Having an adenosine test to check for extra pathways in your heart

Cardiac Rhythm Team

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Information for Patients

Introduction

You may need an adenosine test to see if you have an extra electrical connection between the top and bottom chambers of your heart.

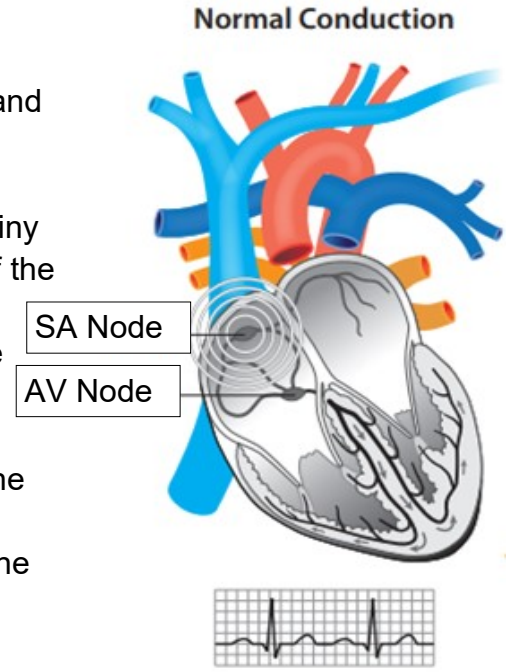
The reason for you having the test could be because:

- You have had fast heart beats (SVT).
- We have found small changes on your ECG results.

This leaflet will help you answer these questions:

- Why do I need an adenosine test?
- What will happen and what to expect when I have the test?
- What do I need to know before I go home?

How does the heart work normally?



The heart is a pump. It helps move the blood around your body and to your brain.

Your heart has a special part called the sinus node. This sends tiny electrical signals to make it beat. This is in the right upper part of the heart called the right atrium. The signals spread through the upper chambers (atria) making the muscle contract and squeeze the blood into the bottom of the heart.

The signals then reach the AV (atrio-ventricular) node which is the middle junction box in the heart. The signal is slowed down as it passes down to the bottom chambers of the heart (ventricles). The ventricles contract and squeeze the blood around the body and brain from the left side or to the lungs from the right side.

What is an accessory pathway /extra connection?

An accessory pathway is an extra electrical connection between the top chambers (atria) and bottom chambers (ventricles) of the heart.

This extra electrical connection may let electrical signals to skip the normal route in your heart and form a short circuit.

This can result in the heart beating abnormally fast for periods of time.

This is often not dangerous but can cause unpleasant symptoms such as a racing heart (palpitations), dizziness, chest pain, shortness of breath or, rarely, may cause you to collapse.

Although the extra connection is present from birth, symptoms may not happen until later in life.

One type of extra connection is called Wolf Parkinson White syndrome (WPW). In some cases this can be life threatening. This is if it happens alongside a type of irregular heart beat called atrial fibrillation (AFib). However this is rare and treatment can completely remove the risk.

How is an accessory pathway diagnosed?

Adenosine is the drug used in this test. It works by blocking the electrical signals through the middle junction box (AV Node) of the heart.

This means signals cannot travel from the top to the bottom chambers of the heart for a few seconds until the effects of the drug wear off.

If an extra connection is present in your heart the electrical signals can still travel down to the ventricles and this will show on the ECG

Adenosine is a very short acting drug, its effects on the heart last for only a few seconds.

Before admission into hospital

Often all patients having an Adenosine Test are seen in the Cardiac Rhythm Pre-admission clinic. This is so that you will know what to expect on the day of your procedure or you may be contacted by phone.

At your pre-admission appointment we will talk to you about:

- your medical history and current symptoms
- the procedure
- your medication and if you should stop any before the procedure
- when to stop eating and drinking

Please ask any questions that you may have.

Please bring to your pre-assessment appointment:

- your current medicine or recent prescription.
- your record of INR blood tests if you take warfarin.
- list of allergies (specially to antibiotics, other drugs and metals).
- If you are diabetic please make sure to bring relevant information about your treatment and any glucose test results you may have.
- If you are asthmatic bring your inhalers or a list of what you take and when.

How do I prepare myself?

Your admission time on the day of the procedure will normally be in the morning. Your letter should confirm the time and date. We will talk to you about this at pre-assessment.

Eating and drinking (fasting)

- You must not eat from midnight the night before.
- You can have **water only** up to 2 hours before our admission time. Then you cannot eat or drink anything after this.
- You must not chew any gum on the day.
- You must not smoke or vape on the morning of the day of your test.

Caffeine

Please do not have any caffeine for 24 hours before your test. Caffeine can be found in tea, coffee, cola drinks and also chocolate. Sometimes it can be in headache medication like paracetamol extra/plus.

Where will I need to be for the test?

We will admit you into ward 32 for the test. This is on Level 1, Glenfield Hospital. The best way to get to this ward is through the East or South entrance.

What happens on the ward?

- The nurse who will be caring for you will meet you at ward 32. They will show you to the radial lounge or your bed space. This depends on your needs.
- The nurse will ask you some questions. They will take your blood pressure, pulse, temperature. They will put a plastic tube (cannula) into a vein in your arm. This will ideally be in the left arm at the elbow.
- A doctor will come and talk about the test with you. They will tell you about the risks and benefits. They will ask you to sign a consent form. This is to confirm you understand the test and risks and are happy to go ahead. If you have any worries or questions about the test please ask these before you sign the consent form.
- We will do the test in one of the Catheter Lab procedure rooms away from the ward. Or in a suitable place in the ward.

What will happen during the test?

There will be more equipment in the room to make sure you are safe.

- We will ask you to lie on the bed. We will attach ECG stickers to your chest and arms. We will put a plastic tube (cannula) into your arm (if not done on the ward already).
- Once you are comfortable the nurse will begin recording your heart rhythm on the ECG machine. The doctor will give the adenosine as a quick injection though the tube in your arm.
- The continuous ECG records the effect of the adenosine on your heart rhythm and heart rate. We will monitor your blood pressure very closely.
- You may need more than one injection of the adenosine. This helps us collect the measurements we need.
- The test will be no more than 30 minutes. But this will depend on your response to the injection.
- When the test is over, we will return you to Ward 32. We will then give you a drink and something to eat.

Benefits

It is important to find out if you have an extra connection between the top and bottom parts of your heart. This can help doctors know if you need more tests or treatment.

If the test does not find an extra connection, it is not likely that you have Wolff-Parkinson-White syndrome.

Are there any side effects or risks?

The adenosine is safe. However, as with any procedure there are possible risks that may happen.

Like all medicines, adenosine can cause side effects. However, adenosine stays in your blood stream for a short time. The symptoms caused by the drug often go away within seconds or minutes after the injection is given.

Very common side effects that happen in more than 1 in 10 people:

- Slowing of the heart rate (bradycardia)
- Shortness of breath
- Reddening of the skin with a feeling of heat (flushing)
- Pressure or pain in the chest

Common side effects affecting more than 1 in 100 people:

- Headache
- Dizziness
- Feeling nervous
- Feeling sick / nauseous

Complications related with this procedure because of low blood presume (hypotension) or slow heart rate (bradycardia) are rare. This can be treated and are very rarely life threatening.

After the adenosine test

The ECG results will often need to be reviewed after the test by a specialist doctor called an Electro-physiologist.

The doctor giving you the adenosine may not be able to tell you the result of the test right away.

If we cannot give you the results of the test on the day, we will tell you as much as we can. We will give you a follow up appointment with the doctors team that referred you for the test. We will send an electronic letter with the results of the test to your GP.

Going home

When your heart rate and blood pressure are normal, you will be able to go home on the same day.

You are allowed to drive yourself to and from the hospital.

What other test could I have instead?

You could have an invasive test called an Electrophysiology Study (EPS).

We do this whilst you are under sedation. We inject local anesthetic into your groin. This will numb the area. During this test we will pass wires up into the heart through the veins at the top of the leg guided by x-rays to get them into the correct place.

This test is more invasive and has more risks.

The adenosine challenge is often recommended as a first step in the diagnosis of your heart condition.

Contact details

If you have any questions or concerns about the Adenosine test please contact:

- **Cardiac Rhythm Nurses:**
  - Call: **0116 258 3848,** Monday to Friday, 8am to 5.00 pm, (excluding Bank holidays / answer phone available out of hours)
  - or email **uhl-tr.cardiacrrhythmnurses@nhs.net**

This number is not an emergency number. Depending on your symptoms please contact your GP or 111. For medical emergencies call 999.

More information

British Heart Foundation

Website: www.bhf.org.uk

Tel: **0300 330 3311**

Arrhythmia Alliance

Website: https://heartrhythmalliance.org

Tel: **01789 867 501**

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہِ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
على هذه المعلومات بلغةٍ أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل
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