Compression Post-Ablation is Unnecessary

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Disclosures: Nothing Relevant

Endovenous Ablation

• Minimally invasive technique for treating reflux in the GSV
• Laser = Radiofrequency

Compression

• Traditionally prescribed after ablation (previously with no great evidence) showing significant benefit
• Uncomfortable leading to low compliance, may cause skin irritation, decreased patient satisfaction

Literature – Vein Stripping

Strength
-15mmHg vs. 40mmHg
-Bruising, pain, phlebitis

Duration
-1 week vs. 3 weeks
-Pain, complications, time to return to work, patient satisfaction

Compression vs. No Compression
-Limb edema, pain, complications, time to return to work

Literature – Vein Stripping

The Optimal Duration of Compression Therapy Following Varicose Vein Surgery: A Meta-analysis of Randomized Controlled Trials
M. P. Huang, S.-C. Chen, T.-H. Ko, C.-H. Lin, S.-K. Tsai

-Meta-analysis 3-10d vs 3-6wks
-No benefits to long term compression therapy in regards to pain, edema, complications, time off from work
Compression After Endovenous Ablation

**Compression Stockings after Endovenous Laser Ablation of the Great Saphenous Vein: A Prospective Randomized Controlled Trial**

<table>
<thead>
<tr>
<th>Time</th>
<th>Group A</th>
<th>SD</th>
<th>Group B</th>
<th>SD</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 h</td>
<td>1.2</td>
<td>1.6</td>
<td>3.4</td>
<td>2.1</td>
<td>NS</td>
</tr>
<tr>
<td>1 week</td>
<td>1.7</td>
<td>2.1</td>
<td>2.0</td>
<td>2.0</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>6 weeks</td>
<td>1.6</td>
<td>1.3</td>
<td>1.9</td>
<td>2.0</td>
<td>NS</td>
</tr>
</tbody>
</table>
| 2 day      | 7 day   | 100% GSV occlusion at 3 months

**RESULTS**

- At 1 week, (SF-36) physical function and vitality both better in Group B (7 day compression)

**A randomised controlled trial comparing compression therapy after radiofrequency ablation for primary great saphenous vein incompetence**

- Randomized to 4h vs 72h of compression
- No difference in leg edema, pain
- Shorter duration compression had less complications (blistering, skin irritation)

**Role of compression stockings after endovenous laser therapy for primary varicosis**

- 111 patients randomized to 24h of bandages vs. 2 weeks of 30-40mmHg compression
- Primary outcome: Pain scores (VAS)
- Aberdeen Varicose Vein Questionnaire, RAND 36 Item Health Survey Score, Patient satisfaction, time before returning to work, Adverse events.
Prospective Randomized Controlled Trial

- Goal: Investigate the therapeutic role of compression after ablation

**Methods**

- Randomized patients into thigh high compression stockings (30-40mmHg) for 7d vs. No compression

**Inclusion Criteria**

- Documented GSV reflux
- CEAP 2,3,4,5 disease
- Palpable pedal pulse or ABI > 9

**Exclusion Criteria**

- Previous ipsilateral intervention
- Hypercoagulable state
- History of DVT
- Concomitant Phlebectomy

**Endpoints**

- Efficacy of ablation based on duplex evidence of closure
  - 1 week, 3-6 months, 1 year
- Improvements in QOL (CIVIQ-2) and Venous Clinical Severity Scores (VCSS)
  - Baseline, 1 week, 2 weeks, 1 month, 3-6 months, 1 year
- Pain – (from 0 to 10 on visual analogue pain scale daily for first 7 days)
- Bruising – (pictures taken at 1 week POV)

**Results**

- 75 pts (85 limbs) were randomized
  - Compression 46 limbs (54%) vs No Compression 39 limbs (46%)
  - 73% women, median age 52 y/o
  - Radiofrequency ablation (91%) and GSV laser (9%)

<table>
<thead>
<tr>
<th>CEAP</th>
<th>Compression</th>
<th>No Compression</th>
</tr>
</thead>
<tbody>
<tr>
<td>varicose veins</td>
<td>29%</td>
<td>27%</td>
</tr>
<tr>
<td>edema</td>
<td>44%</td>
<td>48%</td>
</tr>
<tr>
<td>skin changes</td>
<td>12%</td>
<td>14%</td>
</tr>
<tr>
<td>healed ulcer</td>
<td>10%</td>
<td>6%</td>
</tr>
</tbody>
</table>

P = 0.567

**Chronic Venous Insufficiency Questionnaire CIVIQ-2**
**QOL and CIVIQ-2**

![Graph showing QOL and CIVIQ-2 scores over weeks after endovenous ablation.](image)

- **QOL**
  - Scores range from 0 to 100, with higher scores indicating better quality of life.
  - Weeks 0, 1, 2, 4 show a decrease in scores for non-compression stockings compared to compression stockings, but the difference is not statistically significant (P=NS).

- **CIVIQ-2**
  - Scores are shown as a percentage of baseline screening score.
  - Weeks 0, 1, 2, 4 show a decrease in scores for non-compression stockings compared to compression stockings, with the difference being statistically significant (P=NS).

**Venous Clinical Severity Score (VCSS)**

![Graph showing Venous Clinical Severity Score.](image)

- **Compression**
  - Score: 4.8 → 2.4
  - P=NS

- **No Compression**
  - Score: 4.5 → 1.9
  - P=NS

**Bruising**

- No significant difference in bruising
  - Compression: 1.2 (± 0.8)
  - No compression: 1.4 (± 0.9)
  - P = 0.560

**Post-procedure Pain**

![Graph showing Post-procedure Pain scores over days after endovenous ablation.](image)

- Pain scores range from 0 to 10, with lower scores indicating less pain.
- A trend towards better pain control with compression is observed (P=0.03).

**GSV Closure**

- 100% Duplex occlusion in both groups with all available follow-up (mean f/u 24 months).
CONCLUSIONS

• Patients w/ compression may receive a small benefit in regards to pain control during first week post procedure

• Compression therapy does not significantly affect patient reported and clinical outcomes and may be an unnecessary adjunct following GSV ablation

Thank You