Arrhythmia Alliance

The Heart Rhythm Charity

Promoting better understanding, diagnosis, treatment and quality of life for individuals with cardiac arrhythmias

Catheter Ablation

Catheter Ablation Patient Information

www.heartrhythmcharity.org.uk

Introduction to Catheter Ablation

This booklet is intended for use by people who wish to understand more about Catheter Ablation. The information within this booklet comes from research and previous patients' experiences.

This booklet should be used in addition to the information given to you by your doctors, nurses and physiologists. If you have any questions about any of the information given in this booklet, please ask your nurse, doctor or cardiac physiologist.

Arrhythmia Alliance (**A-A**) is a coalition of charities, patient groups, patients, carers, medical groups and allied professionals.

These groups remain independent, however, work together under the **A-A** umbrella to promote timely and effective diagnosis and treatment of arrhythmias.

A-A supports and promotes the aims and objectives of the individual groups.

Contents

Arrhythmia Alliance patient booklets are reviewed annually.

This booklet will be next updated April 2009,

if you have any comments or suggestions

please contact A-A.

Glossary of terms

Ablation
A procedure performed by an electrophysiologist to clear a small volume of cardiac tissue.

Atria
The two upper chambers of the heart.

AV Node
Part of the electrical pathway between the atria and the ventricles.

Catheter
These are fine wires which are passed through tubes and are positioned within the heart.

Electrophysiologist
A cardiologist who has specialised in the electrical side of the heart, meaning the heart's rhythm.

Sinus Node
This is the natural pacemaker of the heart.

SVT
Supra-ventricular-tachycardia an abnormal heart rhythm arising from the upper chambers of the heart.

Tachycardia
Fast heart beat.

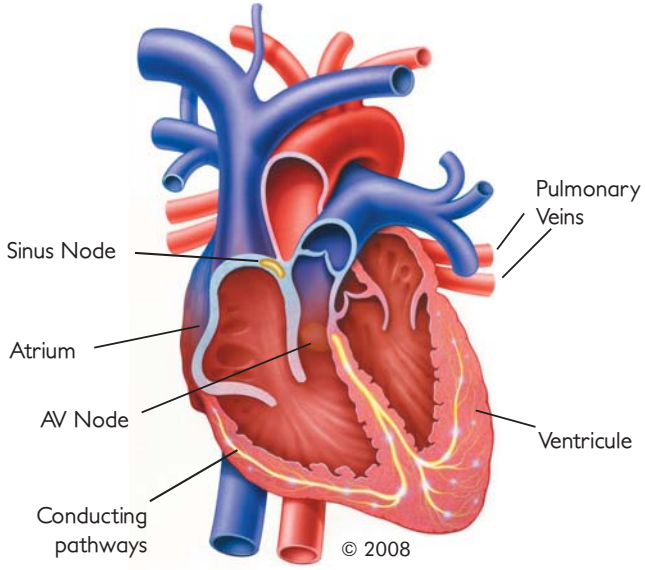
The heart during normal rhythm (sinus rhythm)

The heart is a muscular pump which delivers blood, containing oxygen to the body. It is divided into two upper chambers, or "atria", which collect blood returning via the veins, and two lower chambers or "ventricles", which pump blood out through the aorta (main artery) and the lungs.

Normally, the heart beats in a regular, organised way, at a rate of 60-100 beats per minute. This is because it is driven by the "sinus node", a clump of specialised cells, which emits electrical impulses and is situated in the atria. These electrical impulses spread through the atria and then into the ventricles via a connecting cable (the "AV node").

The sinus node controls the timing of the heart, according to the needs of the body. An example of this is during exercise, when the heart rate speeds up. When the heart is beating normally like this, we refer to it as "sinus rhythm", or "normal sinus rhythm".

The heart and normal conduction



Heart rhythm disturbances

Sometimes, the electrical conduction system in the heart travels in a different direction, due to extra electrical connections known as "pathways", or due to extra electrical cells within the heart. Often these pathways are present at birth, but may only start to work in adulthood.

When the heart has an extra beat (an ectopic), it can travel up the pathway and travel down the normal conduction system. If this continues, palpitations can start. This means that the heart suddenly starts to race, causing an awareness of a fast heartbeat. If the abnormal heart rhythm is arising from the upper chambers of the heart, this is known as SVT, or supra-ventricular tachycardia.

This type of heart rhythm disturbance is not life threatening, but can cause unpleasant symptoms and interfere with your quality of life. If the abnormal heart rhythm comes from the lower pumping chambers of the heart (the ventricles), it can be dangerous, particularly if it is associated with fainting.

These heart rhythm disturbances may be treated in a variety of ways, such as medication to suppress the fast heartbeats. Over the past 20 years (or so) a technique called catheter ablation has been developed as a treatment for a variety of heart rhythm problems. Catheter ablation aims to cure the abnormal heart rhythm by destroying the pathway, or area of extra cells, causing the palpitations.

The ablation procedure

Catheter ablation is carried out in a cardiac catheter laboratory, a room which is similar to an operating theatre. There will be a team of people present, some of whom you may have met before. The doctor, or electrophysiologist, will carry out the procedure with the help of a physiologist, who gives technical support; nurses, who will look after you and assist the doctor and a radiographer who will assist with the x-ray equipment.

Catheter ablation is a minimally invasive procedure, which is usually performed using local anaesthetic. Most patients are also given some sedation, which makes you feel relaxed and you may go to sleep for a while.

Cardiac catheter laboratory (The Cath Lab)

During the study you will be required to lie flat and a local anaesthetic will be administered, possibly in the shoulder or your neck. Some fine tubes will then be inserted into the blood vessel at the top of the right leg, and sometimes in the shoulder under the collarbone or in your neck.

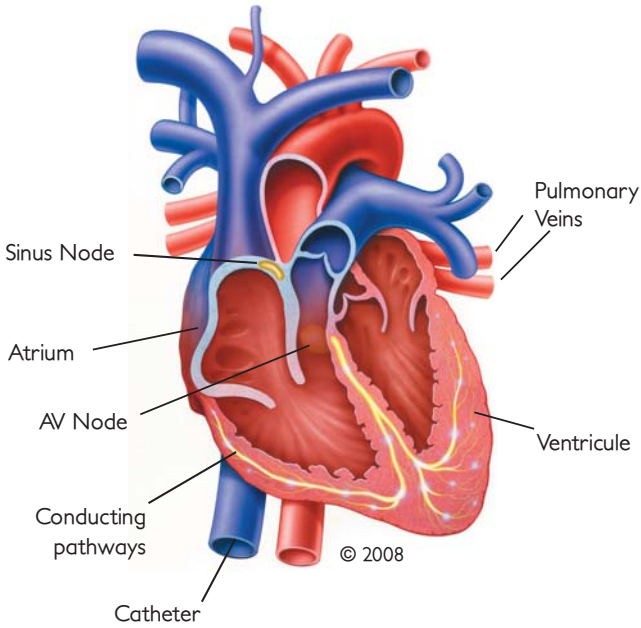
Fine wires, or catheters are then passed through the tubes and positioned within the heart. This is done with the guidance of an x-ray machine. Once the wires are positioned within the heart, extra beats are delivered using an external pacemaker, which may bring on your palpitations. This is necessary to see where the heart rhythm is coming from. It is possible to put the heart back into normal rhythm within a few seconds, by delivering some extra beats.

The doctor performing the procedure will then begin to ablate the pathway or area of extra electrical cells. This is done by delivering a form of energy down the wire to the target area within the heart. Most commonly the energy used is a heat source, called radio-frequency energy, but other types may be used, such as cryo therapy, which freezes the area.

This part of the procedure may be a bit uncomfortable, so usually more sedation is given. Once the procedure has finished, the wires and tubes will be removed and you will spend a few hours recovering on the ward.

After the ablation

Most people recover quickly from the procedure and feel well enough to carry on with normal activities the following day. You should avoid heavy lifting for about 2 weeks afterwards. The DVLA states that you must not drive for one week after the ablation. If you work, you may wish to take a few days off to recover fully.



Following the ablation, it is quite common to be aware of your own heartbeat, even in normal rhythm. Some people are aware of extra or "missed" beats. Try not to worry too much about these symptoms, which usually settle down with the passage of time. If you experience your palpitations or a racing heartbeat, you should report this to your doctor, as this may indicate that the procedure has not been completely successful.

It is common practice for you to be seen in the outpatient clinic a few months after the procedure, to see how you are progressing.

You can access the DVLA guidelines on;
http://www.direct.gov.uk/en/motoring/driverlicensing/medicalrulesfordrivers

Risks and benefits

The benefit of having a catheter ablation is that your heart rhythm disturbance is cured. This is possible in the vast majority of cases. Your local hospital will be able to give you exact figures, depending on the type of ablation and your individual case. A small number of individuals will need more than one session of treatment.

There is no procedure in medicine with zero risk and catheter ablation is no exception. One reason why it has become a popular treatment in recent years is that it has a very good safety record.

The mortality risk of catheter ablation is either 1 in 1000 or 1 in 2000 (Heart Rhythm Society) depending on the type of ablation. More specific risks and complications will be discussed with you at your local hospital.

Useful websites

A list of useful sites can be found at:- www.heartrhythmcharity.org.uk. This list is not exhaustive and it is constantly evolving. If we have excluded anyone, please accept our sincerest apologies and be assured that as soon as the matter is brought to the attention of the Arrhythmia Alliance, we will quickly act to ensure maximum inclusiveness in our endeavours.

If you wish to contact us direct please phone on 01789 450 787 or email heartrhythm@stars.org.uk.

Please feel free to discuss any concerns at all with the doctors, physiologists or your specialist nurse at any time.

Further reading

The following list of Arrhythmia Patients booklets are available to download from our website or to order please call 01789 450787.

- Arrhythmia Checklist - Could your heart rhythm problem be dangerous?
- Atrial Fibrillation (AF)
- AF Checklist
- Blackout Checklist
- Bradycardia (Slow Heart Rhythm)
- CRT/ICD
- Catheter Ablation
- Catheter Ablation for Atrial Fibrillation
- Drug Treatment for Heart Rhythm Disorders (Arrhythmias)
- Electrophysiology Studies
- Exercising with an ICD
- FAQs
- Heart Rhythm Charity
- Highlighting the Work of the Arrhythmia Alliance
- ICD
- Implantable Loop Recorder
- Long QT Patient Information
- National Service Framework Chapter 8
- CRT/Pacemaker
- Pacemaker
- Palpitation Checklist
- Remote Monitoring for ICDs
- Sudden Cardiac Arrest
- Supraventricular Tachycardia (SVT)
- Tachycardia (Fast Heart Rhythm)
- Testing Using Drug Injections to Investigate the Possibility of a Risk of Sudden Cardiac Death
- Tilt-Test

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Membership is free to individuals, however if you would like to make a DONATION please complete and return.

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Standing Order Authority

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Please Pay: A-A, Account: 02685818 Sort Code: 30-98-26, Lloyds TSB Plc, 22 Bridge St, Stratford upon Avon, CV37 6AG

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Sort Code:	Signature:
Date:	Please hand this form in to your Bank

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Arrhythmia Alliance
The Heart Rhythm Charity

Executive Committee

endorsed by DH Department of Health

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Please remember these are general guidelines and individuals should always discuss their condition with their own doctor.

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