Information about Angiography

Introduction
This leaflet tells you about the procedure known as angiography (or having an angiogram) explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor but can act as a starting point for such a discussion.

If the angiogram is being done as a pre-planned procedure then you should have plenty of time to discuss the situation with your consultant and the radiologist who will be doing the angiogram and perhaps even your own GP. If you need the angiogram as an emergency then there may be less time for discussion but none the less you should have had sufficient explanation before you sign the consent form.

What is an angiogram?
An angiogram is a special x-ray examination of blood vessels. Normally blood vessels do not show up on ordinary x-rays. However by injecting a special dye called contrast medium into an artery through a special fine plastic tube called a catheter and taking x-rays immediately afterwards, detailed images of arteries and veins can be produced.

Why do I need an angiogram?
Your doctors feel that there may be a problem with part of your circulation. Other tests that you might have had done, such as Doppler ultrasound, can provide useful information but it is felt that in your case the best way of obtaining the amount of detail required is by an angiogram.

Who will be doing the angiogram?
A specially trained doctor called a radiologist. Radiologists have special expertise in using x-ray equipment and also in interpreting the images produced. They need to look at these images while carrying out the procedure.

Where will the procedure take place?
Generally in the x-ray department in a special "screening" room which is adapted for specialised procedures.

How do I prepare for an angiogram?
You need to be an in-patient in the hospital. You will probably be asked not to eat for four hours beforehand though you may be told that you can drink some water. You may receive a sedative to relieve anxiety. You will be asked to put on a hospital gown. As the procedure is generally carried out using the big artery in the groin, you may be asked to shave the skin around this area.

If you have any allergies you must let your doctor know. If you have previously reacted to intravenous contrast medium, the dye used for kidney x-rays and CT scanning then you must also tell your doctor about this.

What actually happens during an angiogram?
You will lie on the x-ray table generally flat on your back. You need to have a needle put into a vein in your arm so that the radiologist can give you a sedative or painkillers. Once in place this will not cause any pain. You may also have a monitoring device attached to your chest and finger and may be given oxygen through small tubes in your nose.

The radiologist will keep everything as sterile as possible and may wear a theatre gown and operating gloves. The skin near the point of insertion, probably the groin, will be cleaned with

antiseptic and then most of the rest of your body will be covered with a theatre towel.

The skin and deeper tissues over the artery will be anaesthetised with local anaesthetic and then a needle will be inserted into the artery. Once the radiologist is satisfied that this is correctly positioned a guide wire is placed through the needle and into the artery. Then the needle is withdrawn allowing the fine plastic tube (catheter) to be placed over the wire and into the artery.
The radiologist uses the x-ray equipment to make sure that the catheter and the wire are moved into the right position and then the wire is withdrawn. The special dye (contrast medium) is then injected through the catheter and x-rays are taken.

Once the radiologist is satisfied that the x-rays show all the information required the catheter will be removed and the radiologist will then press firmly on the skin entry point for several minutes to prevent any bleeding.

Will it hurt?
When the local anaesthetic is injected it will sting to start with but this soon wears off and the skin and deeper tissues should then feel numb. After this the procedure should not be painful. There will be a nurse or another member of clinical staff standing next to you and looking after you. If the procedure does become uncomfortable for you then they will be able to arrange for you to have some painkillers through the needle in your arm.
As the dye or contrast medium passes around your body you may get a warm feeling which some people can find a little unpleasant. However this soon passes off and should not concern you.

How long will it take?
Every patient's situation is different and it is not always easy to predict how complex or how straightforward the procedure will be. Some angiograms for example those looking at the large arteries in the legs are generally straightforward and do not take very long perhaps half an hour. Other angiograms looking at much smaller vessels may be more complex and take rather longer perhaps over an hour. As a guide expect to be in the x-ray department for about an hour and a half altogether.
What happens afterwards?
You will be taken back to your ward on a trolley. Nurses on the ward will carry out routine observations such as taking your pulse and blood pressure to make sure that there are no problems. They will also look at the skin entry point to make sure there is no bleeding from it. You will generally stay in bed for a few hours until you have recovered. You may be allowed home on the same day or kept in hospital overnight.

Are there any risks or complications?
Angiography is a very safe procedure but there are some risks and complications that can arise. There may occasionally be a small bruise called a haematoma around the site where the needle has been inserted and this is quite normal. There is a chance that the bruise may become very large and uncomfortable but this does not happen very often. If a large bruise develops there is the risk of it getting infected and this would then require treatment with antibiotics.

In some hospitals a large bruise is treated by having a small operation to drain it. The radiologist doing your angiogram will be able to tell you how often problems with bruises occur in your hospital and how they are treated. Very rarely some damage can be caused to the artery by the catheter and this may need to be treated by surgery or another radiological procedure.

What are the benefits?

Angiography is considered a very safe procedure designed to obtain sufficient information about your circulation to allow you and your doctors to make an informed decision about your future treatment. There are some slight risks and possible complications involved and although it is difficult to say exactly how often these occur they are generally minor and do not happen very often. The procedure is normally very safe and is carried out with no significant side effects at all.

Contact us:
Heartlands 0121 424 3290
Good Hope 0121 424 9933
Solihull 0121 424 5272

Additional sources of information:

This leaflet is based on one designed by the Clinical Radiology Patients' Liaison Group of the Royal College of Radiologists but has been modified (with permission) by us to reflect local policies. The Royal Collage of Radiologists web site (http://www.rcr.ac.uk) has further information on radiology procedures.