

DEPARTMENT OF DIAGNOSTIC RADIOLOGY AND NUCLEAR MEDICINE

Patient Information Sheet

Image-guided Joint-Injection for an Arthrogram

General Indications for the Procedure: Abnormalities in joints can cause pain or other joint symptoms. These abnormalities must be accurately diagnosed for proper treatment. Sometimes, the best way to diagnose an abnormality is to take special pictures of the joint after a contrast medium (“dye”) has been injected into the joint. The dye is injected with a needle using “image guidance.” Image guidance means the physician watches the needle containing dye as it is injected using X-ray fluoroscopy, CT or ultrasound. After the dye is injected, a picture, called an arthrogram, is taken.

Description of the Procedure: An image of the joint is first taken with fluoroscopy, CT or ultrasound. This image helps the physician plan the best way to enter the joint and avoid structures that could be harmed, such as large blood vessels or nerves. The skin is then marked to show the best place to put in the needle for injecting dye. After cleaning the skin, the skin and deeper tissues 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. Following injection of the numbing medication, the needle for injecting dye is guided into the joint, using fluoroscopy, CT or ultrasound to watch where the needle is going. A small amount of dye may then be injected to confirm that the needle is in the joint. Once the needle tip is in the joint, a larger amount of the dye is injected, and the needle is removed. This leaves only a tiny puncture wound in the skin, which is covered with a Band-Aid.

Risks of the Procedure: The most common risk is mild bleeding or bruising at the site of the needle puncture. Serious bleeding from such a minor procedure is extremely rare but could occur, requiring a transfusion or even surgery. Even though the skin is carefully cleaned and the puncture is performed with sterile technique, an infection could develop, in which case the patient might need antibiotics. The numbing medication that is injected into the region of the joint sometimes affects a large nerve, which could cause temporary numbness or weakness of an arm or leg. Uncommonly, patients are found to be allergic to the dye or numbing medication that is injected, causing hives, itching or sneezing. In very rare cases, allergic reactions could involve serious, even life-threatening conditions, such as acute asthma, shock, convulsions or severe swelling of the airway.

Alternatives to the Procedure: MRI, CT or X-ray pictures could be taken without injecting dye into the joint.

Probable Consequences of Refusing the Procedure: If patients refuse to have dye put into a joint for X-ray, MRI or CT pictures, their doctor might not receive an accurate diagnosis of their joint abnormality. The dye injection could also be performed without image guidance, but it is not as certain that the needle would be placed properly into the joint.

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 in Body Imaging 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 perform will be based on their level of training and competence.