Further support and advice

If you or your family would like to speak to someone about this test please contact:

Arrhythmia Nurse Specialists

Tel: **0300 019 6154**

Email: **arrhythmia.nurses@uhd.nhs.uk**.

(9am until 5pm Monday to Friday; if you phone outside hours please leave a message on the answering machine).

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The Adrenaline Challenge Test

Your doctor has suggested this test to find out if you have a particular condition called Long QT syndrome (LQTS).

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What is Long QT?

Long QT is a condition which affects the electrical conduction system of the heart.

The syndrome can cause an abnormal heart rhythm (arrhythmia) occurring in the bottom chambers or the ventricles of the heart. If the ventricles start beating at a fast rate the heart will not pump as efficiently. This can cause symptoms of faintness, dizziness, shortness of breath or chest pain. If the rhythm persists it can lead to unconsciousness and, very rarely, death.

Making a diagnosis of LQTS is important as it may mean that you need other tests and treatments. Also, because there is a hereditary factor, other family members may need to be tested for the condition.

Why do I need an Adrenaline test?

LQTS can be identified by particular changes on your electrocardiogram (ECG). An ECG records the electrical signals from inside your heart. The ECG changes of LQTS may appear on the ECG or may not show up at all. Sometimes a drug called Adrenaline can make these changes visible.

What is Adrenaline?

Adrenaline is a natural substance in our bodies that increases the speed and force of our heartbeat. In people with a normal electrical conduction system, Adrenaline will not affect the ECG

What does the test involve?

The test is undertaken as a day case in a cardiac ward. You do not need anyone to accompany you. You will be in hospital for a few hours. Your admission letter will ask that you have nothing to eat for six hours prior to the test but you can drink water up to two hours before.

Prior to the test, you will see an Arrhythmia Nurse Specialist and they will explain what to expect and ask you to complete a consent form. You will be given a hospital gown to allow us to record the ECG more easily. A small flexible tube, called a cannula, will be placed in a vein in your arm or hand. This will be used to take some blood from you. We will need to wait for the results of this blood test before we can proceed with the Adrenaline test.

At the start of the Adrenaline test, you will lie down on a bed and be attached to an ECG machine and a monitor which will monitor and record your blood pressure, heart rhythm and rate. The Adrenaline will be given through the cannula by a special pump to make sure it is given at the correct speed. Your ECG will be monitored regularly throughout the test. Usually two nurses will stay with you throughout the test.

Do not be concerned if the nurse is looking very closely at your ECG during the test, it does not necessarily mean that anything is wrong, but it is important that any changes are recognised.

After the procedure you will be able to eat and drink and the cannula will be removed.

When will I be able to go home?

The effect of the Adrenaline is short acting and you will be able to go home on the same day. The Doctor and the Arrhythmia Nurse will speak to you about the findings of the test. In most circumstances you will be able to drive home following the test and you will be normally be able to resume normal activities.

Are there any side effects or risks?

Complications associated with this procedure are rare and can be treated. It is common to experience some or all of the sensations of a rush of Adrenaline such as your heart racing and beating more forcefully, a tremor or chest tightness. These side effects usually resolve quickly once the drug has been given. If you do have uncomfortable symptoms such as chest pain, dizziness or shortness of breath, please inform the nurse doing the test.

Very rarely the Adrenaline can cause a very fast abnormal heart rhythm in the ventricles. If there are any warning signs on your ECG then the test will be ended immediately and you will continue to be monitored until the drug wears off. On some occasions we will give you a drug to counteract the Adrenaline and lower your heart rate. On very rare occasions, we may need to correct the heart rhythm by a procedure called a cardioversion. A cardioversion is when electrical energy is given to the heart muscle to via a special machine called a defibrillator. You will not be awake for this and will have sedation before the cardioversion is given. This may mean that you need to remain in hospital longer than a day.

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