

# Having an ablation to treat atrial flutter

## Cardiac Rhythm Management

Information for Patients

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### Introduction

This booklet will help you understand what radio-frequency ablation (RFA) or CavoTricuspid Isthmus (CTI) ablation is. This is a treatment where small parts of heart tissue are burned to stop abnormal electrical signals. This helps fix the fast heart rhythms called atrial flutter.

### How does the heart work normally?

The heart is a pump which circulates the blood around your body and to your brain.

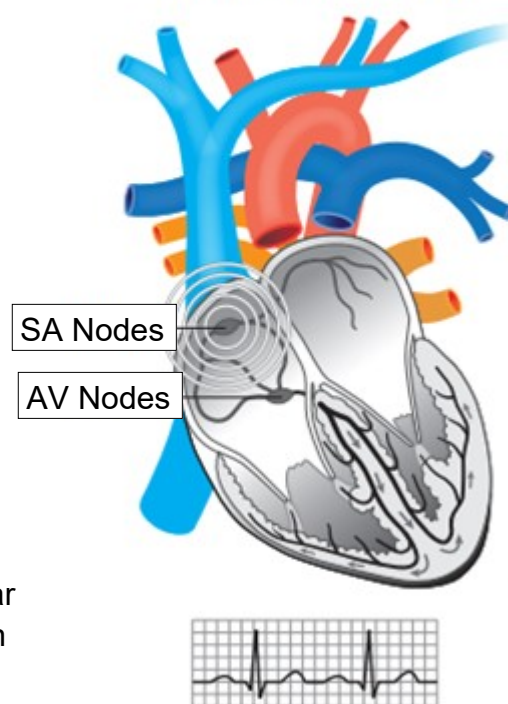
Your heart has its own natural pacemaker (the sinus node). This sits in the right upper part of the heart (right atrium). This sends out an electrical pulse or signal to keep your heart beating regularly and not too slowly.

The electrical signals spread through the top chambers (atria) causing the muscle to contract and squeeze the blood into the bottom chambers of the heart (ventricles).

The electrical signals are then received by the middle junction box in the heart. This is called the atrio ventricular or AV node. The signals are slowed down and pass down to the bottom chambers of the heart (ventricles) by some 'conduction pathways' called bundle branches.

The bottom chambers, or ventricles, then contract and squeeze the blood out around the body and brain from the left side, or to the lungs from the right side.

Normal Conduction



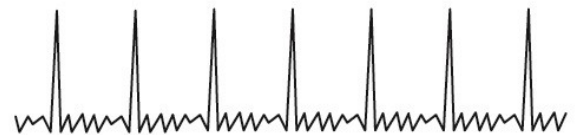
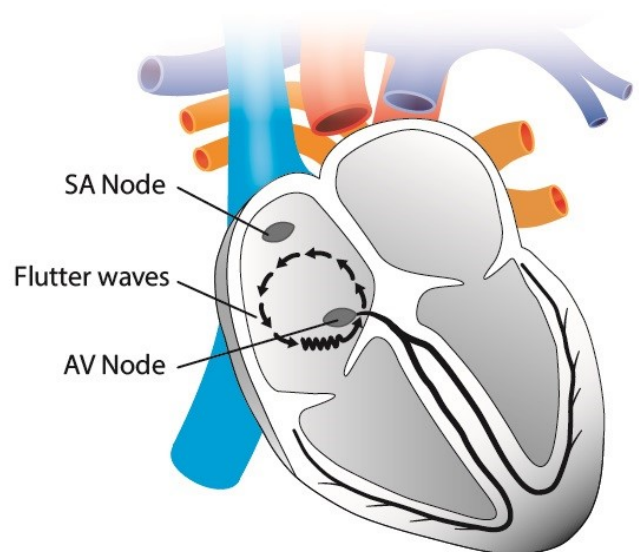
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## What is atrial flutter?

- **Atrial flutter** is a heart rhythm that comes from the top chambers of the heart (atria). It is different to the normal heart rhythm (sinus rhythm).
- Atrial flutter is when the electrical impulses that often spread across the top chambers of the heart (atria) come from a smaller fast circuit.
- These electrical impulses circulate very quickly around your atria causing them to beat very fast (flutter). The signals then spread to the bottom chambers (ventricles) which also start to beat fast.
- There is an area of tissue in the lower part of the top right chamber (atria) called the Cavo Tricuspid Isthmus (CTI). This is where the fast electrical signals can circulate through.
- During an episode of atrial flutter, the heart beat is often rapid, regular and of different intensity. This can cause unpleasant symptoms like:
  - fluttering's in your chest (palpitations),
  - shortness of breath (breathlessness),
  - tiredness,
  - dizziness or light-headedness,
  - chest pain or pressure and discomfort to your chest.
- They do not put your life at risk.
- Some people do not have any symptoms and it is found through a routine ECG.

## Atrial Flutter



## How do you treat atrial flutter?

Atrial flutter can be treated with:

- medication like beta blockers and anti-arrhythmic drugs. This helps to slow down and control the fast heart beat.
- blood thinning medication. This can be used to reduce the risk of stroke.
- a cardioversion might be suggested by your Consultant. This is a medical procedure where under sedation the atrial flutter is reset to a normal rhythm using an electrical shock.
- a surgical procedure known as catheter ablation (radio-frequency ablation) CavoTricuspid Isthmus (CTI) ablation.

## Risk factors related to atrial flutter

Some medical conditions and some types of life style increase this risk of developing atrial flutter, these can include:

- Heart related risk factors include:
  - heart failure
  - poorly controlled high blood pressure
  - coronary artery disease
- Lung related risk factors include:
  - Chronic Obstructive Pulmonary Disease (COPD)
- Other risk factors include:
  - excess alcohol intake
  - diabetes mellitus
  - too much thyroid hormone in the body (thyrotoxicosis)
  - recent surgery
  - acute (serious) illness
  - obesity

However, some of these cases are not related with any of these risk factors.

## Why am I being considered for a catheter ablation?

- Atrial flutter can cause stroke or other unpleasant symptoms.
- Ablation is seen as 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 how long you live for or reduce the risk of stroke.
- This can be achieved by burning (Radiofrequency) along the Cavo Tricuspid Isthmus (CTI) creating a line of block that will not let the abnormal electrical signals through.
- We will advise you about how to manage your risk factors. This will help to improve your symptoms, increase the success of the procedure and reduce the chance of these rhythms coming back in the future.

## Possible risks

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 or not. In a planned procedure, the benefits should outweigh the risks.

- There is a less than 1 in 1000 risk of death. Included in this is hole and tears (perforation) created in the heart and uncontrolled bleeding.
- There is a less than 1 in 100 risk of needing a pacemaker.
- Groin nerve damage is rare. Bruising where the catheters are passed into the vein is common. In about 1 in 100 patients the vein is damaged and a small operation is needed to repair it.
- There is a 1 in 100 risk that blood will leak into the tissues around the heart. This will need passage of a drain under the breast bone to drain away the blood leak.
- There is a 1 in 100 risk of a deep vein thrombosis or pulmonary embolism happening during / after the ablation.
- It is common to have chest discomfort during ablation. We will give painkillers and sedative drugs up to a safe limit as needed for the pain.
- Ionising radiation can cause cancer which happens after many years. The risk of developing cancer because of this procedure is less than 0.01%. This is very low. For comparison, half of the general population will get cancer at some point in their life.
- Depending on the complexity of the procedure there is a small chance of skin reddening (radiation induced erythema). If you are at increased risk of this we will let you know after the procedure is finished.
- Extra procedures which may be needed during the ablation can include:
  - Blood transfusion. This is unlikely.
  - Cardioversion. This can happen if your heart remains in atrial flutter after the ablation. It may need help to return back to normal. Before this happens you will be given some sedation to make you sleepy. We will then place pads on your chest and a small electrical shock will be delivered to cancel out the extra electrical activity allowing your normal heart beat to take back control.

Your Cardiologist will have explained to you why you need to have the ablation and the benefits of this procedure.

After the risks and benefits have been explained to you. If you agree to go ahead, you will be asked to sign an electronic consent form before the procedure goes ahead.

## Blood thinning medicines (anti-coagulation)

Before having an ablation procedure you must be taking a tablet to thin your blood (anti-coagulation).

There are 2 types of tablets: direct oral anticoagulants (DOAC) and warfarin.

### 1. Direct oral anti-coagulant (DOAC)

If you are on one of the following: RIVAROXABAN, APIXABAN, DABIGATRAN or EDOXABAN

You must take this tablet every day as written on the box for at least 4 weeks before and for a period of time after the ablation. Sometimes we may advise you to take this for the rest of your life.

**If a dose is missed or its taken later than normal your ablation will be delayed.**

### 2. Warfarin

Please make sure you have weekly blood tests (INR) for 4 weeks before and 3 weeks after your ablation. Please also arrange a blood test 2 days before you are due to have your ablation procedure.

If your blood test result drops below the target INR level that you have been given, your ablation will be delayed. Please ring through with your weekly readings for the 4 weeks before the procedure.

Please leave a telephone message on the Cardiac Rhythm Management helpline (**0116 258 3848**) with: **Your name, Hospital number, INR result and the date the test was taken.**

## Pre-admission and preparing yourself

All patients having an ablation will be seen in the Cardiac Rhythm pre-admission clinic. This is so that you will know what to expect on the day of your procedure.

At your preadmission appointment we will give you specific information about the procedure, your medication and when to stop eating and drinking.

**If you have been given a preadmission date which is less than 7 days before your procedure please contact the Cardiac Rhythm Team on 0116 258 3848 for advice on your medication.**

### **Please remember to bring the following to your preadmission appointment:**

- Your current medication or recent prescription.
- Your record of INR blood tests if you take warfarin.

## Antimicrobial wash and nasal cream

At your pre-admission appointment we will give you antimicrobial wash and nasal cream. Please use these as instructed for the **3** days before and on the day of your procedure.

## Eating and drinking (fasting)

- **If your admission time is 7.30am:** Do not eat anything from midnight the night before. You can have water only until 2 hours before your procedure.
- **If your admission time is 11am:** Do not eat anything from 5am on the day of the procedure. You can have water only until 2 hours before your procedure.

You will be admitted to ward 32. Please bring a small overnight bag with you and all of your medication. If you are on warfarin, please bring your anticoagulation booklet and readings.

## What if I am unwell before my procedure?

If you are unwell before your procedure with anything such as a chest infection, Covid-19, cough or feel generally unwell please contact the Cardiac Rhythm Team as soon as possible. We may need to change the date of your procedure.

You can contact the Cardiac Rhythm Management Team on **0116 258 3848**. There is an answerphone available to leave a message if we are not able to take your call at that time.

## On arrival to Glenfield Hospital

Please report to the ward desk when you arrive on ward 32 and you will be shown to the waiting room or to your bed space.

### During the ward admission:

- The nurse will check your details.
- They will confirm your tablet advice and eating and drinking advice has been followed.
- You will have your questions answered.
- Have a cannula (small tube in the vein) inserted. This is for the sedation and other medications to be given through it.
- Have your chest, groin and hair on your back shaved (if needed).
- Undress, put on a gown and lie down on a bed or trolley.
- A doctor will tell you about the ablation and go through the consent procedure with you.
- A member of the Catheter lab team will collect you and again confirm your details. They will take you to the procedure room (the Catheter Lab).

## What happens in the ablation procedure for an atrial flutter?

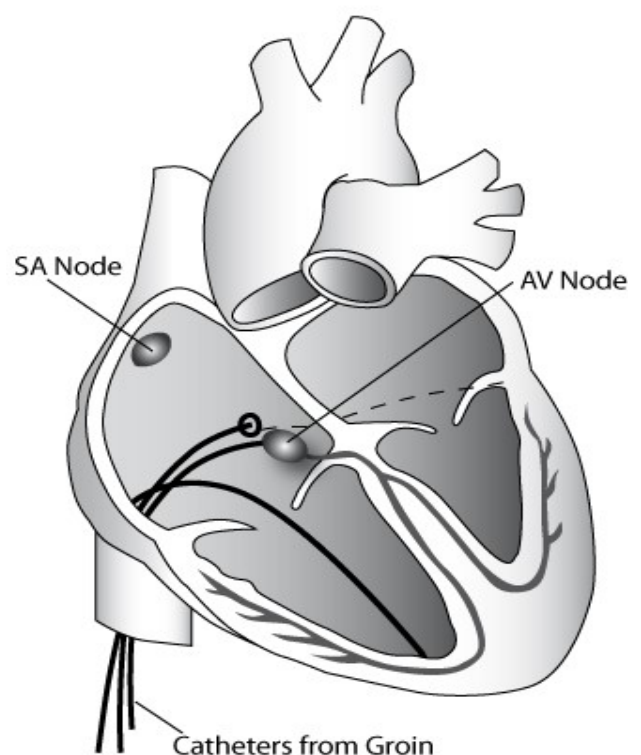
On arrival to the procedure room, you will meet the rest of the team.

We will then:

- Confirm your details.
- Answer any other questions you have.
- Connect you to blood pressure, heart rate and oxygen level monitors.
- You might be given a clear mask to breath oxygen.
- ECG stickers will be placed onto your chest.
- Sticky pads will be attached to the front and back of your chest and lower back. These feel cold.
- Give you something to help you relax and put pain relief into your cannula.
- Clean the top of your leg (s) with an antiseptic cleaning solution and cover you with a sterile sheet.
- Give you local anaesthetic at the top of the leg to numb the skin. This will feel sharp and sting for a short while.
- Use a needle to enter the vein at the top of the leg on the right (sometimes the left as well) to position small tubes in the vein (s). We may use an ultrasound scan to find the vein (s).
- Thin wires (catheters) will be passed through the vein into the heart.
- X-rays are used during the procedure to help us position the wires in the right places in the heart to record the heart signals.
- The X-ray tube will move at different angles around you.
- You must lie still during the procedure as the systems we use to see the wires inside your heart are very sensitive to movement.
- The wires will record and electrically stimulate the heart. From this information a diagnosis can be made and the correct area of tissue burnt (ablated).
- At times, your heart may need to be paced which may set off a fast rhythm and you might feel some palpitations. This may cause you concern, however please remember it is a controlled procedure.

If the area that is causing your atrial flutter is on the left side of your heart, the doctor may need to perform a procedure called a trans-septal puncture.

### 3 WIRE EP STUDY



## What happens in the ablation procedure for an atrial flutter? Cont...

This is where we use a special needle to make a small hole in the thin wall between the top chambers of the heart to pass the wires into the left atrium.

- Once we have safely advanced the wires in the atrium (right or left sided), and have identified where the atrial flutter signals are coming from. We then treat the area with Radio Frequency Ablation (RFA) or burning.
- Burning or Radiofrequency ablation uses heat energy given by a catheter. This creates scar tissue (lesions) 1 point at a time. It blocks the abnormal electrical signals that are causing the fast heartbeats.
- Lesions are a specific area of altered or scarred heart tissue that no longer conducts electrical signals. This includes the tissues around it. This act as a 'roadblock', making sure that the signals follow the normal path.
- There will be an uncomfortable feeling in your chest during the ablation. Please let the team know if it hurts.
- If your heart rhythm is still in atrial flutter at the end of the ablation procedure, you might need a treatment called cardioversion. This restores you to your 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.
- The procedure is likely to take 2 hours to do.
- At the end of the procedure, we take the tubes and catheters out of the vein.
- We will press on the groin or put stitches (suture) in the skin if needed. This is to stop any bleeding.

## What happens after the procedure?

- After the procedure we will take you into the recovery area or the ward to rest.
- We may do a heart scan (ECHO) to check that there is no fluid around the heart.
- You will have small cuts in the top of the leg on the right (and maybe on the left as well). You may have a stitch in the skin. We will remove this after a few hours.
- There is a risk of bruising in the groin. Because of this we ask you to rest quietly in bed for 2 hours after the procedure.

### We will:

- Record an ECG.
- Monitor your heart rate, blood pressure and oxygen levels for about 2 hours.
- Give you something to eat and drink.

- Talk about the result of the ablation and answer any questions.
- Talk about changes to your tablets if needed.
- Do a scan of the heart (echocardiogram) before you go home (if needed).
- If you feel well, and the procedure was straightforward we will let you go home either later the same or next day morning.

## Going home

### Care of groin site

- You will have 2 to 3 small cuts in the top of the right leg and sometimes in the left leg. This is where the wires were passed through the vein into the heart.
- It is normal to have some soreness and bruising in this area.
- You should avoid hot baths or showers for 2 days but instead have them warm.
- You need to move around gently for the first few days at home, do not sit and do nothing.
- You will then need to take things at a steady pace for you for at least 1 week to let your cuts heal and the heart rhythm to settle.

### Heart rhythm after the procedure

- It is normal for your heart rhythm to be unsettled in the first few weeks. It can take 3 months for the heart to heal before we decide how well the procedure has worked.
- This does not mean the procedure has not worked. It may be because of inflammation caused by the ablation.
- If you have any concerns or worries, please contact the Cardiac Rhythm Management Team on **0116 258 3848**.

### Chest pain after the procedure

- It is normal to have some chest pain after the procedure for a few days.

### Bleeding

- It is rare to have severe bleeding from the insertion site once you are at home.
- However if bleeding does happen you must:
  1. Lie flat.
  2. Apply firm pressure to the insertion site for 10 minutes. It is best if someone else can apply pressure to the groin for you.
  3. If bleeding does not stop after 10 minutes of pressure, **call 999**.

## Driving

- For a normal driving car licence (group 1) you can drive a car after 2 days. This will give time for your cuts to heal and your heart rhythm to settle.
- If after 2 days your groin is still sore and limits your movement please do not drive until you are back to normal.
- If you have a HGV/PSV (group 2) licence driving, you cannot drive for 2 weeks as per DVLA guidelines.

## Work

- You will need to have at least 1 week off work to recover at home.
- Some people need to have 2 weeks, mostly if you have a manual job.
- If you need a sick note please talk with the ward staff before you go home.

## Travelling

- You should wait for 4 weeks until you can fly in an airplane.
- Sometimes you may need to fly before this time but you should ask your Consultant about this.

## Exercise

- You should do light exercise for at least 1 week and then build up slowly to what is normal for you.
- For more active exercise advice and getting back to normal please ask your Consultant or Specialist Nurse.

## Advice on blood thinning medicine after the procedure (anti-coagulation)

- If you take Warfarin your INR blood levels need to be in range for at least 3 weeks (ideally 2.5 to 3.5). Please book a blood test (INR) within 1 week of getting home. Do not stop taking this unless your doctor tells you to.
- If you take a different tablet (DOAC) to thin your blood do not stop taking this unless your doctor tells you to.



## Contact details

### Cardiac Rhythm Nurses:

Tel: **0116 258 3848** (Monday to Friday, 8am to 5pm, excluding Bank holidays / answer phone available out of hours).

Email: [uhl-tr.cardiacrhythmnurses@nhs.net](mailto:uhl-tr.cardiacrhythmnurses@nhs.net)

**Please note this number is not an emergency number. Depending on your symptoms please contact your GP or 111 or for medical emergencies call 999.**

## More information

### AF Association

Tel: **0178 945 1837**

Email: [info@afa.org.uk](mailto:info@afa.org.uk)

### British Heart Foundation

Tel: **0300 330 3311**

Email: [bhf.org.uk](http://bhf.org.uk)

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