

DEPARTMENT OF DIAGNOSTIC RADIOLOGY AND NUCLEAR MEDICINE

Patient Information Sheet Dialysis Access Evaluation

General Indications for the Procedure: Patients who have a condition known as renal failure (kidney failure) frequently require dialysis. They may have a dialysis access shunt (a graft or a fistula) which is used to transfer their blood to and from the dialysis machine. Sometimes the shunt gets “plugged up” and stops working properly. A dialysis access evaluation may be performed to determine the best way to correct the problem. In the first phase of the evaluation, X-ray pictures are taken of the inside of the shunt, a procedure, called “fistulogram.” If needed and if appropriate, a second procedure may be performed to open up the blockage in the shunt.

Description of the Procedure: The graft/fistula is first examined to decide the best location at which to access it. Once the best location for access is identified, the skin over the area is carefully cleaned with an antiseptic that may contain iodine, and sterile drapes are placed over the area to be accessed. Next, a small needle is placed through the skin into the graft/fistula. A small wire is then advanced through the needle into the venous part of the graft/fistula. A small plastic tube (a catheter) is inserted over the wire, contrast medium (“dye”) is injected, and X-ray pictures are taken of the inside of the graft. If a blockage is found in the graft/fistula or in the veins connected to it, an attempt may be made to open the blockage by one or more procedures. In one of these procedures, a catheter with a small balloon is inserted into the graft over the wire and passed to the blocked area. The blockage is then opened up (dilated) by expanding the balloon. Once the blocked area is opened, it might be necessary to place a metallic mesh tube (a stent) through the previously blocked area to keep it open. If clot is found within the graft/fistula, the doctors may have to use either a “clot-buster” drug, called tPA, or a mechanical device to eliminate the clots. An antibiotic may be given in order to protect against infection that might be in the clot. Once the procedure to open the blockage is completed, more X-ray pictures will be taken with contrast medium to determine the results of the procedure. When the entire procedure has been completed, the patient is sent to a recovery area to be observed for about 1 hour before being discharged to go home. If for any reason the graft/fistula cannot be unblocked or otherwise made to work properly, the patient must have a dialysis catheter inserted in a vein in the neck or groin, in order to provide access for performing dialysis.

Risks of the Procedure: The most common complications include bleeding and infection. These risks are very low. Another potential risk of this procedure is vein perforation. If perforation of a vein occurs during the procedure, it might be necessary to place a stent to cover the perforation. Alternatively, the patient might have to go to surgery to fix the problem.

Alternatives to the Procedure: The alternative to this procedure is surgical revision of the fistula. Surgical revision may also be necessary if this procedure fails.

Probable Consequences of Refusing the Procedure: If the patient decides not to have the procedure done, the patient’s condition may worsen because of difficulty or inability to perform a dialysis treatment. It might become necessary for the patient to have an emergency intervention to provide access for dialysis treatment.

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 Licensed Physician’s Assistant, resident or fellow in Interventional Radiology 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. Physician’s Assistants are specially trained practitioners who are licensed by the State of Illinois and who are qualified to perform these procedures under supervision. The parts of the procedures residents or fellows will perform will be based on their level of training and competence.