Evidence Based Medicine: Concomitant or Sequential Phlebectomy for Varicosities with Venous Ablation?

2015 UCSF Vascular Symposium

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History of varicose vein surgery

- Greek papyrus (ca 1550 BCE) contains the oldest description of varicose veins
- Classic therapy: from Hippocrates to Sir Astley Cooper
  - “I see the cure is not worth the pain” – Caius Marius
- Saphenous vein ligation and stripping
- Sclerotherapy
- Minimally invasive treatments saphenous
  - Thermal ablation (laser or radiofrequency)

Concerning the recent randomized controlled trial in the New England Journal of Medicine comparing the quality of life in patients with venous disease of the legs following foam, laser and surgical treatment (CLASS study) which of the following is true?

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A. Laser therapy consisted of truncal ablation of saphenous veins under local anesthetic followed by foam sclerotherapy of residual varicosities 6 weeks later</td>
<td>32%</td>
</tr>
<tr>
<td>B. Foam was applied according to the Tessari technique at a ratio of 0.5mL sodium tetradecyl sulfate to 1.5mL of air to treat both the saphenous veins and the varicosities</td>
<td>4%</td>
</tr>
<tr>
<td>C. Surgery consisted of proximal ligation and stripping of the GSV with concomitant stab phlebectomies to treat residual varicosities</td>
<td>21%</td>
</tr>
<tr>
<td>D. Quality of life measures at six months did not differ among the three groups</td>
<td>32%</td>
</tr>
<tr>
<td>E. All of the above</td>
<td>32%</td>
</tr>
</tbody>
</table>

Disclosures

- None
What about the superficial varicosities?

- In the era of general anesthesia for saphenous ligation and stripping, concomitant stab phlebectomy was typical
- The new paradigm of minimally invasive therapies have brought the procedure to the clinic, hence an interest in a procedure that could be tolerated in an office setting

### Phlebectomy technologies

- Stab phlebectomy / microphlebectomy
- Light assisted phlebectomy
- Light assisted power phlebectomy
- Mechanical phlebectomy
- Foam sclerotherapy

*All can be done with local anesthesia*
50 patients randomized to saphenous laser ablation and concomitant vs sequential phlebectomy. 16/24 (67%) treated with EVLA alone had subsequent phlebectomy (vs 1/25 in concomitant group).

101 patients randomized to saphenous RFA with concomitant vs sequential phlebectomy. 18/50 (36%) treated with RFA alone had subsequent phlebectomy (vs 1/51 in concomitant group).

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Predicting need for concomitant phlebectomy

Table 4. Varicose vein class and EVLT results.

<table>
<thead>
<tr>
<th>Class</th>
<th>Complete resolution (E)</th>
<th>Residual varicosities (G/P)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-II</td>
<td>64 (48.1%)</td>
<td>69 (51.9%)</td>
<td>133</td>
</tr>
<tr>
<td>III-IV</td>
<td>51 (30.2%)</td>
<td>118 (69.8%)</td>
<td>169</td>
</tr>
</tbody>
</table>

*p = 0.002

38% of limbs (115/302) had complete varicose vein resolution

- Of patients with **C2 disease** and residual varicosities, 85.7% (132/155) requested a secondary procedure
- Of patients with **C3-6 disease** and residual varicosities, 39.4% (13/33) requested a secondary procedure

Conclusions

- Varicose vein treatment has gone from a “fool me once…” surgery to an office based, outpatient procedure
- Phlebectomies can be safely performed in a concomitant or sequential fashion
- Consider concomitant phlebectomy for extensive, large (>6mm) varicosities and especially in C2 disease