

# *Hampton Roads Radiology Associates*

## **Patient Information**

### **Cervical Myelogram**

Your referring physician has requested that you have a cervical myelogram. The following is a description of this invasive procedure as well as the potential complications, so that you can give informed consent to have the procedure.

Following local anesthesia and using fluoroscopic (x-ray) guidance, a needle will be placed into the spine into the fibrous fluid containing sac that contains the nerve roots and spinal cord. Fluid may be withdrawn (if possible) for routine lab tests and then myelogram contrast (x-ray dye) will be injected. Radiographs will be taken and then you will have a CT of the area, within an hour or two of the myelogram. You will be monitored for potential complications until you are discharged, usually about 4 hours after the procedure. You will be able to eat and drink as well as use the bathroom while in the hospital after the procedure.

In cervical myelograms, the needle is typically placed in the lumbar spine (with the contrast placed into the cervical spine by tilting the table down). It may also uncommonly be injected directly into the cervical spine between the top two cervical vertebral bodies. In patients older than 50 years, cervical puncture may be considered; however, it is uncommonly used in our practice. Cervical puncture may lead to improved myelogram pictures in some patients. In addition, cervical puncture has a benefit in that the most common complication of lumbar puncture, a spinal headache, almost never happens with cervical punctures. However, cervical punctures do have more potential complications than lumbar punctures. Most complications of myelograms are rare (except for spinal headache) and the procedure is very safe. You need to know the potential complications which include:

1. **BLEEDING.** As with all needle procedures, bleeding can occur. As long as you have no bleeding tendency and are not on any blood thinners such as Coumadin and Plavix, bleeding complications are extremely rare. However, patients have had to undergo emergency surgery to relieve pressure on the nerve roots and spinal cord because of bleeding after needle procedures such as myelograms.
2. **INFECTION.** Any needle passing through the skin can introduce infection, which in myelography would be meningitis. This is an extremely rare complication and sterile technique will be used.
3. **SEIZURE.** The injected contrast is absorbed around your brain in the first day and can be irritative. Some patients will complain of a mild headache, for which your nurse can give you pain medicine. It can also bring on seizures, even in patients with no history of seizures/epilepsy. This is very rare complication, but is the reason that you will be monitored in the hospital for a few hours. Valium, which may be given to you prior to the procedure, will drop the tendency of the brain to have a seizure as well as be a mild sedative. You should not be currently taking any medications that may make seizure more likely, particularly antidepressants (Paxil, Prozac, Zoloft, Elavil etc.). Typically, patients hold such medication 2 days prior to and 2 days after the myelogram. Exceptions can be made depending on the antidepressant except for Elavil, which must always be held. Patients with known epilepsy on anti-seizure medication **MAY** have a myelogram but must be aware of the risk of seizure. An IV catheter (Heparin Lock) may be established prior to the procedure in patients felt to be at high risk for seizure, so that emergent IV medication to control the seizure can be given.
4. **SPINAL HEADACHE.** This is a common complication in lumbar punctures but rarely (if ever) occurs after cervical puncture. It is what may occur if the small hole in the fibrous sac does not close after the needle puncture. The fluid inside can then leak out, and when severe, the brain loses the cushioning effect of the fluid which causes a severe headache when you sit or stand. This occurs in

up to 30-50% of patients that have a lumbar puncture of any kind, including myelogram. They occur 2-3 days after the procedure and are positional, they come on when you sit or stand and go away when you lie down. For a full 24 hrs, it is important that you follow instructions and stay at bedrest getting up only to go to the bathroom and drink plenty of fluids after the procedure. That is important to allow the small hole in the sac to heal. If you do develop a spinal headache, it is OK to treat yourself. As long as you do not feel ill, have no fever, and the headache goes away when you lie down, you may treat yourself with another 24 hrs of bed rest with bathroom privileges while drinking plenty of fluids. This almost always works. If it does not, contact the radiologist who performed the procedure or your referring physician, and a procedure can be performed in the hospital that has a very high success rate in treating spinal headaches. This procedure is done in around 1 % or less of patients after a myelogram and is an epidural blood patch.

5. **INJURY TO THE SPINAL CORD OR VERTEBRAL ARTERY.** These are complications only of cervical punctures and are very rare. The needle is placed into a small space immediately behind the spinal cord with the needle puncturing the skin just behind the ear. If the needle does not go where it is intended, particularly if the patient moves during the puncture, it can puncture the spinal cord or injure an artery supplying the back of the brain, the vertebral artery. If the needle touches the spinal cord, nothing happens except for some pain. However, if contrast (x-ray dye) is injected into the cord, serious complications can occur. An injured vertebral artery could lead to a stroke. For these reasons, cervical punctures are only performed by experienced physicians, typically a neuroradiologist.

If you have any questions, please feel free to ask the physician performing the procedure prior to signing the consent form.