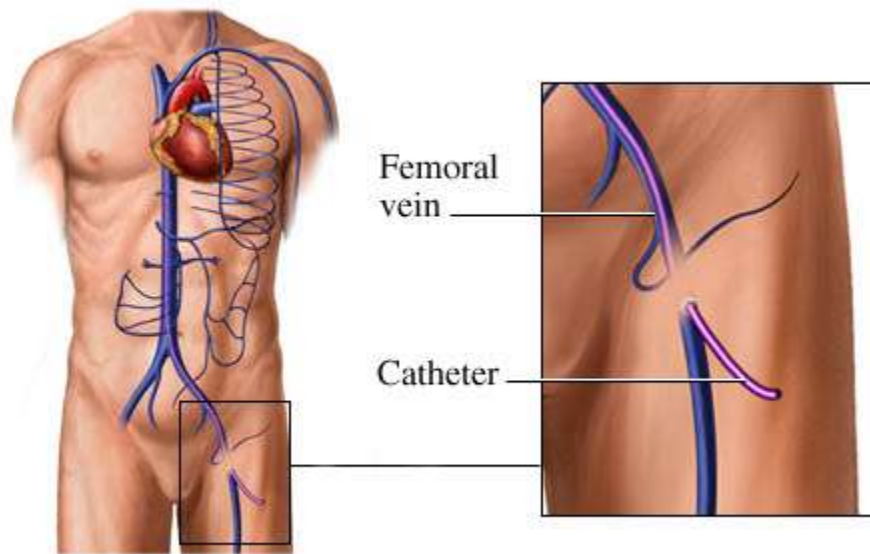


ANGIOGRAM



Patient: What is angiogram?

Doctor: An angiogram is an X-ray test that uses a special dye and camera (fluoroscopy) to take pictures of the blood flow in an artery (such as the aorta) or a vein (such as the vena cava). An angiogram can be used to look at the arteries or veins in the head, arms, legs, chest, back, or belly. Common angiograms can look at the arteries near the heart (coronary angiogram), lungs (pulmonary angiogram), brain (cerebral angiogram), head and neck (carotid angiogram), legs or arms (peripheral), and the aorta (aortogram)

Patient: What is it done?

Doctor: An angiogram is done to:

- Detect problems with blood vessels that affect blood flow. Examples of such problems include a tear in a blood vessel (which can cause blockage or internal bleeding), aneurysms (which are weaknesses in the blood vessel wall), and narrowed areas.
- Look for changes in the blood vessels of injured or damaged organs.
- Show the pattern of blood flow to a tumor. This can not only help show how much the tumor has spread but also guide treatment. Show the condition, number, and location of renal arteries before a kidney transplant. Look for a source of bleeding, such as an ulcer.
- Prepare for surgery on diseased blood vessels of the legs (peripheral arterial disease) in people who have severe leg pain when walking.
- Check how bad atherosclerosis is in the coronary arteries.

Patient: What are some preparations needed for it?

Doctor: Do not eat or drink for 4 to 8 hours before the angiogram. The test may take several hours, so you will empty your bladder just before it begins. Before an angiogram, tell your doctor if you:

- Are or might be pregnant.
- Are breast-feeding. Use formula (throw out your breast milk) for 1 to 2 days after the angiogram until the dye has passed from your body. This generally takes 24 hours.
- Are allergic to iodine dye used in the test.
- Are allergic to any medicines.
- Have any bleeding problems or are taking blood-thinning medicines.
- Have a history of kidney problems or diabetes, especially if you take metformin (such as Glucophage) to control your diabetes. The dye used during an angiogram can cause kidney damage in people who have poor kidney function.

ANGIOGRAM

Patient: How is it done?

Doctor: During an angiogram, a thin tube called a catheter is placed into a blood vessel in the groin (femoral artery or vein) or just above the elbow (brachial artery or vein). The catheter is guided to the area to be studied. Then an iodine dye (contrast material) is injected into the vessel to make the area show clearly on the X-ray pictures. This method is known as conventional or catheter angiogram. The angiogram pictures can be made into regular X-ray films or stored as digital pictures in a computer.

Patient: What happens during the procedure?

Doctor: An angiogram is done by a radiologist. The radiologist may be helped by another doctor, a radiology technologist, or a nurse.

You will need to take off any jewelry. You may need to take off all or most of your clothes. You will be given a gown to wear during the test.

You will likely have an intravenous (IV) line in a vein in your arm so your doctor can give you medicine or fluids if needed. A device called a pulse oximeter, which measures oxygen levels in your blood, may be clipped to your finger or ear. Small discs (electrodes) are placed on your arms, chest, or legs to record your heart rate and rhythm.

Patient: How does it feel during the procedure?

Doctor: You may feel a brief sting or pinch from the numbing medicine. Most people do not have pain when the catheter is in the blood vessel. You may feel pressure in the blood vessel as the catheter is moved. Let your doctor know if you are having pain. You will probably feel some warmth when the dye is put in. This feeling lasts only a few seconds. For some people, the feeling of heat is strong and for others it is very mild. You may have a headache, flushing of the face, or a salty or metallic taste in your mouth after the dye is used. These feelings do not last long. Some people may feel sick to their stomachs or may vomit, but this is not common. After the test, you may have some tenderness and bruising at the site where the catheter was inserted. You can drink extra fluids to pass the dye from your body unless your doctor has told you not to.

Patient: Are there risks for this procedure?

Doctor: Yes, The chance of any major problem from an angiogram is very small, but some problems can occur. In most cases, the problems occur within 2 hours after the test when you are in the recovery room. If the problem occurs during the angiogram, the test may not be completed. You may need urgent treatment that could include surgery. Examples are:

- There is a chance of an allergic reaction to the iodine dye. The reaction can be mild (itching, rash) or severe (trouble breathing or sudden shock).
- There is a small chance that the catheter may damage a blood vessel or dislodge a piece of clotted blood or fat from the vessel wall.
- Bleeding from the needle site may occur. Also, a blood clot can form where the catheter was inserted.
- The iodine dye used for the test can cause water loss or direct damage to the kidneys. This is a special concern for people who have kidney problems, diabetes, or who are dehydrated
- There is always a small chance of damage to cells or tissue from being exposed to any radiation, even the low level used for this test

QUESTIONS:

1. Can you tell me in your own words how the procedure is done?
2. In your own opinion, how important is angiogram?
3. Who are those people who are not allowed to have the procedure?