



Atrial Flutter Patient Information



Providing information, support and access to established,
new or innovative treatments for Atrial Fibrillation

www.atrialfibrillation-au.org

Glossary

Anti-arrhythmic drugs Drugs used to restore the normal heart rhythm.

Anticoagulant Drugs which help to thin the blood.

Arrhythmia Heart rhythm disorder.

Arrhythmia Nurse Specialist A nurse who is trained in heart rhythm disorders.

Atrial Fibrillation (AF) Irregular heart rhythm.

Atrial Flutter A rhythm disorder characterised by a rapid but regular atrial rate although not as high as Atrial Fibrillation.

Cardiologist A doctor who has specialised in the diagnosis and treatment of patients with a heart condition.

Cardioversion A therapy to treat Atrial Fibrillation or Atrial Flutter which uses a transthoracic electrical shock to revert the heart back into a normal rhythm.

Catheter ablation A treatment which destroys a very small area inside the heart causing the Atrial Flutter.

Dyspnea A medical term for shortness of breath.

Echocardiogram An image of the heart using echocardiography or soundwave-based technology. An echocardiogram (nicknamed "echo") shows a three-dimensional shot of the heart.

Contents

[Introduction](#)

[What is Atrial Flutter?](#)

[What causes Atrial Flutter?](#)

[What are the symptoms of Atrial Flutter?](#)

[How do I see the right doctor?](#)

[What are the risks of Atrial Flutter?](#)

[Tests / investigations](#)

[Treatment of Atrial Flutter](#)

[Drug treatments](#)

[Non-drug treatments](#)

[Stroke prevention](#)

[Atrial Flutter and driving](#)

Electrocardiogram A representation of the heart's electrical activity or ECG (sometimes EKG) in the form of wavy lines. An ECG is taken from electrodes on the skin surface.

Electrophysiologist (EP) A cardiologist who has specialised in heart rhythm disorders.

Heart Failure The inability (failure) of the heart to pump sufficient oxygenated blood around the body to meet physiological requirements.

Rate control of Atrial Flutter A medical approach to treating Atrial Flutter which does not treat the Atrial Flutter itself, but rather attempts to slow the rapid ventricular response to the rapidly beating atria (increased heart rate). Since a fast rate is what is most associated with symptoms, this provides symptomatic relief.

Rhythm The pattern of cardiac activity. Strictly speaking, the heart has both a rate (how fast it beats) and a rhythm (the pattern of activity). Rhythm includes the ratio of atrial to ventricular activity.

Sinus rhythm Normal rhythm of the heart.

Stroke A medical condition which is now referred to as a "brain attack" where the brain is deprived of oxygen. Blockage of blood flow can be created when a blood clot breaks free, travels through the circulatory system and gets lodged in blood vessel long enough to cause a section of the brain to die. Strokes can vary in severity from transient (TIA) to very mild to severe.

Syncope A medical term for passing out from lack of oxygen going to certain areas of the brain.

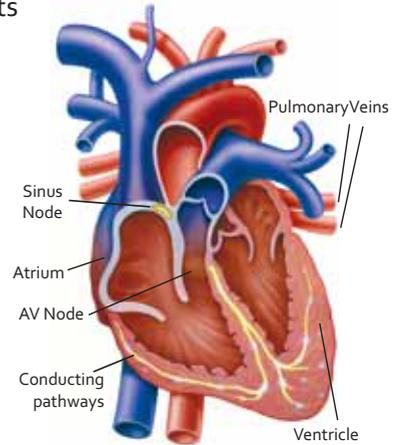
Introduction

Atrial Flutter is a relatively common heart rhythm disturbance encountered by doctors, although not as common as Atrial Fibrillation (AF). The precise incidence of Atrial Flutter is not known, but it affects around 1 in 1,000 people in the UK. It can affect adults of any age, but is more common in older patients and is also seen more often in men. Atrial Flutter has many clinical aspects that are similar to AF and the two arrhythmias often occur in the same patient. However, there are important differences with respect to the electrical origins of these rhythm disturbances, and this can have a bearing on the 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 (right and left) 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 at rest. This is because it is driven by the "sinus node", a specialised group of cells situated in the right atrium, 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

The heart and normal conduction



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(Figure 1)

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 flutter?

Atrial Flutter is an abnormality in the rhythm of the heart (arrhythmia). In this arrhythmia, the upper chambers of the heart (atria) beat very rapidly. Unlike Atrial Fibrillation (AF), Atrial Flutter is a more organised electrical disturbance which originates in the right atrium in the majority of patients.

The atria in Atrial Flutter beat very quickly and regularly, at around 300 beats per minute, and hence take over from the sinus node in controlling the heart rate. The AV node will not conduct all of these atrial beats to the ventricles but tends, instead, to only allow every second, third or fourth beat through, creating an often-regular heart rate of around 150, 100 or 75 beats per minute. Other ratios can occur, and often the ratio changes. This increased heart rate may contribute to symptoms of palpitations, shortness of breath, chest discomfort, light headedness or fatigue when Atrial Flutter occurs. As with AF, there are two main goals in the treatment of Atrial Flutter. First is the control of the rhythm itself, either by restoring normal heart rhythm or normal heart rate and hence reducing the majority of the symptoms caused by the arrhythmia. Second is to prevent complications of Atrial Flutter, which are mainly due to an increased risk of stroke.

What causes atrial flutter?

As Atrial Flutter and AF share many similarities and can occur in the same patient, the two arrhythmias share many causes. Atrial Flutter is more likely to occur as one gets older, and is more common in patients who have a history of previous heart disease. Men are more than twice as likely to get Atrial Flutter as women. Often there is no single factor that causes Atrial Flutter; rather there are

a number of factors and conditions that increase the likelihood of Atrial Flutter. Some of the risk factors for developing Atrial Flutter are shown below:

Conditions predisposing to atrial flutter

High blood pressure	Congenital heart disease (abnormality of the heart present since birth)
Ischaemic heart disease	Pericarditis (inflammation of the heart lining)
Disease of the heart valves	Overactive thyroid
Cardiomyopathy	Chronic airways disease (COPD)
Pneumonia	Excess alcohol
Cardiac surgery	Pulmonary embolism (clot on the lung)

However these are not the only causes for developing Atrial Flutter and for some there may appear to be no obvious reason.

What are the symptoms of Atrial Flutter?

Some people with Atrial Flutter experience no symptoms and the arrhythmia can be a chance finding on a routine ECG. Common symptoms are:

- Palpitations (awareness of rapid or irregular heart rate)
- Fatigue or poor exercise tolerance
- Mild shortness of breath
- Dizziness
- Less common symptoms include chest pain and fainting.

How do I get to see the right doctor to treat my AF?

Initially you will usually consult your General Practitioner who may arrange some investigations before possibly referring you to a cardiologist (heart specialist) – who may or may not have a specialist interest in heart rhythm disorders. After appropriate diagnosis, some patients will respond to medication and in this case it may be that no further treatment will be required. You may be referred to a Cardiologist who specialises in heart rhythm disorders, usually called an electrophysiologist (EP) – this type of doctor will offer “ablation” treatments. If you are seen by a general cardiologist you may be referred on to see an electrophysiologist, but if this is not offered you can request specialist referral from either your General Practitioner or Cardiologist.

To summarise, these are the services typically offered by each type of doctor:

- (1) General Practitioner - overall responsibility for patient care and prescription of medication. May offer simple investigations and monitoring of anticoagulation therapy.
- (2) General Physician / Cardiologist – investigation of heart disease, initiation and monitoring of drug treatment, cardioversion.
- (3) Electrophysiologist – all aspects of heart rhythm diagnosis and treatment, including ablation procedures.

What are the risks of atrial flutter?

The main risk associated with Atrial Flutter, like AF, is the increased risk of stroke. The atria are beating rapidly but fairly ineffectually and this can result in the blood in the atria becoming stagnant. Stagnant blood is at increased risk of forming clots, which might then leave the heart and travel to the blood vessels in the head, blocking them and causing a stroke. A much less common risk of Atrial Flutter can occur if the heart rate remains uncontrolled (high) for extended periods of time, normally weeks or months. In extreme cases this constant rapid heart rate can damage the heart muscle, weakening it such that it no longer pumps effectively, causing heart failure.

The other important drugs that are used in the treatment of atrial flutter are those that thin the blood and reduce the risk of stroke. The most commonly used drugs are aspirin, dabigatran or warfarin (AF Association fact sheets are available for these medications).

A booklet entitled *Drug Information for Atrial Fibrillation* is available from the AF Association and it describes all the drugs currently used in the treatment of atrial flutter.

Tests / investigations

The diagnosis of Atrial Flutter can usually be made from a standard heart rhythm recording (electrocardiogram or ECG) made during the arrhythmia. If the arrhythmia is intermittent (called “paroxysmal”), then a 24 hour continuous ECG recording may be needed. These are simple monitors than can be worn continuously for up to one week at a time. Many GP practices have access to both ECGs and 24 hour monitors (see AFA booklet ‘The Heart, The Pulse and The ECG’, for further details on these). Where these tests are not available at your GP, they are readily available by referral to your local cardiologist. Doctors often also request echocardiograms as well, which are simple ultrasound scans of the heart, used to look for any structural abnormalities as well as to assess the function of the heart and its valves. Very few additional tests are required, but ‘routine’ blood tests are also performed including tests for an overactive thyroid gland.

Treatment of Atrial Flutter

The treatment of Atrial Flutter follows similar lines to the treatment of AF. Treatment is centred round reducing symptoms and reducing risk of stroke, so the treatment for individuals may vary depending upon their symptoms and their stroke risk.

Drug Treatments

There are a variety of drugs that can be used in the treatment of Atrial Flutter. Different drugs are used to achieve different treatment goals, and often two or more drugs are used in combination. Drugs such as Flecainide, Amiodarone, Dronedarone, Sotalol or Propafenone may be prescribed to restore and maintain a normal heart rhythm and are referred to as anti-arrhythmic drugs (see AFA Fact Sheets for further information on individual medications). They work by altering the electrical properties of the heart cells in order to reduce the likelihood of the arrhythmia occurring. Drugs such as beta-blockers, calcium channel blockers or Digoxin (see AFA Fact Sheets for further information), are used in Atrial Flutter in order to slow the heart rate by reducing the number of Atrial Flutter beats that are conducted via the AV node from the atria to the ventricles. As the majority of symptoms experienced by people with Atrial Flutter are due to the fast heart rate, these drugs can be very effective at controlling symptoms.

The final types of drug that are used in the treatment of Atrial Flutter are ones that 'thin' the blood and reduce the risk of stroke. The most commonly used drugs are Aspirin, Clopidogrel or Warfarin (AFA Fact Sheets are available for these medications). A booklet entitled 'Drug Information for Atrial Fibrillation' is available from the Atrial Fibrillation Association and it describes all the drugs currently used in the treatment of Atrial Flutter.

Non-drug treatments

Cardioversion

A cardioversion is the conversion of an abnormal heart rhythm (in this case Atrial Flutter) to normal rhythm. This can occasionally be accomplished by medications, but for Atrial Flutter an electrical cardioversion is usually required. Under a general anaesthetic or heavy sedation, an electrical current is used to restore normal heart rhythm. This is a simple and highly effective treatment that is used for both AF and Atrial Flutter. For more information see the Atrial Fibrillation Association booklet "Cardioversion for Atrial Fibrillation".

Catheter Ablation

Catheter ablation treatment should be considered if Atrial Flutter recurs following a cardioversion. Sometimes, your doctor may even recommend a catheter ablation as the first treatment, rather than perform a cardioversion. The procedure involves passing wires (catheters) into the heart, usually via the groin or neck veins. One of these wires is then used to apply heat (radiofrequency ablation) or sometimes 'freeze' (cryo ablation) to a small area of the heart to prevent Atrial Flutter recurring.

This is a highly effective treatment for Atrial Flutter. The procedure can be undertaken as a day case in some centres and is usually performed using a combination of local anaesthesia and light sedation. It takes on average one to one and a half hours and is generally very well tolerated by patients. At present, a catheter ablation procedure for Atrial Flutter is shorter, safer and more successful than a catheter ablation procedure for AF. (For further information on catheter ablation, contact the Atrial Fibrillation Association).

Stroke prevention

In Atrial Flutter the atria are beating rapidly but fairly ineffectually and this can result in the blood in the atria becoming stagnant. Stagnant blood is at increased risk of forming clots, which might then leave the heart and travel to the blood vessels in the brain, blocking them and causing a stroke. The risk of

stroke in Atrial Flutter is thought to be similar to that for AF and is five times greater than in the normal sinus rhythm (regular heart rhythm). This is why people with Atrial Flutter need to have their risk of stroke assessed by their doctor and may then require their blood to be thinned to reduce the risk of clots forming and thus reduce the risk of strokes.

What blood thinning options are available for doctors to use?

Clots are made up of two main components from the blood. These two components are (i) fibrin, a long protein that binds together to form a mesh and (ii) platelets, small cell particles that stick to the mesh and help to hold it together once they become active. The blood can be thinned to different degrees by attacking each of these components. Drugs like Warfarin and Heparin act to stop the formation of fibrin and are known as anticoagulants, whilst Aspirin and Clopidogrel are drugs that stop the activation of platelets and are known as anti-platelet agents.

Anti-coagulants

By inhibiting the formation of the fibrin network, Warfarin and Heparin act to thin the blood very efficiently and can reduce the risk of stroke by up to 60%.

Warfarin

At present only Warfarin is available in tablet form and thus useful for long-term blood thinning. Warfarin acts on the liver to prevent the formation of the proteins that go on to create fibrin. As our bodies have stores of these proteins that last a few days, Warfarin will only start to thin the blood efficiently after a few days. When you first start taking Warfarin you will attend the anti-coagulant clinic weekly as they adjust your dose to suit you. Most people find once they are established on Warfarin their INR is pretty stable and they need only attend the clinic every 6-8 weeks. However you have to watch out for things that can affect your Warfarin level to keep it stable, such as alcohol, certain food items and other medication, including cough remedies, herbal cures and many other over-the-counter medications. In short you are fine to have a couple of para-

cetamol for a headache but anything else you should seek the advice of your doctor or chemist.

Anti-platelets

Aspirin and Clopidogrel act in slightly different ways to prevent the activation of platelets. As they affect the platelets that are circulating in the blood they are effective almost immediately. However, as platelets are not so vital for clot formation in the atria they are less effective than anti-coagulants at preventing strokes, reducing the stroke risk in AF by 20%. In some people who are at very low risk of stroke this is sufficient. The combination of Aspirin and Clopidogrel is better than aspirin alone, but bleeding side effects are more common with this combination.

'Which drug is best for me?'

The choice of which drug is best for you depends on:- (i) your personal risk of stroke and (ii) if any intervention like cardioversion or ablation is planned. A more detailed fact sheet on "Blood Thinning in Atrial Fibrillation" is available from the Atrial Fibrillation Association and the contents apply equally for Atrial Flutter.

Atrial Flutter and driving

Up to date guidance on this can be found on the NTC website:
<http://www.ntc.gov.au>



AF Association

MEMBERSHIP APPLICATION

Register to become a member of
AF Association Australia

online at

www.atrialfibrillation-au.org
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Providing information,
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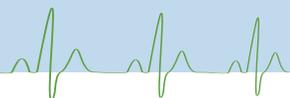
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Please remember that this publication provides general guidelines only.
Individuals should always discuss their condition with a healthcare professional.
If you would like further information or would like to provide feedback please contact AF-A.

