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### **Pelvic Congestion Syndrome—Chronic Pelvic Pain in Women Nonsurgical Procedure Is Effective Treatment for Painful Ovarian Varicose Veins**

It is estimated that one-third of all women will experience chronic pelvic pain in their lifetimes.<sup>1</sup> Many of these women are told the problem is “all in their head” but recent advancements now show the pain may be due to hard-to-detect varicose veins in the pelvis, known as pelvic congestion syndrome.

The causes of chronic pelvic pain are varied, but are often associated with the presence of ovarian and pelvic varicose veins.<sup>7</sup> Pelvic congestion syndrome is similar to varicose veins in the legs. In both cases, the valves in the veins that help return blood to the heart against gravity become weakened and don’t close properly; this allows blood to flow backwards and pool in the vein causing pressure and bulging veins. In the pelvis, varicose veins can cause pain and affect the uterus, ovaries and vulva. Up to 15 percent of women, generally between the ages of 20 and 50, have varicose veins in the pelvis, although not all experience symptoms.<sup>2</sup>

The diagnosis is often missed because women lie down for a pelvic exam, relieving pressure from the ovarian veins, so that the veins no longer bulge with blood as they do while a woman is standing.

Many women with pelvic congestion syndrome spend many years trying to get an answer to why they have this chronic pelvic pain. Living with chronic pelvic pain is difficult and affects not only the woman directly, but also her interactions with her family and friends, and her general outlook on life. Because the cause of the pelvic pain is not diagnosed, no therapy is provided even though there is therapy available.

#### **Prevalence**

- Women with pelvic congestion syndrome are typically less than 45 years old and in their child-bearing years.<sup>3-5</sup>
- Ovarian veins increase in size related to previous pregnancies.<sup>6</sup> Pelvic congestion syndrome is unusual in women who have not been pregnant.<sup>6</sup>
- Chronic pelvic pain accounts for 15 percent of outpatient gynecologic visits.<sup>6</sup>
- Studies show 30 percent of patients with chronic pelvic pain have pelvic congestion syndrome (PCS) as the sole cause of their pain and an additional 15 percent have PCS along with another pelvic pathology.<sup>6</sup>

#### **Risk Factors**

- Two or more pregnancies and hormonal increases<sup>2</sup>
- Fullness of leg veins<sup>2</sup>
- Polycystic ovaries<sup>2</sup>
- Hormonal dysfunction<sup>2</sup>

## Symptoms

The chronic pain that is associated with this disease is usually dull and aching. The pain is usually felt in the lower abdomen and lower back.<sup>2</sup> The pain often increases during the following times:<sup>6</sup>

- Following intercourse<sup>2</sup>
- Menstrual periods<sup>2</sup>
- When tired or when standing (worse at end of day) <sup>2</sup>
- Pregnancy<sup>2</sup>

Other symptoms include

- Irritable bladder<sup>2</sup>
- Abnormal menstrual bleeding<sup>2</sup>
- Vaginal discharge<sup>2</sup>
- Varicose veins on vulva, buttocks or thigh

## Diagnosis and Assessment

Once other abnormalities or inflammation have been ruled out by a thorough pelvic exam, pelvic congestion syndrome can be diagnosed through several minimally invasive methods. An interventional radiologist, a doctor specially trained in performing minimally invasive treatments using imaging for guidance, will use the following imaging techniques to confirm pelvic varicose veins that could be causing chronic pain.

*Pelvic venography:* Thought to be the most accurate method for diagnosis,<sup>3</sup> a venogram is performed by injecting contrast dye in the veins of the pelvic organs to make them visible during an X-ray. To help accuracy of diagnosis, interventional radiologists examine patients on an incline, because the veins decrease in size when a woman is lying flat.

*MRI:* This may be the best noninvasive way of diagnosing pelvic congestion syndrome. The exam needs to be done in a way that is specifically adapted for looking at the pelvic blood vessels. A standard MRI may not show the abnormality.

*Pelvic ultrasound:* Usually not very helpful in diagnosing pelvic congestion syndrome unless done in a very specific manner with the patient standing while the study is being done. Ultrasound may be used to exclude other problems that might be causing pelvic pain.

*Transvaginal ultrasound:* This technique is used to see better inside the pelvic cavity.<sup>2</sup> As with a pelvic ultrasound, it is not very good at visualizing the pelvic veins unless the woman is standing. However it may be used to exclude other problems.

## **Treatment Options**

Once a diagnosis is made, if the patient is symptomatic, an embolization should be done. Embolization is a minimally invasive procedure performed by interventional radiologists using imaging for guidance. During the outpatient procedure, the interventional radiologist inserts a thin catheter, about the size of a strand of spaghetti, into the femoral vein in the groin and guides it to the affected vein using X-ray guidance. To seal the faulty, enlarged vein and relieve painful pressure, an interventional radiologist inserts tiny coils often with a sclerosing agent (the same type of material used to treat varicose veins) to close the vein. After treatment, patients can return to normal activities immediately.<sup>6</sup>

Additional treatments are available depending on the severity of the woman's symptoms. Analgesics may be prescribed to reduce the pain.<sup>6</sup> Hormones, such as birth control pills, decrease a woman's hormone level. This causes menstruation to stop and may be helpful in controlling her symptoms.<sup>6</sup> Surgical options include a hysterectomy with removal of ovaries, and tying off or removing the veins.<sup>6</sup>

## **Efficacy**

In addition to being less expensive than surgery and much less invasive, embolization offers a safe, effective, minimally invasive treatment option that restores patients to normal.<sup>9</sup> The procedure is very commonly successful in blocking the abnormal blood flow. It is successfully performed in 95-100 percent of cases. A large percentage of women have improvement in their symptoms; between 85 and 95 percent of women are improved after the procedure.<sup>6</sup> Although women are usually improved, the veins are never normal and in some cases other pelvic veins are also affected which may require further treatment.

## **About Interventional Radiologists**

Interventional radiologists are doctors who specialize in minimally invasive, targeted treatments that have less risk, less pain and less recovery time compared to open surgery. They use their expertise in interpreting X-rays, ultrasound, MRI and other diagnostic imaging studies to understand, visualize and diagnose the full scope of the disease's pathology and to map out the procedure tailored to the individual patient. Then during the procedure, they image as they go to guide tiny instruments, such as catheters, through blood vessels or skin, to treat diseases at the site of the illness nonsurgically.

Interventional radiology is a recognized medical specialty by the American Board of Medical Specialties. Interventional radiologists complete preliminary training in Diagnostic Radiology and advanced training in Vascular and Interventional Radiology. The American Board of Radiology certifies their specialized training.

## **For Further Information**

For more information on pelvic congestion or interventional radiology, visit the SIR Web site at [www.SIRweb.org](http://www.SIRweb.org).

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