

## CEREBRAL ANGIOGRAM

### **What is a cerebral angiogram?**

A cerebral angiogram is a study to look at the blood vessels in your head and neck. This is performed in the radiology department at Sacred Heart Medical Center.

It is normally an outpatient procedure, with patient admission in the morning and discharge home in the afternoon. An angiogram may also be done if you have been admitted to the hospital for some other reason. Most angiograms take about an hour, occasionally longer.

### **What happens in the procedure?**

After you arrive in the Surgery Center, you will be provided with a hospital gown. We will then insert an intravenous (IV) line into a vein in your arm. This IV line is used to give you medicines to help you relax during the angiogram, but you will not be completely asleep. It also allows us to give you fluids to help rid your body of the contrast. When you are brought to the radiology department, you will be greeted by the angiography technologist and nurse. 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. If at any time you are feeling pain or discomfort, or are worried, you are welcome to share those concerns with us. If you want to fall asleep, it is okay to do so. We will then shave a small amount of hair from the groin, usually the right side, then wash the area with a cleansing solution and cover it with a sterile drape. You must keep your arms and legs relatively still underneath the drapes so as not to contaminate the drape. Your head will rest on a cushion so that it does not move during the examination, which could cause distortion in the pictures. We 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. The stinging goes away within 15 seconds. We will tell you before we give 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 from the tube insertion. If at any time the pain at the groin is bothersome, you should tell us so that we can give you additional medication. The catheter is inserted into the artery in the leg and navigated using x-ray 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. We do not go through your heart during this procedure. The heart is off to the side of the arteries we travel through.

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 relate to the contrast dye. The technologists will instruct you exactly when the pictures are being taken so that you can hold your breath, not move your jaw, or swallow. These still periods last about 10 seconds. While the pictures are not being taken, you may ask us questions, although occasionally we will ask you to hold still or not talk.

### **Where should my family or friends wait?**

If your family or friends accompany you, they can come to the interventional holding area with you and wait. During the procedure there is a waiting area by the angiography suites and progress reports will be sent out to your family members or friends if you wish. We will discuss the results of this test afterward with your family if you would like us to do so.

### **What happens to me after the procedure?**

After the angiogram is finished, we will painlessly remove the catheter from the artery. We will apply pressure to your leg at the catheter insertion site for about 15 minutes to stop any bleeding or place a suture that does not need to be removed. Once the procedure is finished and you are back in your room, you can usually eat and should drink plenty of fluids. You need to lie flat and keep your leg straight for 2 hours if we used a suture device, or 4-6 hours if we did not, which allows the small hole in the artery time to completely seal up. If you need to go to the bathroom during the waiting period, your nurse will assist you. Most people can use either a bedpan or a urinal. Occasionally it is necessary to place a small tube into the bladder to aid you in emptying your bladder. At the end of this time, you may stand up and walk around. And, if you are feeling well, you may go home. Someone else must drive you home.

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. It is common to have a small lump in your groin where the catheter was inserted, as long as it is not increasing in size. If it is enlarging, you should see us. You may also experience some slight hair loss. This is completely normal. Although this is not permanent, it may take up to 6 months to grow back completely.

### **What are the risks of angiography?**

Your doctors have asked us to perform this test because they feel it is the optimal test to provide the information they need 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 risk. Contrast liquids have markedly improved over the last few years so that allergic complications and the toxicity to your kidneys have been greatly reduced. Despite these advances there is still a risk of a life threatening allergic reaction to the contrast. If you have ever had a contrast allergy to iodine dyes, you should let us know. Generally, these types of allergies can be prevented by pre-treating you with both steroids and antihistamines. However, it is important for you to let us 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 which can lead to a stroke. The contrast can cause kidney failure. You can have life threatening bleeding at the arterial puncture site in your groin. However, these complications are exceedingly rare and we feel that risk of these complications is much less than the risk of not gaining the most complete information possible about the blood vessels in your head and neck.

### **When will I know the results of my angiogram?**

The results of the cerebral angiogram should be immediately available after the procedure. We will discuss the findings with you when you are fully awake. In some cases we can provide you with selected copies of the pictures. We are also happy to see you in clinic on another day after your procedure, to review the images and tell you what the findings mean.

