Chronic venous disease - Any manifestation of venous disease

Chronic venous insufficiency - Skin changes associated with venous hypertension

Varicose Veins 20+ million
Swollen Leg 6 million
Skin Changes 1 million
Skin Ulcer 500,000

Clinical Evaluation of CVD

Step 1 - The History

- Primary symptoms
  - Pain / aching / swelling
  - Sensation of (> 5% volume increase) or visible swelling (>8%)
  - Itching
  - Phlebalgia (pain at the site of a visible vein)

- Atypical symptoms
  - Resting pain with weight bearing
  - Pelvic pain, urinary symptoms, dyspareunia (Pelvic varies)

- Exacerbating factors
  - Worse in the heat
  - Relieved with elevation

- Past History
  - pregnancies
  - Previous acute DVT
  - Compression use
  - Previous vein procedures

Venous Symptoms

Carpentier PH, J Vasc Surg 2007

- Comparison of
  - Leg symptoms with CVD signs, and (+) reflux (n = 123)
  - Leg symptoms without CVD signs and (-) reflux (n = 94)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Likelihood Ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensation of heavy legs</td>
<td>2.04</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Sensation of swollen legs</td>
<td>2.17</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Itching</td>
<td>9.67</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>&quot;Impatient&quot; legs</td>
<td>4.45</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Phlebalgia</td>
<td>22.91</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Not present when waking up</td>
<td>1.45</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Worse in heat</td>
<td>2.75</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Clinical Evaluation of CVD

Step 2 - Physical Exam

- Abnormal veins
  - Varicose veins
    - > 4 mm diameter
    - Palpable
    - No skin discoloration
  - Reticular veins
    - < 4 mm diameter
    - Not palpable
    - Blue discoloration
  - Telangiectasias
    - < 7 mm diameter
    - Red to purple
    - Main saphenous trunks rarely involved
Clinical Evaluation of CVD

**Step 2 - Physical Exam**

- Location & distribution of veins
  - Typical truncal locations
    - GSV
    - AASV
    - SSV
  - Atypical locations
    - Vulva, perineum, gluteal cleft
    - Lateral marginal vein
- Groin & abdominal wall collaterals
- Distribution of edema
  - Foot & toes – suspect lymphedema
  - Calf
  - Thigh – suspect proximal obstruction
- Pulses & ABI (cautious compression < 0.6)

**Skin & Subcutaneous Tissue**

- Hyperpigmentation
- Venous eczema
- Corona phlebectatica
- Atrophie blanche
- Ulceration

**Step 3 - Venous Duplex Ultrasound**

**Step 4 - Does the presentation fit the U/S?**

- The veins don’t fit
  - Pelvic sources of reflux
    - Labia
    - Perineum
- The symptoms don’t fit
  - Venous malformations
    - Swelling
    - Recurrent ulceration
    - Venous claudication

**Step 5 - Putting it All Together – Venous Classification Instruments**

**Why does it matter?**

- To define populations with similar clinical features
- Natural history
- Response to treatment

**Evaluative Instruments**

- Key, stable features
- Large, between subject variation

**Discriminative Instruments**

- Dynamic features
- Small, within subject variation

**Defining Populations - CEAP**

Eklof et al; J Vasc Surg 2004

- **C** - Clinical class (C0 - C6)
  - C0: No visible or palpable signs of venous disease
  - C1: Telangiectasias or reticular veins
  - C2: Varicose veins
  - C3: Edema
  - C4: Changes in skin and subcutaneous tissue
  - C5: Pigmentation or eczema
  - C6: Lipodermatosclerosis or atrophic blanche
  - C7: Healed venous ulcer
  - C8: Active venous ulcer

- **E** - Etiology
  - Primary (P)
  - Secondary (S)
  - Congenital (C)

- **A** - Anatomy
  - Superficial (S)
  - Deep (D)
  - Perforate (P)

- **P** - Physiology
  - Reflux (R)
  - Obstruction (O)
**Patient Reported Outcomes**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Items</th>
<th>Spectrum</th>
<th>Validated</th>
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</thead>
<tbody>
<tr>
<td>SCOR-V</td>
<td>46</td>
<td>C0-C3</td>
<td>Responsiveness not validated</td>
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<tr>
<td>Veines-QoL</td>
<td>26</td>
<td>C1-C6</td>
<td>English, French, Italian</td>
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<tr>
<td>AVVQ</td>
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<tr>
<td>CIVIQ</td>
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<td>“Venous Insufficiency”</td>
<td>English, French</td>
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<tr>
<td>VVSymQ</td>
<td>5</td>
<td>C2-C3</td>
<td>English</td>
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</tbody>
</table>

**Conclusions**

- **Modern venous disease management**
  - **History & exam**
    - Non-specific symptoms but some are more likely vein related
    - Itching
    - “Phlebalgia” – Tenderness over varicosities
    - Worsening over the day and in hot weather
  - Exam focused on
    - Typical / atypical distribution of varices & edema
    - Skin finding
    - Duplex ultrasound
  - Beware when symptoms /exam are discordant with U/S
- **Know your toolkit**
  - CEAP – Classifying patients
  - VCSS – Following change over time
  - Patient reported outcomes – This is largely a quality of life disease!