



ANGIOGRAPHY

REVISED DECEMBER 2004

The purpose of this document is to provide written information regarding the risks, benefits and alternatives of the procedure named above. This material serves as a supplement to the discussion you have with your physician. It is important that you fully understand this information, so please read this document thoroughly.

The Procedure: Angiography is used to detect abnormal blood vessels, blockages of blood flow, involvement of blood vessels in disease, and to evaluate the vascular anatomy of the organ(s) under review. When contrast dye is injected into arteries and/or veins, it is possible to view these structures with the help of X-rays. In a special room with X-ray equipment, the skin and tissue surrounding the blood vessel to be entered (typically in the groin) are cleansed to prevent infection and numbed with a local anesthetic. After a needle is inserted into the blood vessel, a small wire is introduced and the needle is withdrawn. Using the wire, a catheter (tube) is inserted. Together, the wire and catheter are used to gain access to blood vessels, under X-ray guidance. Once contrast (X-ray dense fluid) is injected, X-ray pictures are obtained to evaluate the vessels. Afterwards, the wire and catheter are removed and either point pressure and/or closure devices are used to control bleeding from the puncture site. The entire process is generally done under sedation but in some patients, general anesthesia is used.

Benefits

You might receive the following benefits. The doctors cannot guarantee you will receive any of these benefits. Only you can decide if the benefits are worth the risk.

Angiography is:

1. The best method of identifying blood vessel abnormalities.
2. Used to facilitate diagnosis of conditions, including stroke, vasculitis, aneurysm, vascular malformation, tumors, obstructions, arteriosclerosis, bleeding and blockage.

Risks

Before undergoing one of these procedures, understanding the associated risks is essential. No procedure is completely risk-free. The following risks are well recognized, but there may also be risks not included in this list that are unforeseen by your doctors.

1. There may be injury to the blood vessels.
2. Blood clots may form inside the vessels, resulting in damage to the organ(s) supplied by that vessel. For example, in brain studies you may have a stroke or there may be bleeding in the brain. For extremity studies,

there may be loss of limb, limb function, and injuries specific to other organs.

3. You may have an allergic reaction to the dye.
4. There may be kidney damage.
5. You may develop infection.
6. There may be radiation injury.
7. You may develop a hematoma (blood clot).
8. There may be nerve damage.
9. You may develop pulmonary embolus.
10. You could die from the procedure.

In addition, risks associated with sedation include:

1. You may experience respiratory depression. Your breathing could slow to a dangerous level or even stop (respiratory arrest). This could require that a breathing tube be temporarily inserted while the medication wears off, or longer, if necessary.
2. You may develop decreased blood pressure, requiring treatment that may consist of administering intravenous fluid or medication. Either of these treatments may require

that you be transferred to an intensive care unit (ICU) until you are stable.

3. You may develop adverse reaction(s) to the sedatives/analgesics that may result in nausea, vomiting, seizures, hallucinations, allergic reaction, skin rash, fever, cardiac arrhythmias requiring drug treatment, cardiac arrest, or coma.
4. Reversal of sedation may be required. In some cases, it may be prudent to administer medication to counteract the effects of a sedative or narcotic pain killer. This would cause you to be more awake during the procedure.
5. Should a blood transfusion become necessary, separate information is available regarding transfusion, products, and alternatives.

Alternatives

The alternatives to angiography include:

1. CT and MRI scanning can be used to view blood vessels but may not provide the information necessary to make a diagnosis or appropriate treatment

2. Conservative management (no treatment)
If you decide not to have this procedure, there may be associated risks to this decision. Please discuss it with your doctor.

If you have any questions regarding the procedure, risks, benefits, or alternatives to this procedure, ask your physician prior to signing any consent forms.



Patient Signature

Date