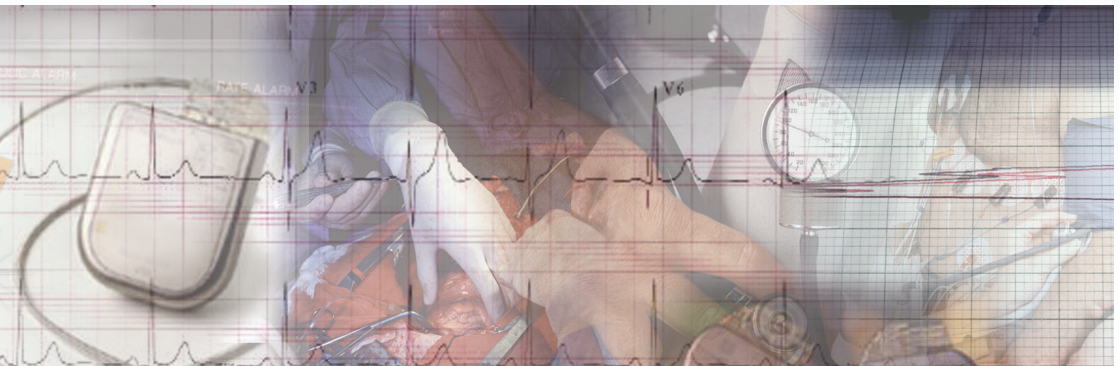
ATRIAL FIBRILLATION (AF) PATIENT INFORMATION

The Heart Rhythm Charity

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

Arrhythmia Alliance

www.heartrhythmcharity.org.uk



Arrhythmia Alliance (A-A) is a coalition of charities, patient groups, patient, 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

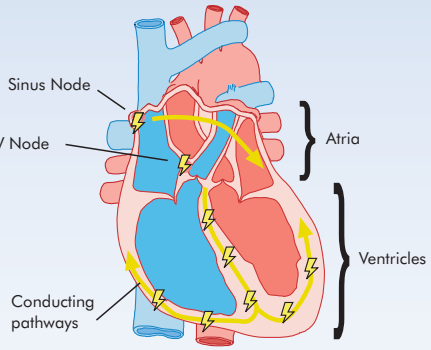
Arrhythmia Alliance patient booklets are reviewed annually.
This booklet will be next updated August 2008.
If you have any comments or suggestions please contact A-A.

Introduction

Atrial fibrillation (AF) is the most common heart rhythm disturbance encountered by doctors. It affects about 500,000 people in the UK alone. It can affect adults of any age, but it is more common as people get older. In the over-75-year-old age group, it affects about 10% of people. Atrial fibrillation is not a life-threatening heart rhythm problem, but it can be troublesome and often requires treatment.

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 great 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 situated in the atria, which emits electrical impulses. The sinus node is sometimes referred to as the heart's natural pacemaker.

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".

What is atrial fibrillation?

Atrial fibrillation or AF occurs when chaotic electrical activity develops in the upper chambers or atria, and completely takes over from the sinus node. As a result, the atria no longer beat in an organised way, and pump less efficiently. The AV node will stop some of these very rapid impulses from travelling to the ventricles, but the ventricles will still beat irregularly and possibly rapidly.

What causes atrial fibrillation?

The cause of AF is not fully understood, but it often develops in patients with common heart conditions, such as high blood pressure, coronary artery disease, heart valve disease.

It can be associated with thyroid gland disorders, high alcohol intake and chest infections. In many people with AF, there is no cause and this is known as "lone AF".

What are the symptoms of atrial fibrillation?

Common symptoms are:

- Palpitation, (or awareness of the heartbeat), which may be rapid
- Tiredness
- Shortness of breath
- Dizziness
- Chest pain

Some people with AF have no symptoms at all and it is only discovered at a routine medical examination.

Are there different types of atrial fibrillation?

AF is described as being paroxysmal, persistent or permanent. Paroxysmal means that the AF occurs in short episodes and the heart will return to normal rhythm by itself. These AF episodes can last for seconds, minutes, hours or even days. Persistent AF means that the heart remains in AF until some form of treatment is used to correct it. Permanent AF means that treatment to correct the rhythm has not worked, or has not been attempted (for various reasons).

What are the risks of atrial fibrillation?

The main risk associated with AF is stroke. This occurs because the atria are fibrillating and not beating in a co-ordinated way. As a result, the blood in the atria can become stagnant and then does not flow through the heart smoothly. This causes blood cells to stick together and form a clot which can travel to the brain and result in a stroke (an embolism).

Having an uncontrolled heart rate for long periods of time (weeks or months) can damage the heart and you should check with your doctor that your heart rate is controlled adequately. In extreme cases, often when the rate is very fast or when it happens in a damaged heart, AF can cause heart failure, which means that the heart becomes weak as a result of the rapid rhythm. As the heart weakens, blood flows back into the lungs and affects the normal breathing pattern.

AF is also associated with a slightly increased risk of death although this is a very small risk and generally AF is not considered a life-threatening disease in its own right. Why AF is associated with increased risk of death is not understood.

Tests/investigations (all explained in more detail on a separate information sheet).

Firstly, it is important to check that you do actually have AF. This is confirmed by a heart tracing called an electrocardiogram (ECG). The ECG may be a simple recording made in real time, or a continuous monitor, worn for 24 hours or more, to look for episodes of AF. You may need to have an echocardiogram (a scan) which can assess the structure and overall function of the heart.

Treatment of atrial fibrillation

Treatment of AF broadly falls into 2 areas: the prevention of blood clots (and therefore, stroke) and the control of the rhythm itself. If other heart problems are present, they may need treatment in their own right.

Stroke prevention

To minimise the risk of blood clots, drugs such as Aspirin or Warfarin, may be recommended. Aspirin is simple to take and seldom causes side-effects.

Warfarin is a powerful blood thinning agent, but can be complicated to take, because the daily dose needs to be adjusted according to a blood test called the INR (international normalised ratio). These blood tests are performed every few days initially and then every 4-8 weeks once the treatment is established and the INR stable. If the dose of Warfarin is too low, the blood will not be thin enough to prevent a stroke.

If the dose is too high, the blood will be too thin and bleeding problems may occur. Despite the disadvantages of warfarin it has been shown to be very effective in preventing strokes particularly in patients who may be more at risk (e.g. patients over 70 years of age, or those with other heart or circulation problems).

The choice between Aspirin and Warfarin depends on the individual circumstances of each person. National and International guidelines are available to doctors, recommending such treatment.

Rhythm treatment

The treatment of heart rhythm in AF depends on whether you have symptoms or not, and whether the AF is paroxysmal, persistent or permanent.

Persistent atrial fibrillation

If you have symptoms from AF, or it has been newly-diagnosed, an electrical treatment to restore normal sinus rhythm may be recommended. This procedure is called electrical cardioversion, which is usually performed as a day case in hospital. Either heavy sedation or a short general anaesthetic (5 to 10 minute) is given, after which the electric shock is delivered via a machine called a defibrillator, across the chest.

In order to maximise the chances of keeping the heart in normal rhythm, you may be advised to take a rhythm-stabilising drug, like Amiodarone or Sotalol, for some time after the procedure. Anyone undergoing cardioversion will need to take Warfarin for at least one month before the procedure and for several months afterwards.

Paroxysmal atrial fibrillation

There is not just one method of treating AF, as everyone is different and responds to treatment in a variety of ways. Your doctor will discuss the treatments available, but the main options are described below.

No treatment

In some cases, for example, if the AF episodes are infrequent and short, it may not be worthwhile taking medication. This is because the potential side-effects from the drugs may outweigh the benefits.

Drug treatments

The aim of treatment initially is to reduce the frequency and/or severity of AF with medication, called anti-arrhythmic drugs.

There are various drugs available for treating the AF episodes. One of these, Flecainide, can be effective at reducing the severity and frequency of the episodes. This drug is only suitable for patients who have no coronary heart disease. Therefore it is used in younger patients, although it may be used in older individuals who have been tested for any signs of heart disease. Flecainide is usually taken twice daily. Propafenone is a similar medication but that is often taken three times daily.

In some patients with infrequent sustained episodes of AF, Flecainide or Propafenone may be given as a single dose at the beginning of the attack. This is known as the "pill in the pocket" method. However, this is only safe when patients who are carefully selected are trained to undertake this procedure and practise it first in the hospital setting.

Another group of drugs that can be highly effective in controlling the symptoms of AF are Beta blockers. One of these, Sotalol (given two or three times daily) is a special type of Beta blocker, which has extra rhythm stabilising properties at higher doses.

The other commonly used drug is Amiodarone which is initially given in a relatively large dose two or three times daily followed by regular once daily therapy. This is a powerful and effective drug, which may work well for you. However, six-monthly blood tests are required in order to check for any side effects, of which there can be many. For example, there is a small risk that the drug could affect your lungs, eyes, thyroid or other organs in your body. The drug also makes you more sensitive to the sun. If you are prescribed Amiodarone, you will need to wear a high protection sun cream and cover up your skin on sunny days. Your doctor/nurse will discuss any potential risks with you before you start taking the drug.

You may have tried certain drugs in the past which have not been successful in making you feel better. It is important to remember that there are several other types of medication available and it can take time to find the best treatment (single medicines or combinations) in your individual case.

Non-drug treatments

In some individuals the episodes of atrial fibrillation are both severe and frequent, affecting their quality of life. If drug treatments do not work or cause unpleasant side effects, it may be necessary to offer a different solution. This may involve implantation of a permanent pacemaker and/or subsequent procedures, depending on the improvement of your symptoms.

AV nodal ablation ("pace-ablate")

Some types of AF respond to treatment with special pacemakers which can help to maintain or regulate the heart rhythm. If the implantation of a pacemaker alone fails to improve your symptoms, you may be suitable for a catheter ablation. One of the most sommon ablation treatments for AF is called AV nodal ablation.

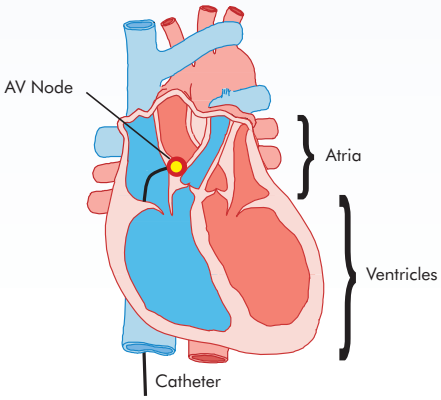
This is performed under local anaesthetic and heavy sedation, and involves passing fine wires to the heart via the veins in the right groin. One of the wires is heated at the tip, which then ablates or destroys the target tissue, in this case the AV node. This means that the top chambers or atria are disconnected from the lower chambers or ventricles.

Once this procedure is performed you will be dependent on your pacemaker to deliver impulses to the bottom chambers of your heart (the ventricles). The procedure is not reversible.

Your permanent pacemaker will regulate the beating of the lower chambers, or ventricles, in a controlled regular pulse. The AF is not cured, but many individuals find relief from palpitations by having this procedure performed. It important to realise that symptoms of fatigue and breathlessness may not be improved by this procedure.

Catheter ablation may be performed as a day case procedure in some hospitals, which means that you may not have to stay in hospital overnight.

If you are suitable for this treatment, your cardiologist will discuss the procedure with you in more detail at an appropriate time. The risks and benefits of such treatment will be explained so that you can make an informed choice.



Left atrial ablation

Also called a left atrial circumferential ablation or pulmonary vein isolation ablation (PVI). It is not suitable for all patients with AF, but may be considered if your symptoms do not respond to other treatment.

In this case areas within the left atrium are ablated, thus preventing AF from starting. In recent years it has been found that AF can originate from areas around the pulmonary veins (blood vessels linking the heart with the lungs), which are situated in the left atrium (upper chamber).

The technique involves passing a wire into the left side of the heart. This is done by passing a wire through the vein in the groin, into the right side of the heart and making a small hole in the muscle, which separates the right and left upper chambers. Once the wire is in place, tiny burns are delivered around the pulmonary veins.

This type of ablation is only available at certain centres within the UK and is usually recommended when other treatments have been tried. To undergo such a procedure involves quite a commitment from the individual. The procedure can take several hours and you will be in hospital for at least one night.

Furthermore, patients having a left atrial ablation have to take warfarin for at least several months after the procedure. Some patients will need to continue their anti-arrhythmic drugs for several months after the ablation and is it is not uncommon to experience AF episodes for a few months after the procedure, whilst things settle down.

The advantage of having this procedure is that the majority of suitable patients have a dramatic improvement in their symptoms and some are completely cured of AF. If your cardiologist recommends this type of ablation, he/she will give you more detailed information regarding benefits and risks, so that you can make an informed decision.

Permanent atrial fibrillation.

Some individuals are in AF all the time, because attempts to restore normal rhythm have failed, or because the AF is not too bothersome. This is acceptable providing you are prescribed the correct medication firstly for stroke prevention (Aspirin or Warfarin), and secondly for heart rate control (Digoxin or Betablockers).

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

Finally

This is the list of Arrhythmia Alliance Patient booklets available by website or emailing.

- Atrial Fibrillation Inc Atrial Flutter
- Bradycardia (slow heart rhythm)
- Cardiac Resynchronisation Therapy ICD/CRT Patient Information
- Catheter Ablation
- Catheter Ablation for Atrial Fibrillation
- Drug treatment for heart rhythm disorders (arrhythmias)
- Electrophysiology Studies
- Exercising with an ICD
- FAQ's
- Heart Rhythm Charity
- Highlighting the work of the Alliance
- ICD Patient Information
- Implantable Loop Recorder
- National Service Framework Chapter 8
- Pacemaker/CRT
- Pacemaker Patient Information
- Remote follow-up and Remote Monitoring of Pacemakers and ICDs Patient Information
- Sudden Cardiac Arrest
- Supraventricular Tachycardia (SVT) Patient Information
- Tachycardia (fast heart rhythm)
- Testing using Drug injections to investigate the possibility of a risk for Sudden Cardiac Death
- Tilt-Test

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

Please help us to improve services for all those affected by arrhythmias and to save lives by making a donation today. Please complete the donation form below and return to P.O Box 3697 Stratford upon Avon CV37 8YL or click on www.heartrhythmcharity.org.uk and click the donate icon.

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

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I have made donation to A-A via PAYPAL at www.arrhythmiaalliance.org.uk to the sum of:	£
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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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Please remember these are general guidelines and individuals should always discuss their condition with their own doctor.

Arrhythmia Alliance

endorsed by DH Department of Health

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