When And How Should Pelvic Venous Compression Syndromes Be Treated

David L. Gillespie MD, RVT, FACS
Chief, Division Vascular and Endovascular Surgery
Heart and Vascular Center
Southcoast Health Systems
Fall River, MA

Disclosures
• Consulting Agreements
  – Volcano Corps
• Medical Advisory Board
  – Volcano Corps

Pelvic Pain
• Pelvic pain may be due to many conditions in the pelvis,
• pelvic venous causes often overlooked
• Physicians unfamiliar
• usually is attributed to
  – Ovarian vein reflux
  – Internal iliac vein reflux
  – Aortomesenteric compression

Pelvic Venous Compression

The pelvic venous syndromes: analysis of our experience with 57 patients.
Scultetus AH, Villavicencio JL, Gillespie DL, Kao TC, Rich NM.

Venous outflow obstruction
Non-Thrombotic
• compression of left common iliac vein by right common iliac artery
  – secondary band or web formation
• classically found in younger females
  – not uncommon in males
  – elderly patients
  – may involve the right limb.
• more common cause of venous obstruction than previously thought.
Endovascular stenting in the treatment of pelvic congestion syndrome caused by nutcracker syndrome: lessons learned from the first five cases.


- reported at the European Venous Forum
- series of patients with PCS
- treated with venous stenting,
  - arterial compression of the iliac vein 32
  - post-thrombotic lesions 8

Venous angioplasty and stenting improve pelvic congestion syndrome caused by venous outflow obstruction

Stephen F. Daugherty, MD, FACS, FACPh, RVT,a and David L. Gillespie, MD, FACS, RVT,b Clarksville, Tenn; and Fall River, Mass J Vasc Surg: Venous and Lym Dis 2015;3:283-9

- 19 patients w/ LE pain, edema, and/or varicose veins
- all patients described their pelvic symptoms as their dominant complaint.
- Ultrasound and CT suggested moderate to severe pelvic venous compression of the left CV in 18 patients and a high-grade stenosis of the suprarenal IVC in one patient.
- Venography showed outflow obstruction with pelvic collaterals, and intravascular ultrasound confirmed focal severe stenosis of the involved vein.

Terrarecon analysis of CTA/CTV

>90% correlation with IVUS IF contrast bolus well timed

Morphologic Assessment of Venous Stenoses Intravascular Ultrasoundography (IVUS)

Morphologic Assessment of Venous Stenoses Intravascular Ultrasoundography (IVUS)
Venous angioplasty and stenting improve pelvic congestion syndrome caused by venous outflow obstruction

Stephen F. Daugherty, MD, FACS, FACPh, RVT,a and David L. Gillespie, MD, FACS, RVT,b Clarksville, Tenn; and Fall River, Mass

- 19 patients were treated with stents for severe venous outflow obstruction
- Follow-up of 1 to 59 months (median, 11 months)
- Complete resolution of pelvic pain in 15 of 19 patients
- Dyspareunia in 14 of 17 sexually active patients.
- Of pts LE pain or edema before treatment the 13-15 had complete resolution after treatment.
- Imaging follow-up by ultrasound or CT showed 16 of the stents to be widely patent.

Half of treated pts presented with LE complaints and were unaware that their pelvic symptoms might be related to their LE symptoms.
A targeted questionnaire and interview by a female nurse identified the dominant pelvic symptoms at the initial office visit.
The patients often had not associated their pelvic symptoms with a venous problem and were reserved about answering questions about pelvic symptoms until they were educated about pelvic venous disorders.
Venous angioplasty and stenting improve pelvic congestion syndrome caused by venous outflow obstruction
Stephen F. Daugherty, MD, FACS, FACPh, RVT,a and David L. Gillespie, MD, FACS, RVT,b Clarksville, Tenn; and Fall River, Mass.J Vasc Surg: Venous and Lym Dis 2015;3:283-9

• The other half of the pts presented on referral from other physicians who had a clinical suspicion
• sometimes supported by clinical findings of vulvar varicosities or ultrasound, CT, or laparoscopic findings of enlarged pelvic veins.

• Many patients with PCS have undergone gastrointestinal, urologic, and gynecologic evaluations before they reach a vascular specialist.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Complex</th>
<th>Partial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pelvic angioplasty</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Y-V graft</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>1.4-1.6 mm venous</td>
<td>12</td>
<td>2</td>
</tr>
</tbody>
</table>

CONCLUSIONS

• Pelvic Congestion Syndrome
  — may result from outflow obstruction of the iliac veins or the IVC
  — as well as ovarian vein reflux

• Venous angioplasty and stenting
  — provide excellent short-term results

• Pelvic venous obstruction
  — as clinical awareness and imaging techniques improve
  — will be recognized more frequently

• There is a great need for education
  — of clinicians and imaging specialists
  — identify patients whose QOL may be greatly improved
  — correct diagnosis and treatment of abdominal or pelvic venous obstruction.