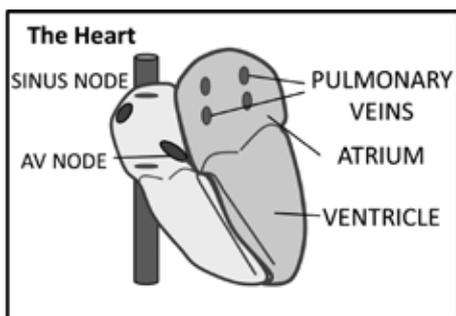


Atrial Fibrillation Ablation

This leaflet is designed to give you more information about atrial fibrillation and catheter ablation for atrial fibrillation. It will hopefully cover any questions you may have about the procedure. Further information can be found online and details of useful websites and contact numbers are listed at the end of the leaflet.

Atrial Fibrillation

Atrial fibrillation is a chaotic heart rhythm that occurs in the upper chambers of the heart (the atria).

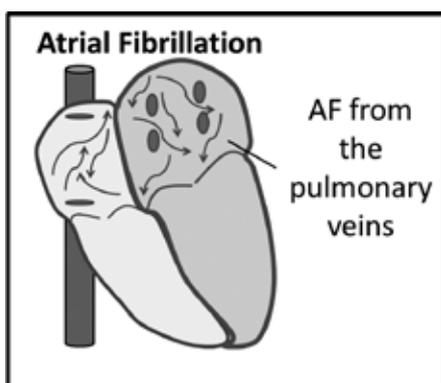


Common symptoms include palpitations, breathlessness, tiredness and light-headedness but many patients do not feel symptoms at all.

Individuals may experience continuous symptoms or periodic attacks lasting minutes, hours or days.

Is atrial fibrillation dangerous?

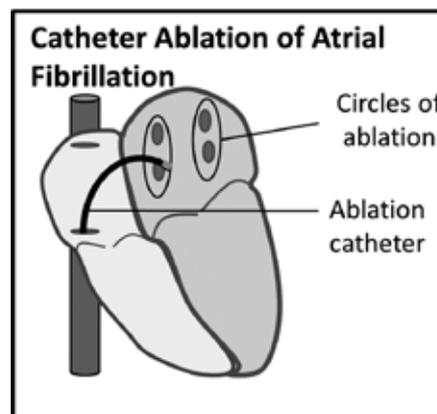
Atrial Fibrillation is not life threatening but patients often feel unwell during attacks.



Patients with atrial fibrillation have a higher chance of developing a stroke. This increased risk of stroke is reduced by anticoagulant medication (i.e. Warfarin, Dabigatran, Rivaroxaban, Apixaban or Edoxaban).

Catheter ablation for atrial fibrillation

Catheter ablation is a term that describes the process of modifying the heart muscle so that it no longer transmits electrical signals. In the majority of cases abnormal electrical signals causing AF originate within the pulmonary veins. By ablating around these veins (known as pulmonary vein isolation) it prevents the AF by blocking the abnormal electrical signals.



In many cases pulmonary vein isolation is enough to prevent AF from recurring. Some patients require further ablation in other areas of the heart to prevent atrial fibrillation.

What benefits are there of catheter ablation for atrial fibrillation?

Catheter ablation for atrial fibrillation is a very effective and successful procedure for patients suffering from the symptoms of AF or those patients who can't tolerate the medication.

Patients can expect an improvement in their quality of life and may be able to stop some of their medications.

Patients without symptoms are unlikely to benefit from catheter ablation.

At the moment there is no conclusive evidence that catheter ablation reduces the risk of stroke or prolongs a person's life. Large research studies are currently being undertaken to investigate all the potential benefits of catheter ablation for atrial fibrillation.

How successful is catheter ablation for atrial fibrillation?

There are many factors that can affect the success rate of catheter ablation for atrial fibrillation and this will be discussed with you prior to your procedure.

In general patients with periodic episodes have a success rate of 70-80% from one ablation. If atrial fibrillation recurs a second ablation can increase the success rate to 85%.

Patients with continuous atrial fibrillation lasting less than a year can expect a success rate of 50-60% after one procedure. If atrial fibrillation recurs a second ablation can increase the success rate to 65%.

Patients who have suffered with atrial fibrillation for more than one year will have a lower rate of success and will often require more than one procedure.

What are the methods available for catheter ablation of atrial fibrillation?

There are 2 main technologies used to perform catheter ablation, radio frequency energy (like microwave energy) and cryotherapy (freezing energy).

Both methods are performed through a small puncture in the groin into a vein. This vein allows us to pass thin wires (known as catheters) into the heart.

By using a combination of X-ray and a 3D computer model of the heart ablation is delivered around the pulmonary veins to achieve the desired effect.

How long does the procedure take?

The procedure usually takes between 1 to 3 hours.

On the day checklist

1. No food after midnight the night before the procedure (you should not eat 6 hours before the procedure), you may drink water until 6am.
2. Phone the ward the morning of your procedure
3. Bring an overnight bag
4. Please do not stop your anticoagulation medication (Warfarin, Dabigatran, Rivaroxaban or Apixaban) prior to the procedure.

In most cases if the anticoagulation has been stopped the procedure will have to be postponed due to an increased risk of stroke.

What to expect on the day

Please attend the ward at the time stated on the admissions letter.

A nurse will welcome you to the ward and take your details.

A doctor will review your symptoms and consent you for your procedure.

You will then be given a gown and a small cannula placed in the hand or arm to allow us to give pain relief and sedation during the catheter ablation.

We are unable to give you an exact time for your procedure will start as procedures are undertaken throughout the day and we can't accurately predict how long each will take. Although you may be admitted in the morning, you might have your procedure in the afternoon. The team on the ward will keep you informed of progress whilst you wait.

The procedure



A nurse will walk you into the operating room. The operating room has a bed, a large X-ray machine and many computer screens. The room is air-conditioned so often feels a little cold.

There will normally be 2 nurses, 1 or 2 cardiac physiologists and a cardiology consultant in the operating room.

The staff will introduce themselves and help to make you comfortable. Once you are lying down you will be connected to a blood pressure machine and heart monitoring system. You will be given oxygen via a tube around the nose.

Before proceeding further one of the nurses will give a brief summary of your case highlighting important information.

At this point the nurse will give you pain relief and a sedative via your cannula.

A small area over your right groin will be exposed and the hair shaved. A cold cleaning fluid will be used to sterilise the area. A long drape will then be placed over you to maintain a sterile field (and also keep you warm). Local anaesthetic will be injected into the groin to numb the area.

By this time most patients will be asleep and will remain so for the remainder of the procedure. A nurse will be present at all times to check you are comfortable and further sedative will be given as necessary. The doctor will perform the punctures in the groin and the ablation catheters will be placed in the heart ready to perform the procedure.

Once the ablation is complete the catheters will be removed and a small stitch is placed in the groin. The doctor will also press on the groin for about 5 minutes to prevent any bleeding. We would ask that you lie flat on your back for a few hours after the procedure and avoid bending your right leg to try and prevent further bleeding.

After the procedure

You will be returned to the ward on your bed. It is quite normal not to wake fully until the next morning. It is also normal not to remember anything of the operation.

To help prevent bleeding from the groin you should remain on your back with your leg straight for 2 hours. If all is well the stitch will be removed and you will be able to sit up. After 4 hours you will be able to walk.

You can drink water (initially through a straw) within the first hour and have other drinks and food if you aren't too drowsy.

The ward staff will monitor your heart rhythm, blood pressure and groin carefully in the first 4 hours.

The doctor will come to talk to you about the outcome of the procedure. Don't worry if you don't remember this; the doctor will return the next morning to confirm all is well and answer any questions you may have.

You will be able to go home the next morning if all is well. You should receive a copy of the discharge summary with a brief description of the procedure and an up to date medication list. This will also be sent to your GP.

A follow-up appointment with the arrhythmia team will be arranged for about 3 months.

Can I stop my anticoagulation (Warfarin, Dabigatran, Rivaroxaban or Apixaban)

It is very important that you continue your anticoagulation tablet after an ablation. Most patients should continue their anticoagulation tablets long-term. This will be discussed in detail at your follow-up appointment.

At home

It is not unusual to feel tired or lethargic for up to 2 weeks after the procedure.

Once you get home you can go about your normal activities but there are a number of activities that you should avoid to allow the groin to heal.

1. Avoid rigorous exercise for 5 days (walking is fine)
2. Avoid lifting heavy objects for 7 days
3. The DVLA state you should not drive for 2 days
4. You should not fly for 7 days
5. Avoid bathing for 3 days (you can shower but try and keep the groin dry)

If your puncture site starts to ooze you should lie down and press firmly for 10 minutes. If it continues to bleed despite 10 minutes of firm pressure then you should attend your nearest Emergency Department.

If the puncture site is bleeding and it is more than just an ooze, lie flat, apply pressure and call an ambulance immediately.

It is normal to experience some chest pain after a catheter ablation. This is due to inflammation of the lining of the heart. It is often worse on movement or deep breathing. It should settle without consequence and regular paracetamol can be extremely useful in treating the pain.

What if the AF comes back?

Atrial fibrillation can recur in the first 3 months after a catheter ablation due to inflammation. It doesn't mean the procedure has failed. It may settle by its self or require medication or a small shock (cardioversion) to return back to normal rhythm. It is rarely an emergency and if you feel okay you can contact your GP or arrhythmia team at a convenient time to discuss the options.

Repeat catheter ablation in the first 3 months is rarely advised.

What symptoms should make you seek urgent medical attention?

You should contact your local NHS hospital for the following symptoms:

1. Increasing swelling, pain or bleeding from the groin
2. Increasing shortness of breath
3. Severe chest pain
4. Fever
5. Signs of a stroke (weakness on one side of the body, loss of speech or vision)

Your local NHS hospital will be able to make an initial assessment and contact the Royal Devon and Exeter Hospital for advice if there are any concerns regarding your symptoms.

What are the possible complications of catheter ablation for atrial fibrillation?

There are risks of undergoing a procedure on the heart. Common complications are not dangerous but can be uncomfortable and may require a slightly longer stay in hospital. Serious complications are rare but need more immediate attention.

Common complications

Pain

Pain can occur during the procedure but is quickly controlled with pain relief and sedation.

Bleeding

A small amount of oozing from the groin after the procedure is normal. Rarely the bleeding can take a little longer to settle. By the time you are discharged it should have stopped completely.

Groin bruising and swelling

There will always be a degree of bruising in the groin following the procedure. The bruise may increase in size and change colour after you go home. Because of gravity the bruise may extend

over the whole of the thigh and down to the calf and even the foot. It may be sore and may require regular paracetamol. It may take up to 3 weeks to improve.

Serious complications

Groin problems (vascular complications)

In about 1 in 100 cases there is more bleeding from the groin than is expected. This may require prolonged pressure on the groin, an ultrasound scan and small injection to stop the bleeding or in rare cases a surgeon may have to repair the blood vessel.

Stroke

The risk of stroke is 1 in 200 (0.5%). Symptoms of stroke include weakness of one side, slurred or loss of speech and loss of vision. Continuing anticoagulation medication (warfarin, dabigatran, rivaroxaban or apixaban) is essential in keeping this risk as low as possible.

Should you develop any of these symptoms you should attend hospital immediately.

Most strokes will resolve completely within 24 hours but some patients can be left with permanent disability. Rarely stroke can result in coma or death.

Fluid around the heart (pericardial effusion)

The heart sits in a sack called the pericardium. In 1 in 100 (1%) cases fluid can collect in the sack causing pressure on the heart. This can be from a small leak from the heart due to the ablation catheter or because of inflammation caused by the catheter ablation. If there is pressure on the heart a small drain is placed through the skin into the pericardium. This usually stays in place for 24 hours which allows the heart to heal. It rarely results in any long-term problems.

Nerve damage

The nerves that control some of the breathing muscles (the diaphragm) and the nerves to the stomach are found close to the heart. The risk of damage to either of these is 1 in 1000 (0.1%). Nerve damage always recovers but may take up to 6 months. There may be no symptoms or there may be a degree of breathlessness or

change in bowel habit. The freezing technology has a slightly higher risk (1 in 100) of damaging the nerve to the diaphragm.

Gullet injury

The gullet sits behind the heart and in extremely rare (1 in 5000) cases may be damaged as part of the ablation. Symptoms include persistent chest pain, fever and symptoms of stroke. You should seek medical help immediately if you develop these symptoms. Early detection of damage to the gullet can be repaired with an operation. Unfortunately in many cases damage to the gullet can be fatal.

Permanent pacemaker

Rarely (1 in 1000 or 0.1%) the wiring that connects the top chambers of the heart (atria) to the bottom chambers of the heart (ventricles) becomes damaged during catheter ablation. If this occurs you will require a pacemaker to prevent the heart from beating too slowly.

Death

Death from catheter ablation is very rare (less than 1 in 1000). It normally results from one of the serious complications that despite treatment can't be corrected.

What can you do?

There is now strong evidence that changes in life style can greatly improve the success rate of all treatments for atrial fibrillation. Specifically we advise:-

Regular exercise:- 200 minutes per week at moderate intensity

Weight loss

It is also important that other medical conditions such as high blood pressure and obstructive sleep apnea have been treated to reduce the chances of AF recurring.

How to contact us

Arrhythmia Nurses **01392 403813**
Taw Ward **01392 402836**
Patient Advice and Liaison Service (PALS)
..... **01392 402093**
Cardiac Admissions **01392 403713**

Where can I get more information?

- Arrhythmia Alliance
www.rrhythmiaalliance.org.uk
- Atrial Fibrillation Association
www.afa.org.uk
- The British Heart Foundation
www.bhf.org.uk
- British Cardiac Patients Association
www.bcpa.co.uk
- DVLA Medical Enquires
0300 7906806 (car, motorcycle)
0300 7906807 (bus, coach, lorry)

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