Pelvic Congestion Syndrome What Is It and Who Do We Treat?

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ABSTRACT: **Pelvic congestion syndrome (PCS) is an often poorly understood and often overlooked etiology of chronic pelvic pain. When clinical and ultrasound examinations are normal, further diagnostic imaging can be helpful to obtain the diagnosis. Once identified, pelvic congestion syndrome can often be treated successfully with transcatheter embolization. (J Radiol Nurs 2014;33:57-62.)**

KEYWORDS: **Pelvic congestion syndrome; Minimally invasive gynecological treatment; Interventional radiology; Radiology nursing.**

INCIDENCE AND ETIOLOGY

Chronic pelvic pain is often debilitating and accounts for up to 10–40% of all gynecological visits (Beard, Reginald, & Wadsworth, 1988; Ganeshan et al., 2007; Kwon, Oh, Ko, Park, & Huh, 2007; Venbrux et al., 2002). It is a complex and often challenging problem to manage for the health-care provider. Pelvic congestion syndrome (PCS) is associated with dilated pelvic varices with reduced venous clearance, most often as a result of retrograde flow in an incompetent ovarian vein. It is seen more often in multiparous premenopausal women. The venous congestion stretches the inner surface of the ovarian vein, distorting both the endothelial and the smooth muscle cells. It is postulated that incompetency of the ovarian vein(s) leads to venous stasis, flow reversal, and subsequent varicosities (Giacchetto et al., 1989). The left ovarian vein appears to be the culprit in most cases. This is thought to be due to one of two processes: (1) The possible absence of ovarian venous valves or (2) The left ovarian vein drains directly into the left renal vein in contrast to the right ovarian which drains into the inferior vena cava (Figure 1). External compression as seen in nutcracker syndrome (the left renal vein is compressed between the aorta and the superior mesenteric artery) and May Thurner (the left iliac vein is compressed beneath the iliac artery) may also result in PCS.

CLINICAL PRESENTATION

PCS is not easy to diagnose. Women typically complain of a dull, throbbing achy pain in the lower pelvis and vulvar region. The vulvar discomfort often increases throughout the day and worsens with intercourse or postcoital. Patients may not be symptomatic in the morning but with prolonged standing or sitting will become symptomatic. The patient may or may not have vulvar varicosities but often has varicose veins with the left leg presenting greater than the right leg. The varicosities usually extend along the medial aspect of the medial to posterior upper thigh and along the buttocks (Figure 2).

PCS is often diagnosed in women less than 45 years of age who have had more than one pregnancy. The ovarian veins increase in size during each pregnancy, and in those with PCS, they do not return to normal. PCS is rarely diagnosed in nulliparous women.

DIFFERENTIAL DIAGNOSES

Making the diagnosis more challenging is the vast array of the associated symptoms—cyclic pain (with her menstrual periods), dyspareunia, bladder irritability, gastrointestinal symptoms, and low back pain that may also be present. Ovarian point tenderness on examination with a history of postcoital ache is said to be 94% sensitive and 77% specific for PCS (Beard et al., 1988). Other options to be considered in the differential are listed in Table 1.

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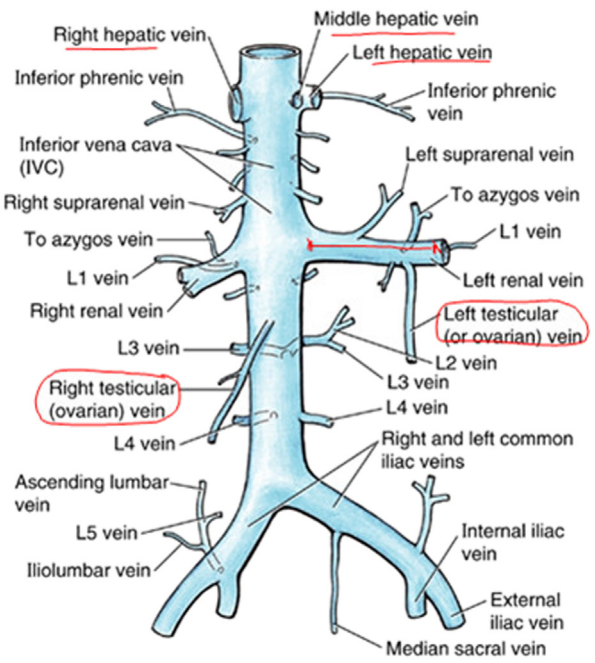

Figure 1. Pelvic venous anatomy. Courtesy of http://guizlet/.com/5206570/2-renal-anatomy-flash-cards/.

Most women who are referred to an interventional radiologist have been evaluated by their gynecologist. Many have had at least a pelvic ultrasound, and some have already undergone exploratory laparoscopy. If the examination is consistent with a diagnosis of PCS, magnetic resonance imaging (MRI) of the pelvis is the preferred noninvasive modality.

PATIENT EVALUATION

A detailed history and comprehensive examination is of the utmost importance. The history should focus on the nature, intensity, pattern, location, duration, and radiation of the pain as well as exacerbating and relieving factors. The relationship between the pain and a woman's menstrual cycle should also be discussed. Screening for depression, personality disorders, and domestic violence should be included. Women with any of these identifiers will have a higher incidence of somatic complaints and should be treated in conjunction with the assistance of a trained psychologist.

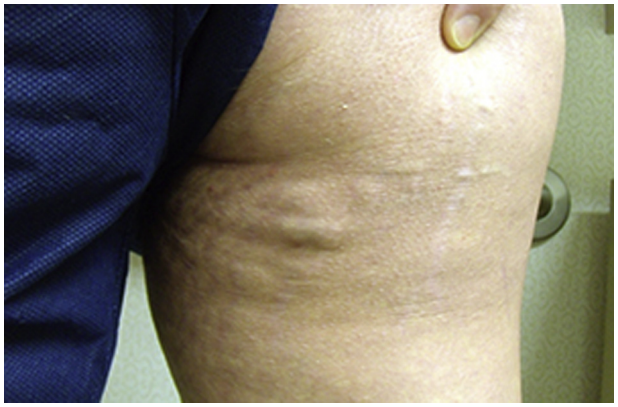

Figure 2. Varicosity typically extends along the medial aspect of the medial to posterior upper thigh. Courtesy of Department of Vascular Interventional Radiology, Duke University Medical Center.

Table 1. Differential diagnosis for pelvic congestion syndrome

Gynecological
■ Endometriosis
■ Chronic pelvic inflammatory disease
■ Leiomyoma
■ Adenomyosis
■ Pelvic congestion syndrome
Gastrointestinal
■ Irritable bowel syndrome
■ Diverticulitis
■ Diverticulosis
■ Meckel diverticulum
Renal/urological
■ Interstitial cystitis
■ Abnormal bladder function
■ Chronic urethritis
■ Nutcracker syndrome
Neuromuscular/orthopedics
■ Fasciitis
■ Nerve entrapment syndrome
■ Hernias
■ Scoliosis
■ Spondylolisthesis
■ Osteitis pubis
Psychological
■ Somatization
■ Psychosexual dysfunction
■ Depression

The review of systems should involve a thorough discussion regarding sleep patterns, lifestyle (does the pain affect activities of daily living), menstrual pattern, dyspareunia, urologic dysfunction, and any gastrointestinal issues. Irritable bowel syndrome has been reported in 65–79% of women with chronic pelvic pain (Gelbaya, Bch, El-Halwagy, & Bch, 2001; Gunter, 2003). All previous consultations, as well as diagnostic or therapeutic interventions, should be reviewed. Inquire about any previous contrast media examinations and possible reactions, allergy history, and medication use (over the counter and prescribed).

A thorough physical examination should include the neurologic (evaluating the thoracolumbar spine), cardiovascular, pulmonary, and vascular system (evidence of varicosities in the lower pelvis, buttocks, and