammation caused by the ablation and this will be discussed with you at your follow up appointment. If this happens and you feel unwell, you should seek medical advice through your GP (during hours), NHS 24 (out of hours), 999 if emergency.

Contacts

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