

Clinical Presentation, Patient Assessment, Anatomy, Pathophysiology, and Imaging of Pelvic Venous Disease

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Abstract

Pelvic venous disorders (PeVDs) can result in several different clinical presentations, but can be challenging to distinguish from other etiologies of chronic pelvic pain (CPP). Clinical evaluation of CPP patients optimally should be performed in a multidisciplinary fashion and patients who may have PeVD should be referred for consultation with a vascular interventionalist whose evaluation would utilize an imaging workup to search for pelvic varices. Additionally, it is critical to quantify the quality-of-life effects of all CPP to determine the impact on the patient's overall health. Diagnostic imaging, including transabdominal and transvaginal ultrasound, computed tomography, magnetic resonance imaging, and venography, can be utilized to identify pelvic varices, as well as venous reflux and obstruction leading to CPP. The use of the SVP tool is important to classify PeVD patients based on their clinical symptoms, varicose veins, and pathophysiology for precise clinical communication and for reporting clinical research. The goal of this publication is to delineate the clinical presentation, anatomy, pathophysiology, and imaging evaluation of patients with CPP suspected of having PeVD.

Keywords

- ▶ pelvic venous disease
- ▶ pelvic congestion
- ▶ diagnostic imaging
- ▶ interventional radiology

Chronic pelvic pain (CPP) represents a diagnostic and therapeutic challenge to all physicians who encounter it, but more importantly it is a burden to affected patients resulting in significantly decreased quality of life (QoL). Cost of evaluation and treatments for CPP are estimated per year at approximately \$2.8 billion, and often fail to result in a definitive diagnosis.¹ Recent studies have shown that around 20% of diagnostic laparoscopies are performed to evaluate for unknown causes of CPP.² Diagnostic imaging modalities such as ultrasound (US), computed tomography (CT), and magnetic resonance imaging (MRI) can result in improved diagnostic ability as a less invasive approach.

Pelvic venous disorder (PeVD) is an underappreciated cause of CPP. Favorable outcomes from ovarian vein emboli-

zation were first reported in the 1990s,^{3,4} and although multiple large case series have demonstrated durable clinical improvement and safety, questions regarding its value and appropriate patient selection continue to exist resulting in inconsistent procedural insurance coverage and acceptance of intervention among the gynecology and CPP communities. PeVD should be considered in the spectrum of addressable pathologies resulting in CPP. An improved understanding of the various causes for PeVD, consensus diagnostic criteria, as well as outcomes data from interventional endovascular strategies will result in enhanced outcomes and broader acceptance in the CPP community.

The goal of this article is to provide an overview of clinical manifestations, pathophysiology, patient evaluation, and

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