Valve Transposition for Venous Disease

What is a valve transposition for venous disease?

A valve transposition takes place when a surgeon uses a portion of vein with a normal-functioning valve from another part of the body to replace a section of vein with a non-functioning valve.

Why is this procedure performed? Why do I need this procedure?

You may need this procedure if you have venous insufficiency, in which the flow of blood through the veins is impaired.

In healthy veins, there is continuous flow of blood from the limbs back toward the heart. There are valves within the veins of the legs that prevent the backflow of blood. Venous insufficiency occurs when forward flow through the veins is obstructed, as in the case of a blood clot, or if there is backward leakage of blood flow through damaged valves. These valves can be damaged due to a previous blood clot in the vein.

Valve repair or valve transposition is typically performed in individuals who have severe venous insufficiency associated with leg swelling and chronic ulceration that has been resistant to standard medical therapies.

Each patient is evaluated, and treatment will be individualized for the patient’s circumstances.

Where is the procedure performed and who performs this procedure?

Valve transposition is performed in the hospital setting by a vascular surgeon.

What are the risks and potential complications of the procedure?

Your doctor will discuss the specific risks and potential benefits of the recommended procedure with you.

Valve transposition usually has no complications, but there may be a risk of injury to the blood vessel, leg swelling, bleeding, wound complications, and the development of a blood clot in the treated vein. Your vascular surgeon will discuss the important risks and benefits with you.

Special precautions are taken to decrease these risks, and there may be other possible risks. When you meet with your doctor, please ask questions to make sure you understand the risks of the procedure and why the procedure is recommended.

How do I prepare for the procedure?

A few days before the procedure, pre-procedure tests may be performed to ensure that it is safe to perform the surgery. You may need to discontinue certain medications before the procedure. Your healthcare team will provide specific instructions to help you prepare for the procedure.
What happens during the procedure?

The procedure will be performed under general anesthesia. Through a skin incision, the surgeon removes a portion of a vein with a normal-functioning valve from another part of the body (usually the upper arm). The arm has multiple veins that allow blood to drain from it, and rarely do patients develop any problems due to the removal of this short piece. A segment of the vein that has one to two normal-functioning valves is dissected free of the surrounding tissue. That segment of the vein is excised, and its cut ends are tied off with suture.

The surgeon then replaces the non-functioning valve with the good one. Typically, blood flow in the diseased vein is temporarily stopped with special clamps. A portion of the diseased vein, which does not have functioning valves, is excised. The healthy segment of vein is then sewn in place, taking the place of the excised, diseased segment.

How long does the procedure last?

The procedure itself generally takes three to five hours, but the preparation and recovery time add several hours. The surgery may require a minimum hospital stay of four to seven days.

What happens after the procedure?

Some patients require admission to an intensive care unit for close monitoring for about one to two days after the surgery, but this is not routine. Once the patient is transferred to the nursing unit, the hospital stay is about three to seven more days. Most patients will receive physical therapy during the recovery period. Most patients will require anticoagulation in the post-operative period, and many will require long-term anticoagulation with medications such as Coumadin. The exact duration of anticoagulation therapy is patient specific and will be determined by your surgeon.

Your doctor will provide specific guidelines for your recovery.

Are there any side effects of the treatment?

As with any surgical procedure, you will feel somewhat tired for a few weeks. You will have mild pain along the incisions, and you may experience mild leg swelling.

What are typical results of the procedure?

Restoring blood flow by performing a valve transposition usually provides good relief of symptoms in the right patients. Your doctor will discuss the results of the procedure with you.

How do I find out if I am a candidate for this procedure?

To find out if you are a candidate for this procedure, please call the Vascular Surgery Department at 216.444.4508 or 800.223.2273 ext. 4-4508.