

DEPARTMENT OF DIAGNOSTIC RADIOLOGY AND NUCLEAR MEDICINE

Patient Information Sheet Endovascular Intervention (Includes Arteriogram, Thrombolysis, Angioplasty and Stent Placement)

General Indications for the Procedure: These procedures are used to diagnose or treat peripheral arterial disease, a very common condition in which the arteries may be narrowed, closed off or expanded like a balloon, causing pain, or risk of serious injury or death. This condition can involve the arteries of any part of the body, including the brain, heart, arms, abdomen and legs. An angiogram is a test in which X-ray pictures are taken of the arteries or veins, allowing doctors to evaluate them by seeing them from the inside. The purpose of an arteriogram is to determine the severity and location of disease in the arteries and to determine if it can be helped by special treatments.

Description of the Procedure: At the beginning of the procedure, patients receive medication to help keep them comfortable. This may include sedating medicine given into a vein, as well as local numbing medicine injected into the skin at the site of the procedure. An angiogram is then performed, in which X-ray pictures are taken of the arteries or veins to diagnose blockage or ballooning of blood vessels. A needle is inserted into the artery or vein through a small nick in the skin, after which a thin tube called a catheter is passed through the needle into the artery or vein. A contrast agent, also known as “X-ray dye” is injected through the tube into the blood vessel to make it visible in X-ray pictures that are taken.

Treating the blocked blood vessels (angioplasty and stent placement): If a narrowed or blocked blood vessel is found, it may be possible to open the blockage by “angioplasty” or “stenting.” In these techniques, a very small balloon attached to a thin tube is inserted through the catheter already in the blood vessel and pushed along to the site of the blockage or narrowing, guided by X-ray. The balloon is inflated to open the artery. Sometimes, a small metal mesh tube, called a stent, is inserted and expanded to keep the blood vessel open.

Infusion of clot-dissolving agent (thrombolysis). If an artery or vein is blocked by clotted blood, a clot-dissolving medicine called tPA may be used to dissolve the clot and open the artery. When tPA therapy is needed, it is infused through a small catheter placed within the artery or the patient’s vein. The infusion may last for 2 or 3 days, during which time the patient must be in an intensive care unit to be monitored.

Quick treatment of acute clot. Clot can sometimes be removed more quickly by putting a device into the artery or vein that will suck out the clot. This is called the angiojet system.

Risks of the Procedure: The most common complication is bleeding. Blood thinners are commonly used during these procedures, and the patient may bleed after the catheters are

removed. If the patient undergoes treatment with a clot-dissolving agent, they are at a higher risk of bleeding than with the other procedures. The most feared complication is bleeding into the brain: The risk of this life-threatening complication is very rare. If for any reason the patient bleeds during one of these procedures, the procedure will be stopped immediately, and the complication will be treated by the patient's doctors. The use of the angiojet is associated with "funny beats" of the patient's heart, but most of these go away by themselves.

Alternatives to the Procedure: Some of the diseases of blood vessels discussed in this information sheet can be treated with surgical procedures. Depending upon the patient's underlying medical condition, surgery may be more risky than the procedures described in this sheet, since these procedures are less invasive than surgery.

Probable Consequences of Refusing the Procedure: If patients refuse to have the procedure to open their blocked blood vessels, the problems caused by the blockage may worsen, to the point that the procedure might be needed as an emergency, which frequently is more dangerous.

Persons 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 resident or fellow who will be observed and supervised by a member of the medical staff. Residents are licensed physicians in an approved residency program. Fellows are licensed physicians who have completed a residency in radiology and are in an approved post-residency training program. The parts of the procedures residents or fellows will perform will be based on their level of training and competence.