Management Of Very Large Saphenous Veins

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Study Background

Surgical dictum (prejudice):
Patients presenting with signs and symptoms of chronic venous disorder, found to have great saphenous vein (GSV) reflux measuring >8-10mm in diameter MUST have concomitant high ligation to enhance efficacy and avoid DVT/thrombus extension.

Study Background

Patients presenting with signs and symptoms of chronic venous disorder, found to have great saphenous vein (GSV) reflux requiring ablation were treated with endovenous thermal ablation using radiofrequency or laser energy.

Patient Selection

• Some patients had GSVs larger than the diameter suggested by the thermal ablation equipment manufacturers, either over long segments or in shorter aneurysmal segments.

Hypothesis:

Large diameter or aneurysmal greater saphenous veins can be successfully ablated using currently available thermal ablation equipment.
Methods

46 Patients with vein diameters or aneurysmal segments measuring greater than 8mm in the supine position

Range 8-21mm
Mean 13.9 mm

Methods (cont’d)

All 46 patients were ablated under local, ultrasound-guided, tumescent anesthesia supplemented with oral Diazepam

<table>
<thead>
<tr>
<th>TUMESCENCE</th>
<th>Diazepam</th>
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<tbody>
<tr>
<td>Range: 75cc-350cc</td>
<td>Range 5-20mg</td>
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<tr>
<td>Mean: 212cc</td>
<td>Mean 10.2mg</td>
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Methods (cont’d)

All patients had Duplex ultrasound examinations pre-op, intra-op, immediately post-op, and at intervals of 1 & 6 wks, and 3, 6, & 12 months

Methods (cont’d)

All patients received adjunctive ultrasound-guided, foam sclerotherapy for the distal greater saphenous vein and major tributaries

All patients used short-stretch bandages and compression hose for 3 weeks post-op

Follow-up

LAST SCAN

Range: 1-16 mos
Mean: 4.5 mos

Results

44/46 Patients successfully* closed

*Successful ablation defined as no flow detectable by Duplex in any portion of the treated segment of the greater saphenous vein
**Discussion**

Intraoperative technical factor considered to be most important in achieving successful ablation of the greater saphenous vein using thermal ablation:

Tumescent anesthesia delivered directly into the saphenous sheath under ultrasound guidance

**Discussion (cont’d)**

Factors examined and found NOT to be important in achieving successful ablation:

- Vein diameter, pullback rate, length of large segment, patient's age

**Conclusions:**

Great saphenous veins up to 21mm in diameter can be successful ablated with thermal ablation techniques

Well-placed tumescent anesthesia, delivered under ultrasound guidance into the saphenous sheath, appears to be the key element necessary for success

**Conclusions (cont’d)**

Since this study, GSVs up to 39mm have been successfully ablated

It is unclear if an upper diameter size limit exists which would preclude use of a thermal ablation device

**Treating Varicose Veins: The Saline Flush Method**
1 week post-Procedure