Well-recognized venographic signs of significant iliac vein compression in asymptomatic young volunteers

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Disclosure

Speaker name:

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I have the following potential conflicts of interest to report:

- Consulting: Cook medical; Optimed GmbH; Bard; Volcano/Philips; Straub; Bentley; Vesper Medical;
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

I do not have any potential conflict of interest
May-Thurner/NIVL/Venous Compression

- 50% stenosis on venography
  - Multiple angulations

- 50% stenosis on IVUS
  - Fibrotic spurs

- Angiographic signs
  - Collaterals
  - Pancaking
  - Translucency/impression of the common iliac artery
Debate

• “False-positives” on CT well-known
• Arbitrary thresholds on angio and IVUS
• No relation with hemodynamics
• No causality between lesion and clinic
• Position of patient influences lesion severity

• Thus: potential overtreatment due to angiographic and IVUS findings?
Study design

- 20 healthy subjects (asymptomatic for venous)
  - Exclusion CEAP $\geq C2$/VCSS $\geq 2$
- Left groin access, 6F
- AP and lateral angiography 10/5
- Angiographic signs scored
  - Collaterals, CIV compression, lumen deformity, translucency due to CIA
Results

<table>
<thead>
<tr>
<th>Table 1. Demographics of included subjects.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years (Median, IQR)</td>
<td>21 (20–22)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Females, N (%)</td>
<td>16 (80)</td>
</tr>
<tr>
<td>Males, N, %</td>
<td>4 (20)</td>
</tr>
<tr>
<td>Venous history, N,%</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Smoking, N,%</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Abdominal wall collateral, N,%</td>
<td>0 (0)</td>
</tr>
<tr>
<td>CEAP</td>
<td></td>
</tr>
<tr>
<td>C0, N, %</td>
<td>16 (80)</td>
</tr>
<tr>
<td>C1, N, %</td>
<td>4 (20)</td>
</tr>
<tr>
<td>&gt; C2, N, %</td>
<td>0 (0)</td>
</tr>
<tr>
<td>VCSS</td>
<td></td>
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<tr>
<td>0—1, N, %</td>
<td>20 (100)</td>
</tr>
<tr>
<td>≥2, N, %</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

*N = number; CEAP = Clinical; aetiological; anatomic; and pathophysiological; VCSS = Venous Clinical Severity Score.*
Results
Results

• 16 (80%) showed at least two signs indicative of May-Thurner compression

• In the remaining subjects, three (15%) had narrowing of the CIV without collaterals

• One (5%) had no obstructive signs.
Results
Significance

- Patients with varicosities
  - 78% have reflux only
  - 8% have obstruction only
  - 14% have both
  (Cesarone, Angiology, 2012)

- Overtreatment in about 60%
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