NHS
Gloucestershire Hospitals
NHS Foundation Trust

Patient Information

Cardiac catheterisation

Introduction

This leaflet gives you information about having cardiac catheterisation, also called cardiac angiography (angiogram).

Your heart

Your heart is a muscular pump responsible for maintaining the circulation of blood around the body and lungs. It has its own electrical system to control the rate of pumping and valves so that blood flows in the right direction. Your heart needs its own blood supply and this is provided by 3 main coronary arteries. Diseases of the heart can affect any or all of the muscle, valves, electrical system or coronary arteries. When this happens your doctor may recommend a cardiac catheterisation (angiogram).

Why is the test performed?

An angiogram is performed to diagnose heart conditions including coronary artery disease, valvular disease (problems with the heart valves) and cardiomyopathy (changes to the heart muscle).

An angiogram can also provide information about how well your heart is pumping and the pressures inside your heart. The test is essential for a definite diagnosis of coronary artery disease and for deciding what treatment may be best for you.

Cardiac catheterisation

A cardiac catheter is a fine tube that is passed into an artery in your wrist or groin until it reaches your heart where it will measure pressures and/or take pictures of the pumping chambers, valves and coronary arteries. It is done using special X-ray machines in a cardiac catheter room.

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What happens before the cardiac catheterisation?

Before your procedure, the reasons why you are having the test and what information we hope to find will be discussed with you. Alternative treatment will also be discussed.

Please bring with you all your medications, a dressing gown, slippers, reading glasses if needed. You may also like to bring a book or magazine to read.

Do not bring any valuables, such as jewellery (all neck chains must be removed) or large amounts of money.

On the day of your procedure, you can have an early light breakfast such as tea and toast before 6:00 am. You may continue to drink clear fluids until the time of your procedure.

Please report to Cardiology Day Case Unit (CDCU) at 7:45 am on the day of your admission. You may need to take a seat outside until you are collected by a nurse.

On the day of the procedure take all of your usual medication.

If you are taking anticoagulant medication (blood thinners) for example, warfarin, rivaroxaban or dabigatran please contact your consultant's secretary on the telephone number at the top of your admission letter for advice.

If you have diabetes and you are taking metformin, stop this medication for 2 days following your procedure.

If you take insulin, do not administer any on the day of your procedure but you can still have an early light breakfast. Bring your insulin into hospital with you.
At lunchtime, we will ask you to administer half of your normal morning dose of insulin with your lunch.

If you have any queries about taking your medication, please telephone the CDCU on the number provided at the end of this leaflet.

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On the unit, a nurse will go through a checklist with you, explain the procedure and answer any questions you may have. The nurse will also check your blood pressure and ask you to change into a hospital gown. A cannula (thin tube) will be inserted into a vein in your arm or hand so medication can be given during or after your procedure. This will be removed before you are discharged.

Your doctor will discuss the procedure with you and ask you to sign a consent form. At this point the doctor will decide whether to perform the procedure through your wrist or groin. You will be able to ask any further questions that you may have and discuss if you would like sedation to help you feel more relaxed.

What happens during cardiac catheterisation?

You will be asked to lie flat on an X-ray table with your head supported on a pillow. ECG electrodes will be attached to your arms and legs to monitor your heart. You may be given sedation at this point, if you would like it.

First your wrist or groin area will be cleaned with an antiseptic solution and you will be covered with a sterile drape.

The skin in your wrist or groin area will then be numbed with local anaesthetic and a sheath (small hollow tube) placed in the artery. Once the sheath is in the artery it is rare to feel anything, although you may have some discomfort. If you do have any pain, please tell the doctor straight away.

A catheter will be passed through the sheath and into your heart, guided by an X-ray machine. The table and the X-ray machine will move during the procedure to allow multiple images of your heart arteries. You may be asked to hold your breath or to stop breathing for a few seconds while measurements or pictures of the heart are taken.

A contrast medium (dye) is injected through the catheter to allow the coronary arteries and chambers of the heart to be seen clearly.

During the angiogram you may have a hot flush, a metallic taste and the sensation that you are passing urine. You may also feel mild chest discomfort or have a fluttery heartbeat for a short time. The staff in the X-ray room will inform you about this at the time, so please do not be concerned.

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The procedure will last about 15 minutes and once completed you will be taken back to the CDCU.

Most patients will be told the results of their procedure and treatment plan before going back to the CDCU. The results will also be included in your discharge information.

After your cardiac catheterisation

If the procedure was performed via the wrist, you will have a band about the size of a watch strap around your wrist to apply pressure in order to prevent bleeding. The pressure will gradually be reduced by nursing staff on the CDCU.

If the procedure was performed via the groin, the sheath will be removed in the CDCU. Firm pressure will be applied to the puncture site for about 10 minutes. This will seal the artery and prevent any bleeding.

Normally, patients are kept on bed rest for 2 hours after this procedure; 1 hour flat, 30 minutes sat at a 45° degree angle and then 30 minutes sat at a 90° degree angle. This is done to prevent bleeding and bruising.

Occasionally, a collagen plug (Angio-Seal™) will be inserted into your groin to seal the artery, instead of pressure being applied. In this case you will need to remain on bed rest in CDCU for at least 30 minutes.

The collagen plug will dissolve in 60 to 90 days. You will be given a card with information about the plug to carry with you for 3 months.

Regular checks of your blood pressure, pulse rate, wound site and the pulses in your wrist or feet will be recorded.

Following the procedure, you will be encouraged to eat and drink. It is important to drink plenty of fluids to help flush the dye from your kidneys.

Before discharge, your results and plans for further treatment will be discussed. This information will also be written in a discharge leaflet for you to take home.

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Depending on your results you may be treated with medication or further procedures might be recommended, such as, PCI (stents), coronary artery bypass graft (CABG) or valve surgery. A letter will be sent to your GP explaining your results and treatment plan.

Complications

Cardiac catheterisation is generally a safe procedure but as with any invasive test there are a number of small risks. The exact risks are specific to you. Your doctor will explain how these risks apply to you when you sign the consent form.

Your doctor will not recommend the procedure unless the benefits outweigh the risk. You should discuss any worries or concerns you have with the doctor.

Discharge from hospital

Most patients have the procedure performed as a day case and are able to go home later the same day, usually after midday.

You will need a responsible adult to collect you from the CDCU and stay with you overnight. If this is not possible, please let us know as soon as you receive your appointment letter so that we can make alternative arrangements for your admission.

If you inform us that this is not possible on the day of the procedure it will be at your consultant's discretion if they perform the procedure.

Before you are discharged a nurse will give you a discharge leaflet with instructions to follow once you are home.

You will not be able to drive for 2 days after this procedure.

Follow-up appointment

The need for a follow up appointment will be discussed with you before you are discharged. Sometimes your case may need to be discussed with other doctors and surgeons before final recommendations can be made. If this is the case, your consultant will write to your GP with the recommendations after your results have been discussed. You should receive a copy of this letter.

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Patient Information

Contact information

If you have any questions or concerns, please contact:

Cardiology Day Case Unit (CDCU)
Gloucestershire Royal Hospital
Tel: 0300 422 2994
Monday to Friday, 7:45am to 5:00pm

Outside of these hours please contact:

Cardiology Ward
Gloucestershire Royal Hospital
Tel: 0300 422 4011 / 8405

Alternatively, contact your consultant's secretary.

Further information

British Heart Foundation
Website: www.bhf.org.uk/heart-health/tests/angiogram

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Making a choice