Ovarian Vein Embolization



Ovarian vein embolization is a minimally invasive treatment for pelvic venous disorder, a painful condition resulting from the presence of enlarged and malfunctioning veins in the abdomen and/or pelvis. The procedure helps relieve pain by closing off the abnormal veins so they can no longer enlarge with blood. The ovarian vein embolization procedure is an effective way of treating pelvic venous disorder.

Tell your doctor if there's a possibility you are pregnant and discuss any recent illnesses, medical conditions, allergies and medications you're taking, including herbal supplements and aspirin. You may be advised to stop taking aspirin, vitamin E, nonsteroidal anti-inflammatory drugs (NSAIDs) or blood thinners several days prior to your procedure. You should have nothing to eat or drink after midnight the night before. Plan to be admitted to the hospital on the morning of your procedure, leave jewelry at home, and wear loose, comfortable clothing. You may be asked to change into a gown.

What is Ovarian Vein Embolization?

Ovarian vein embolization is a minimally invasive treatment for Pelvic Venous Disorders (PeVD), formerly known as pelvic congestion syndrome, that is used to close off faulty veins so they can no longer enlarge with blood, thus relieving the pain.

Pelvic venous disorder is a painful condition most often caused by malfunction of the ovarian vein, resulting in the presence of varicose veins (http://www.radiologyinfo.org) in the pelvis. The condition is caused by valves in the veins that help return blood to the heart against gravity becoming weakened and not closing properly, allowing blood to flow backwards and pool in the vein causing pressure and bulging veins. Diagnosis of the condition is done through one of several methods: pelvic venography, computed tomography (CT), magnetic resonance imaging (MRI) and pelvic and transvaginal ultrasound.

During this procedure, an interventional radiologist inserts a catheter from either the femoral vein or the internal jugular vein and into the faulty vein(s) under image-guidance. Catheterization requires only a small needle size incision in the skin for insertion and x-ray guidance of the catheter to its target area. The catheter delivers small metallic coils or plugs that clot the blood and seal the abnormal vein. The use of a liquid sclerosing (inflammatory) agent may also be used to allow the radiologist to block smaller veins not accessible for metallic plugs or coils.

How should I prepare?

Stop taking aspirin and vitamin E at least five days before the procedure.

Do not eat or drink anything after midnight prior to the procedure.

In general, you should not eat or drink anything after midnight the day of your procedure. However, you may take your routine medications with sips of water. If you are diabetic and take insulin, ask your doctor if you need to adjust your usual insulin dose.

Prior to your procedure, your doctor may test your blood to check your kidney function and to determine if your blood clots

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normally.

Tell your doctor about all the medications you take, including herbal supplements. List any allergies, especially to local anesthetic (http://www.radiologyinfo.org) , general anesthesia (http://www.radiologyinfo.org) , or contrast materials (http://www.radiologyinfo.org) . Your doctor may tell you to stop taking aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs (http://www.radiologyinfo.org)) or blood thinners before your procedure.

Tell your doctor about recent illnesses or other medical conditions.

Women should always tell their doctor and technologist (http://www.radiologyinfo.org) if they are pregnant. Doctors will not perform many tests during pregnancy to avoid exposing the fetus (http://www.radiologyinfo.org) to radiation. If an x-ray is necessary, the doctor will take precautions to minimize radiation exposure to the baby. *See the Radiation Safety (https://www.radiologyinfo.org/en/info/safety-radiation) page for more information about pregnancy and x-rays.*

You will be admitted to the hospital on the morning of your procedure. The interventional radiologist (http://www.radiologyinfo.org) will assess you before the procedure begins.

Wear comfortable, loose-fitting clothing to your exam. You may need to change into a gown for the procedure.

What does the equipment look like?

X-ray equipment, a catheter, intravenous (IV) contrast and a variety of medical devices and medications, called embolic agents, are used in this procedure.

This exam typically uses a radiographic table, one or two x-ray tubes, and a video monitor. Fluoroscopy converts x-rays into video images. Doctors use it to watch and guide procedures. The x-ray machine and a detector suspended over the exam table produce the video.

A catheter is a long, thin plastic tube that is considerably smaller than a "pencil lead." It is about 1/8 inch in diameter.

Your physician will select an embolic agent depending on the size of the veins. These include:

- Gelfoam™, a gelatin sponge material, which is cut into small pieces that are injected into the vein and block the vein. Gelfoam can treat the smaller veins and is sometimes used with a sclerosing agent.
- various sized metal coils or plugs made of heavy metals such as nitinol or platinum are used to block larger veins.
- liquid sclerosing agents, which are used to damage the lining of the vein. Filling a vein with this liquid agent causes blood clots to form, closing up the abnormal vascular channels.
- liquid glue, which can be inserted into the vein where it hardens, preventing blood flow through the vein.

This procedure may use other equipment, including an intravenous (http://www.radiologyinfo.org) line (IV), ultrasound machine and devices that monitor your heart beat and blood pressure.

How does the procedure work?

Using x-ray imaging and a contrast material to visualize the blood vessel, the interventional radiologist inserts a catheter through the skin into a blood vessel and advances it to the treatment site. Once the position has been confirmed, usually with IV contrast, synthetic material or medication called an embolic agent is then inserted through the catheter and positioned within the abnormal vein(s).

Permanent embolic agents physically plug-up blood vessels and cause scar tissue to form in the vessel. This is important in treating conditions such as refluxing veins, which would recur if the embolic agent dissolved.

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How is the procedure performed?

Image-guided, minimally invasive procedures such as embolization for pelvic venous disorder should be performed by a specially trained interventional radiologist in an interventional radiology suite or occasionally in the operating room.

Prior to your procedure, your doctor may perform ultrasound (http://www.radiologyinfo.org) , computed tomography (CT), or magnetic resonance imaging (http://www.radiologyinfo.org) (MRI) exams.

You will lie on the procedure table.

The doctor or nurse may connect you to monitors that track your heart rate, blood pressure, oxygen level, and pulse.

A nurse or technologist (http://www.radiologyinfo.org) will insert an intravenous (http://www.radiologyinfo.org) (IV) line into a vein in your hand or arm to administer a sedative. This procedure may use moderate sedation. It does not require a breathing tube. However, some patients may require general anesthesia (http://www.radiologyinfo.org) .

The nurse or technologist will sterilize the area of your body where the catheter is to be inserted. They will sterilize and cover this area with a surgical drape.

The doctor will make a very small skin incision at the site.

Using image-guidance, the doctor inserts a catheter (http://www.radiologyinfo.org) through the skin to the treatment site.

A contrast material then is injected through your IV and a series of x-rays are taken to locate the exact site of the venous abnormality. The medication or embolic agent is then injected through the catheter. Additional venograms are taken to ensure the embolic agent is correctly positioned and that the reflux is no longer present.

When the procedure is complete, the doctor will remove the catheter and apply pressure to stop any bleeding. The tiny opening in the skin is covered with a dressing.

The doctor or nurse will remove your IV line before you go home.

You can expect to stay in bed for two to four hours after your procedure.

The length of the procedure varies from 60 minutes to several hours depending on the complexity of the condition.

What will I experience during and after the procedure?

The doctor or nurse will attach devices to your body to monitor your heart rate and blood pressure.

You will feel a slight pinch when the nurse inserts the needle into your vein for the IV line and when they inject the local anesthetic. Most of the sensation is at the skin incision site. The doctor will numb this area using local anesthetic. You may feel pressure when the doctor inserts the catheter into the vein or artery. However, you will not feel serious discomfort.

If the procedure uses sedation, you will feel relaxed, sleepy, and comfortable. You may or may not remain awake, depending on how deeply you are sedated.

You may feel slight pressure when the doctor inserts the catheter (http://www.radiologyinfo.org) , but no serious discomfort.

As the contrast material (http://www.radiologyinfo.org) passes through your body, you may feel warm. This will quickly pass.

Most patients experience some side effects after embolization. Pain is the most common and can be controlled by medication given by mouth or through your IV.

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Most patients have this procedure as an outpatient.

You should avoid heavy lifting (straining to lift) and very vigorous exercise for about a week.

Who interprets the results and how do I get them?

After the procedure is complete, the interventional radiologist (http://www.radiologyinfo.org) will tell you whether the procedure was a success.

It may be one to three months after embolization before it is clear whether symptoms have been controlled or eliminated.

Your interventional radiologist may recommend a follow-up visit.

This visit may include a physical check-up, imaging exam(s), and blood tests. During your follow-up visit, tell your doctor if you have noticed any side effects or changes.

What are the benefits vs. risks?

Benefits

- Ovarian vein embolization is a highly effective way of treating pelvic varicose veins due to faulty ovarian veins.
- Worldwide success rates of 85 percent and higher have been reported in women treated with embolization.
- Embolization is much less invasive than conventional open surgery. As a result, there are fewer complications, and the hospital stay is relatively brief.
- Blood loss is less than with traditional surgical treatment, and there is no obvious surgical incision.
- This method can be used to treat abnormal veins in the pelvis which otherwise would require a major surgical procedure.
- No surgical incision is necessary—only a small nick in the skin that does not need stitches.

Risks

- There is a very slight risk of an allergic reaction to the sedation medications or contrast material (http://www.radiologyinfo.org) .
- Any procedure that places a catheter inside a blood vessel carries certain risks. These risks include damage to the blood vessel, bruising or bleeding at the puncture site, and infection. The doctor will take precautions to mitigate these risks.
- There is always a chance that an embolic agent (http://www.radiologyinfo.org) can lodge in the wrong place and deprive normal tissue of its oxygen supply.
- There is a risk of infection after embolization, even if an antibiotic has been given.
- Pain may get worse before it gets better, often due to inflammation in the week following the procedure.

What are the limitations of Ovarian Vein Embolization?

Successful embolization without injuring normal tissue requires that the catheter be placed in a precise position. This means that the catheter tip is situated so that embolic material can be deposited only in vessels serving the abnormal area. In a small percentage of cases, the procedure is not technically possible because the catheter cannot be positioned appropriately.

Over time, more abnormal veins can develop which may lead to recurrence of symptoms.

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