

Additional Notes

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# Catheter Ablation of the Atrio-Ventricular Node

## Cardiac Intervention Unit

This booklet is to help you understand  
about your **Catheter Ablation**  
of the **Atrio-Ventricular Node**.

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t: 01202 303626 w: [www.uhd.nhs.uk](http://www.uhd.nhs.uk)

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## Important Points to Remember

Please read this booklet carefully. If you have any further questions or concerns contact the Arrhythmia Nurse Specialists on **0300 019 6154** or email **arrhythmia.nurses@uhd.nhs.uk**.

- Your admission letter will give you details of where you will be admitted.

### On the morning of the procedure:

Please shower on the morning of your admission and bring all your medication with you to hospital.

It is very important you follow the instructions on stopping medication before your procedure. You will receive instructions with your admission letter.

If you are unsure of your instructions, please call the arrhythmia nurse specialists.

You will receive instructions on when you should stop eating and drinking prior to admission. A small sip of water to swallow tablets is allowed.

### The Electrical System of the Heart

The heart consists of two pumps side by side. One pump circulates blood around the lungs before emptying into the second pump. The second pump circulates blood around the body. Each pump consists of two chambers, the atrium and the ventricle.

## Additional Notes

## What is Atrial Fibrillation and Ablation of the AV Node?

Atrial Fibrillation (AF) occurs when chaotic electrical activity develops in the upper chambers of the heart (the atria) and completely takes over normal heart rhythm. Consequently the atria no longer contract in an organised fashion and pump less efficiently. This electrical activity bombards the AV Node, which cannot send all of these impulses to the bottom chambers (the ventricles). This results in the ventricles beating rapidly and irregularly and can lead to some of the symptoms of AF, which may include:

- Palpitations
- Feeling tired
- Shortness of breath
- Dizziness or light-headedness
- Chest pain or tightness.

AV node ablation involves passing fine wires up to the heart and heating the tip of the wire, which then ablates or destroys the AV node. This means that the top chambers of the heart (the atria) are electrically disconnected from the lower chambers of the heart (the ventricles). After the ablation the implanted permanent pacemaker will regulate the beating of the lower chambers causing a controlled regular pulse. The AF is not cured but you should find that some of the symptoms you have been experiencing will be relieved. As the AF is not cured, it is vital the blood thinning medication (anticoagulation medication, such as warfarin or Direct Oral Anticoagulants (DOACs) - e.g. Edoxaban, Apixaban, Rivaroxaban Dabigatran) you take is continued to reduce the risk of a clot forming.

## Are there any complications?

Although the following complications must be mentioned, the risk of them happening is extremely small. Please do discuss any particular concerns that you have prior to the ablation.

- Your groin will have some minor bruising and short-lived tenderness.
- There may be damage to the blood vessels at the top of the leg, resulting in a large bruise and possible bleeding. This is called a False Femoral Aneurysm. Applying extra pressure to the vessel can usually treat this, but occasionally a small operation is required.
- You may get palpitations during this test, but as your heart is being monitored we will notice this and treat you as necessary.
- Very rarely the insertion of the catheters into the heart may cause heart damage or stroke but this risk is less than 1 in 1,000 (less than 0.1%).
- If an emergency situation occurs during the procedure, we will do whatever is possible to treat it. Although extremely rare, this emergency treatment could include 'open-heart surgery'.

Your Doctor feels that the benefits that can be gained from performing this procedure outweigh any of the risks involved.

## Internet Sites

The following are web sites that provide information for patients. Whilst we recommend these sites, we cannot be held responsible for information that you collect from them. To locate the site connect to the addresses below:

[www.arrhythmiaalliance.org.uk](http://www.arrhythmiaalliance.org.uk)

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

[www.dvla.gov](http://www.dvla.gov)

[www.guidant.com](http://www.guidant.com)

[www.medtronic.com](http://www.medtronic.com)

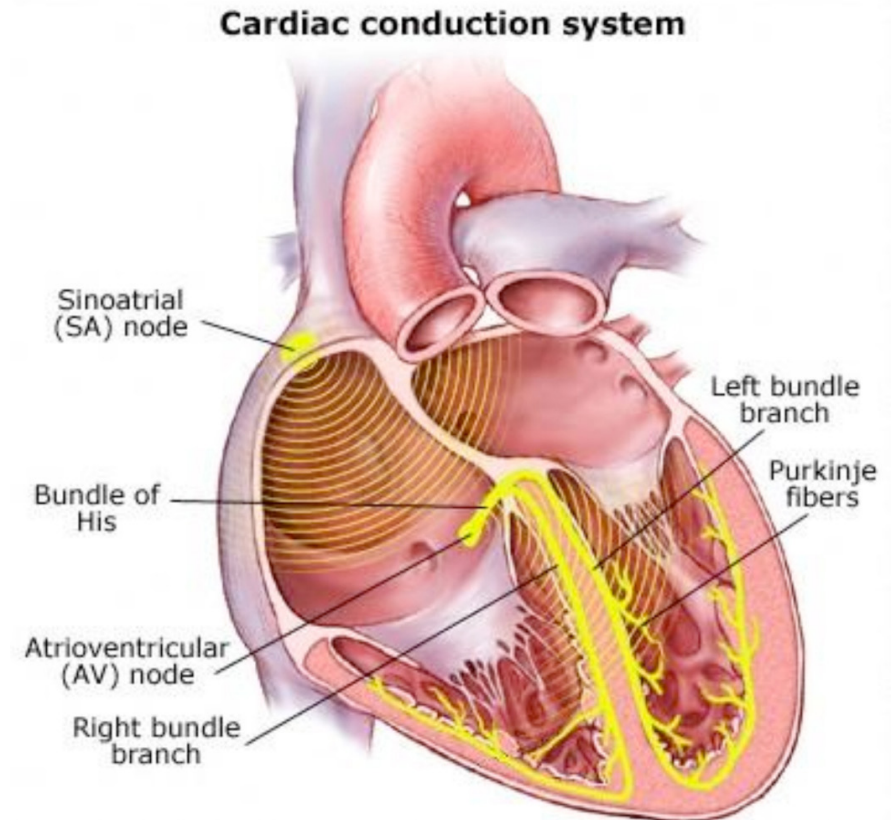
[www.sjm.com](http://www.sjm.com)

## The Bournemouth and Christchurch Heart Fund

**The Bournemouth and Christchurch Heart Fund** (charity no. 216161) was set up in 1989 for the purpose of developing cardiac services which would not be supplied through National Health Services resources. Several of the recent purchases of equipment since the cardiac department was established have been provided or supported through non-NHS money. In order to continue to maintain and update our facilities, donations are greatly appreciated.

If you would like to contribute, cheques should be made payable to **“The Bournemouth and Christchurch Heart Fund”** and sent to the Cardiac Department (Dr Rozkovec’s office).

The heart needs an electrical impulse to generate a heartbeat. In normal heart rhythm the electrical impulse starts in the heart’s natural pacemaker called the Sino Atrial node (SA node). The SA node is sited in the right atrium. The electrical impulse travels through the tissues of the conduction system causing the heart muscle to contract in sequence, the atrium before the ventricle. There is a junction between the atria and ventricles called the Atrio-Ventricular node (AV node) that allows communication between these chambers.



The heart normally beats at 50 - 100 times per minute at rest. The heart beats regularly and slowly at rest and faster during physical and emotional activity.

Long thin wires will be passed through the tubes. These wires will then be used to record electrical signals from within the heart. The wires are guided into position using x-ray equipment. The x-ray machine will move around you to take pictures from different angles. As with all x-rays, if there is any chance you are pregnant, please let the Doctor or Nurse know before the procedure begins. The staff in the Lab will wear protective aprons because they are exposed to x-rays every day.

When the Doctor has located the AV node the ablation will be performed. This is done by applying radiofrequency energy, which will heat the tip of one of the wires positioned in your heart. You will be required to stay still during this time and you may be aware of a slight discomfort in the chest. Once the delivery of radiofrequency energy has stopped, the discomfort usually disappears.

Very occasionally during the procedure the heart may go into a fast rhythm, which needs to be stopped. In such instances an electrical shock may be required to restore the heart to its normal rhythm. This may sound frightening, but you should not feel pain as sedation is given before the shock. This is a rare occurrence, and once the heart has been restored to its normal rhythm the procedure will then continue as before.

It is often necessary to deliver several amounts of energy to ensure complete destruction of the tissue and there is sometimes a waiting time of up to 20 minutes to ensure that the procedure has been successful.

After the procedure is finished, the Doctor will remove the wires and the small plastic tubes in the groin. A small plaster will then be placed on the wound. You will then be transferred to a recovery area for close observation before being transferred back to the ward.

## Before the ablation

A hospital gown will be provided for you to wear. A little plastic tube will be inserted into your arm to enable you to be given medication you might require during the procedure.

If you wear dentures they can remain in place providing they fit well. Before the ablation you will be seen by the Doctor who will explain what the procedure involves and what risks or complications may be associated with the procedure. You will be asked to sign a consent form to allow the ablation to go ahead.

## After the Ablation

When you get back to the ward, the Nurse will check your blood pressure, pulse and wound in the groin.

You will need to lie flat for approximately two hours to allow the groin to heal. Your Nurse will make sure that you have something to drink and that you are comfortable. Once you are able to sit up a little you may be provided with something to eat. An electrocardiogram (heart tracing) will be taken and you will be encouraged to rest.

Your Doctor or Arrhythmia Nurse will discuss the results of your catheter ablation later in the day and you should be able to go home by early evening.

## Going Home

- You must have someone to collect you from the ward and someone staying with you for the first night, just in case your wound bleeds or you begin to feel unwell.
- We do not advise using public transport.
- The Driving and Vehicle Licensing Agency (DVLA) have guidelines for patients who have received an ablation. Generally you can't drive for two days after an ablation. If you drive for a living or hold a Group 2 (bus/lorry) licence, please ask the arrhythmia nurses or DVLA what restrictions apply. You can access the DVLA guidelines at [www.gov.uk/driving-medical-conditions](http://www.gov.uk/driving-medical-conditions).
- You will need to plan one week off work following a catheter ablation.
- You should continue to take your medications as normal, unless the Doctor has told you not to.
- You will be followed up in Pacing Clinic one month after the ablation.

If you have any new medical questions when you return home you should contact your GP. In any medical emergency you can present to the Accident and Emergency Department or call **999**.

If you have any concerns about your ablation procedure you may contact:

### **The Arrhythmia Nurse Specialists**

on **0300 019 6154**

Monday to Friday 9.00 to 5.00pm.

## Where is the Catheter Ablation performed?

The study takes place in a special room, which looks like an operating theatre and is called a catheter lab or 'cath lab'. In this room with you will be:

- The cardiologist who will perform the test.
- Two nurses, one to look after you and one to help the doctor.
- A radiographer who takes the x-ray films.
- A cardiac physiologist who will monitor your heart while you have the test.

## How is the Catheter Ablation performed?

You will be awake during the procedure, but may be given sedation that may make you drowsy. If it is uncomfortable at any time during the procedure or you feel very anxious please let the Nurse or the Doctor know.

You will lie as flat as you are able on the x-ray table, with a pillow. The Cardiac Physiologist will place some stickers on your chest, a blood pressure cuff on your arm and a probe on your finger. This will enable the heart rate, blood pressure and oxygen levels to be observed throughout the study. An oxygen mask may also be placed on your face.

Your groin will be cleaned with antiseptic solution and local anaesthetic will be injected here. The local anaesthetic will cause a stinging sensation for a few moments and the groin will feel numb. The Doctor will place some fine tubes in the main vein of your groin. This should not be painful but you may feel some pushing when the tubes are inserted.