

**DEPARTMENT OF DIAGNOSTIC RADIOLOGY AND NUCLEAR MEDICINE  
SECTION OF NEURORADIOLOGY**

**PATIENT INFORMATION SHEET**

**Angiography of cerebral arteries, arch and great arterial vessels of the neck, cervical carotid arteries and/or cervical vertebral arteries.**

**Indications for the Procedure:** This procedure is used to diagnose diseases of the blood vessels of the brain or neck such as aneurysms (enlargement of a part of the vessel), vascular malformations (too many vessels), tumors, narrowing (stenosis or blockage) that produce bleeding, and/or stroke (paralysis or weakness of the arms and/or legs, unable to speak/talk).

**Description of the Procedure:** The patient is placed on his/her back on the X-ray table. Sedative medication may be given into a vein to make the patient comfortable. The skin of a groin (usually the right) is cleaned with an antiseptic fluid that contains iodine, and the area is covered with sterile drapes. The skin and deeper tissues of the groin are numbed with an anesthetic (numbing medication), which is injected with a tiny needle. This injection may cause the patient to feel a brief stinging, pinching and/or burning sensation. The location of the femoral artery, a large artery in the groin, is located by feeling for its pulsation. A small nick is made in the skin, and with a different needle, the femoral artery in the groin is punctured; a small tube is then placed in the femoral artery using X-ray fluoroscopy to make certain the tube is in the correct place. A second, smaller tube, called a catheter, is placed through the first tube in the femoral artery, and while watching with X-ray fluoroscopy, the catheter is put into arteries that supply blood to the brain or neck. X-ray dye is injected through the catheter to make the blood vessels visible in X-ray pictures. At the end of the procedure, the catheter and the larger tube in the femoral artery are removed and the femoral artery is compressed by the doctor's fingers for 15 to 20 minutes until the bleeding stops. The patient is returned to his or her hospital room and observed for 6 to 12 hours or longer.

**Risks of the Procedure:** Serious complications from this procedure are rare. There may be bleeding at the puncture site from the femoral artery, narrowing or blockage of the femoral artery with loss of blood flow to the leg, infection at the puncture site, allergy to the contrast material producing shock, difficulty breathing and/or hives, kidney shutdown from large amounts of contrast material, stroke causing weakness or paralysis, memory loss, inability to speak. These complications may be permanent or could be transient or partially improve.

**Alternatives to the Procedure:** Non invasive imaging procedures can be performed to demonstrate the blood vessels, such as CT scan angiography (CTA) or MRI angiography (MRA).

**Probable Consequences of Refusing the Procedure:** If a patient refuses the procedure, diseases or malformations may not be found, resulting in a continuation or worsening of the patient's problems.

**Person(s) Performing the Procedure:** The key portions of the procedure will be performed by an attending physician who is a member of the medical staff of Rush University Medical Center, or a fellow or resident in Neuroradiology who will be observed and supervised by a member of the medical staff. Residents and fellows are licensed physicians. Fellows have completed a residency in radiology and are in an approved post-residency training program. Residents are in training in an approved residency program. The parts of the procedures fellows or residents will perform will be based on their level of training and competence.

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