



Kuether Brain and Spine

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What Happens When You Have a Cerebral Angiogram

Your doctor has requested that the Neurointerventional Service at Legacy Good Sam or Emanuel perform a study of the blood vessels in your head and neck. This procedure is called a cerebral angiogram or cerebral arteriogram. The reason for this test should be discussed with you by your doctor so that you fully understand why this test is being performed. A cerebral angiogram is usually done as an out-patient procedure with the patient being admitted in the morning and then discharged home later in the afternoon or evening.

A cerebral angiogram involves a study of the blood vessels in the head and neck. The procedure begins by admitting you to the hospital. You will be brought to one of the hospital rooms and a nurse will check you in. You will be provided with a hospital gown, and your privacy will be well protected. An intravenous (IV) line will be inserted into a vein in your arm. This IV line is used to give you medicines to help you relax during the angiogram. It also allows your doctor to give you fluids to help rid your body of the dye.

PROCEDURE

When you are brought to the Angiography Department you will be greeted by the Angiography Technologists and/or Angiography Nurses. You will lie down on a cushioned x-ray table and monitoring devices will be attached to you to measure heart rate, blood pressure, and breathing. Medications can be given throughout the procedure, but you will not be asleep. If at any time you are feeling pain or discomfort, or are worried, you should tell the doctor, technologist, or nurse so that they can deal with the issue that is concerning you. If you want to fall asleep, it is okay to do so.

With attention paid to your privacy, we will shave a small amount of hair from the groin, usually the right side. You will then have this area washed with a cleansing solution and covered with a sterile drape. It will be necessary for you to keep your arms and legs relatively still underneath the drapes so that the drape is not contaminated.

Your head will rest on a cushion so that it does not move during the examination, which would cause distortion in the pictures. A strip of tape will be used to remind you to hold your head still. The doctor will then place some local anesthetic or numbing medicine over the artery in

the groin. This causes some stinging when it is first administered, much like one would experience at a dentist's office, but then the stinging should go away within 15 seconds. The doctor will tell you before he gives you this medication.

After the medication is given in the groin, a tiny tube called a catheter will be inserted into the artery through a needle. During the placement of the tube in the artery, the numbing medicine should prevent any pain when the tube is inserted. If at any time the pain at the groin is bothersome you should tell the doctor or the nurse so they can give you additional medication.

The catheter is inserted into the artery in the leg and navigated using x-rays through the body up to the level of the neck. There are no nerves in these arteries and you will have no sensation of the movement of the catheter. Once the catheter is in the correct artery in your neck, a small amount of contrast dye will be injected and pictures will be taken with the x-ray machine. During the injection of the contrast dye, you may feel the sensation of warmth over one side of your face or the other. Most everyone describes it as a warm sensation. Occasionally you may see flashing lights in one eye. These flashing lights are normal and related to the contrast dye. The contrast dyes are constructed today such that they are not nearly as irritating as they used to be a few years ago. The doctor may then move the catheter into another artery that is necessary for your examination.

During the course of the angiogram from the beginning to the end, medications may be given to you to help take away any discomfort and to help you relax during the procedure. If you feel like you are anxious or having discomfort, it is important for you to communicate that to the doctor, technologist, or nurse.

If your family or friends accompany you to your angiogram, they should come with you to your room in the Angiography Department where the angiogram is being performed. There is a waiting area close to the department, and progress reports will be send out to the family members or friends if you so wish. The doctor will discuss the results of this test with everyone if that is what you desire.

POST-PROCEDURE

After the study is finished, the doctor will pull the catheter out of the artery – which is painless. The doctor will apply pressure to your leg at the catheter insertion site for about 15 minutes to stop any bleeding. The hole in the artery is very small, so bleeding is rarely a problem. It is necessary for you to lay flat and keep your legs straight for six hours. This allows the small hole in the artery time to completely seal up. At the end of six hours, you may stand up and walk around. If you are feeling well, you may go home at this time. Someone else must drive you home. Instead of holding pressure after the catheter is removed, the doctor may place a stitch in the hole in the artery at the end of the procedure. If this is done, you will be able to move your leg right away and only need to stay for two hours after the procedure.

Once the procedure is finished and you are back in your room, you can usually eat and drink plenty of fluids – whatever you feel like. If it is necessary for you to go to the bathroom (and it usually is during the six hour waiting period), your nurse will assist you. Most people can use either a bed pan or a urinal. Occasionally it is necessary to place a small tube into the bladder to aid you in emptying your bladder.

After you are discharged from the hospital, you should not lift any heavy objects for 48 hours. You may walk as much as is comfortable, but you should not engage in any strenuous activities such as: running, bicycling, or lifting weights for three days. If you feel completely recovered you may drive a car the next day. The doctor will discuss the results with the family that is present. You will be asked to schedule a follow-up appointment to go over these results and the pictures in clinic.

RISK OF ANGIOGRAPHY

Your doctor has asked us to perform a test because he feels that there is no good alternative test that will provide the information the doctor needs in order to direct your care. The risk of angiography is extremely small. However, when catheters are put in blood vessels there is always some small risk.

The risks primary relate to placing the needle into the artery in the leg. There is a small risk that the artery could be damaged, bleeding could occur, or you will have pain and discomfort with this procedure. Bruises form if there is some bleeding underneath the skin. Occasionally this bleeding can be quite large, going from the lower part of the belly down into the thigh. If this occurs, it usually resolves within a few weeks.

The contrast dyes have markedly improved over the last few years so that allergic complications and the toxicity of the dye have been greatly reduced. Despite these advances there is still a risk of life threatening allergic reaction to the dye. If you have had a contrast allergy in the past, or you are allergic to iodine or shellfish (which contain iodine), you should let your doctor know. Generally these types of allergies can be prevented by pre-treating you with steroids and antihistamines. However, it is important for YOU to let your doctor know this before the procedure.

Whenever catheters are placed in blood vessels in the neck leading up into the brain there is always a small risk of damage to those blood vessels and from that damage, a stroke can occur. While your doctor does everything possible to reduce the risk of a stroke from an angiogram, the risk can never be completely eliminated. Strokes can be mild or even unnoticeable, but occasionally they can produce more severe deficits such as paralysis, blindness, or may even result in the loss of life. However, these severe complications are exceedingly rare and your doctors feel that the risk of these complications is much less than the risk of not understanding the blood vessels in your head or neck.