Cardiac catheterisation or coronary angioplasty/stenting

Patient information guide
Cardiac catheterisation or coronary angioplasty/stenting
Introduction

You will have had a discussion with your doctor and you have decided to undergo a cardiac catheterisation procedure. This is called an Angiogram. This test/procedure is carried out to obtain further information about your heart and particularly your heart arteries. This information sheet describes the procedure and the associated risks of complications. If the angiogram shows any narrowing in your heart arteries that can be treated by angioplasty, (this will be described later) we may go directly on to do this at the same time but not without your consent.

Cardiac catheterisation (coronary angiography)

This involves passing a fine tube via the artery (large blood vessel) in your leg or wrist directly to your heart. You will be awake during the procedure but sedation can be given if your or the doctor feel it is necessary. The area where the tube is inserted is “numbed” with local anaesthetic (a small injection) so you should not feel any discomfort. The results of the test may be provided immediately after the procedure by the Cardiologist carrying out the procedure.

Before you come into hospital

In order that we can care for you to the best of our ability you must tell us if you are allergic to anything, including x-ray dye. You will need to bring with you a dressing gown and slippers and a book or something to read to help you pass the time. Please note that you will be kept in hospital for a minimum of three hours after you have had your procedure. Please remove any make-up and nail polish in order that we are able to assess you accurately during the whole process. Jewellery and valuables other than your wedding ring and a watch should be left at home. You will only be allowed to wear your wedding ring during the procedure. If you wear a hearing aid please leave it in for the procedure to allow you to hear any instructions your doctor may give you.
Fasting and medications

You may have a light breakfast such as tea and a slice of toast before you leave home unless you have been told that you are having a general anaesthetic.

Medicines

Please bring all your current medication in their original containers with you when you come in for admission.

Continue to take your medication as normal and directed by your doctor unless you are taking warfarin.

If you are taking warfarin please contact the cardiac day unit on 0141 951 5886 for advice on whether you should continue or temporarily stop taking your warfarin.

Diabetic medicines and water tablets should be withheld on the morning of your admission, but do please bring them with you; if you are due any other tablets in the morning please take them as you would normally.

If you are still unsure what to do please contact the cardiac day unit on 0141 951 5886.

On arrival at the hospital

Please report to the hospital reception and let the reception staff know that you are attending the Cath Lab for an Angiogram. The staff at reception will then give you directions to the Cardiac Day Unit located on level two. This is where a nurse will show you to your room.
On arrival at the day unit

When you are shown to your room you will be given a gown and paper pants to wear. The nurse will ask you some questions about your medical history take your blood pressure and pulse and insert a “venflon” into a vein/blood vessel in your arm or the back of your hand. This is a small plastic tube which will allow the doctor or nurse to give you any sedation, medication or a drip if required. The doctor will again explain the procedure to you and answer any questions you may have before asking you to sign a consent form.

NB. Unfortunately, due to the size of the rooms in the ward, relatives are unable to wait with you. There is however a waiting area on the same level where they are welcome to wait.

The Cath Lab

Your procedure will be carried out in a special x-ray room called the Cath Lab. During the procedure you will lie flat on an x-ray table. You do not need to move unless the doctor asks you to move your arms or take a deep breath. The doctor will ‘numb’ the area at the top of your leg or wrist with local anaesthetic. A fine tube will then be placed in the artery at the top of your leg or wrist. This will allow the doctor to introduce catheters into the small tube. The doctor will then put some dye into the tube which will allow x-ray pictures of your arteries to be taken. An x-ray camera will move around you side to side taking pictures. If the doctor wants to take a picture of the main pumping chamber of your heart, he will have to put a bigger volume of dye into the fine tube. When this picture is being taken you may feel a warm flush from your head to your toes. You may also feel as if you have passed water. You will not have. This feeling is because the dye is being passed quickly round your body. A team of doctors, nurse, radiographers and cardiac technicians will look after you while you are in the cath lab.
After the procedure

Once the tube has been removed from either your wrist or the top of your leg, pressure will be applied to stop any bleeding. When the artery has sealed over a dressing will be applied to the area. You will need to rest lying quite flat or sitting in a chair for around three hours.

The nurses will regularly check your blood pressure, pulse and wound dressing. When you are able to sit up you will be given something to eat and drink. After resting you will be encouraged to mobilise to make sure you are well enough to go home.

The doctor will explain the result of the tests before you leave. Any changes to your medication or any further plans will be discussed with you at this time and you will be given a discharge letter to take to your GP. Please note that you will be kept in hospital for a minimum of three hours after you have had your procedure.

Risk of complications during cardiac catheterisation

This procedure cannot be performed without some element of risk. The majority of patients (approx 99%) have no major problems but significant complications can occur. These are listed below for your information. It is important you understand these potential complications of the procedure before you sign the consent form.

Death: 1 in 1000 (0.1%)
Myocardial Infarction (heart attack): 1 in 500 (0.2%)

If a heart artery blocks off during an angiogram this is usually treated by immediate angioplasty and/or a combination of different medications. Very rarely it may be necessary to consider emergency bypass surgery.
**Stroke: 1 in 500 (0.2%)**

Heart disease itself can lead to stroke but the catheterisation procedure can also cause strokes usually because the catheter has dislodged material from the main blood vessel in the body (aorta) and this material has obstructed the blood flow in one of the arteries supplying blood to the brain.

Other less serious complications can occur and include bleeding/bruising at the groin/arm site, a subsequent need for blood transfusion (less than 1%) and an allergic reaction to the x-ray dye (less than 1%).

**Coronary angioplasty and stenting**

Following an angiogram you may be advised by your doctor that you require an angioplasty which is also known as PCI (percutaneous coronary intervention). This is when a balloon and/or a small metal coil (stent) is used to open narrowed areas in the arteries of your heart. This will improve the blood going to your heart muscle and in the opinion of your doctor will help your symptoms and/or improve how your heart works.

Depending on all the information that the doctor gets from your angiogram and other tests, this procedure may be done at the same time as your angiogram or you may be discharged and readmitted at a later date.

As with an angiogram, this involves passing a small tube via the artery in your leg or arm to the heart artery. If you are having an angioplasty as a follow-on procedure the same tube is used for both procedures. You are awake during the procedure but sedation is given if necessary. It is possible you will feel some chest discomfort during the time the balloon is blown up, but if this becomes very uncomfortable you will be given pain-killing medication.
In some cases opening the artery with a balloon is enough to give a good result and sometime not all arteries are suitable for stenting. However most times a stent will be put in to improve the results and reduce the chance of the blood vessel getting narrow again in future. Stents stay in the artery for life and hold it open.

**Risks of complications during angioplasty and stenting**

Any procedure cannot be done without some type of risk and this procedure is no exception. The majority of patients (approx 97-98%) have no major problems but serious complications can happen. It is important you understand the risk of these complications attached to this procedure before you sign your consent form.

**Death: 1 in 500 (0.2%)**

**Myocardial infarction (heart attack): 1 in 50 (2%)**

If this happens it is often because a small side branch of the heart artery has blocked off during the procedure. Usually it is a minor event detected only by blood tests. However, occasionally a serious heart attack can happen following angioplasty.

**Stent thrombosis: 1 in 100 (1%)**

This complication only happens when a blood clot forms within the stent causing it to block off. It is serious and can result in heart attack. A special drug (Clopidogrel) is given for at least four weeks after the stent is implanted/put in which helps reduce the risk of this problem occurring. Sometimes we may ask you to keep taking this for up to a year. This medication must not be stopped without the agreement of your Cardiologist.
Stroke: 1 in 200 (0.5%)
Emergency “bypass surgery”: less than 1 in 500 – (0.2%)

If emergency surgery is needed you will be taken directly to the operating theatre after discussing the surgery with the doctor and surgeon.

Renarrowing following angioplasty or stenting (Restenosis)

The risk of a narrowing in the heart arteries becoming renarrowed following angioplasty or stenting (restenosis) varies from 5-50%. This can depend on the type of narrowing found during the original angioplasty and the result of that angioplasty. If you have further chest pains in the first four to six months following the procedure, your doctor may suggest a repeat angiogram. The balloon/stenting therapy can be repeated if an angiogram confirms that a narrowing has happened or your doctor may suggest that bypass surgery would be a better result for you.

Summary

The likelihood of these risks happening depend on the severity of the heart disease you may have and when the procedure is being carried out.

- Problems are less common during “elective” planned procedures compared to “urgent” or emergency procedures.

- Problems are more common in patients with severe heart disease compared to those with mild or moderate disease.
The vast majority of angiograms and angioplasties are performed without major complications but it is important you realise that these procedures are not risk free. At the moment angiography is the only available method of obtaining true pictures of the heart arteries and in the vast majority of patients the benefits of obtaining this information is more important than the small risks linked to the procedure.

As far as the risks of angioplasty / stenting are concerned it is important to understand that the other treatments for heart disease, such as surgery or “drug” therapy also carry risks. If you have any queries about the procedure, please talk to the doctor about them before signing the consent form.

**Data protection act**

All of the hospitals in Scotland, which carry out cardiac catheterisation, store the patient details on the same computer database. Your information is used to record the care you are given and also to compare and hopefully improve the results of treatment in different hospitals. All medical records are confidential. Only the doctor and other healthcare professionals looking after you will be allowed to look at your medical records.

Any information given by you is gathered together centrally to allow us to compare our practice with other hospitals. The results are gathered anonymously, your records cannot be identified as you. This type of information collection is carried out in accordance with the Data Protection Act. If you do not want your information stored in this way you have the right to refuse permission. If you do not wish us to include your information in this database please tick this box ☐.
Taking part in research

As a regional centre for the West of Scotland in the treatment of heart disease, the Golden Jubilee National Hospital participates in a number of research studies.

During your stay here, you may be approached by a member of the Cardiology Research Team and invited to take part in such a study. Participation in Research is entirely voluntary and will not affect the standard of care you receive.
All of our publications are available in different languages, larger print, braille (English only), audio tape or another format of your choice.

Please call the above number if you require this publication in an alternative format.

☎: 0141 951 5513

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