Should you use foam for telangiectasia or reticular veins: where is the evidence?

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Conflict of interest: none
Disclosures: none

Variables
- Approach to underlying reflux
- Choice of sclerosant
- Volume of sclerosant
- Concentration of sclerosant
- Liquid or foam
- Direct vision or ultrasound guided
- Gauge of needle/type of syringe
- Compression regimen
- Blood release
- Adjunctive laser

Sclerotherapy indications
- European guidelines
  - “Sclerotherapy, liquid or foam, is a safe and effective method to treat telangiectasia, reticular veins and subcutaneous varicose veins”
- AVF Guidelines
  - “We recommend liquid or foam sclerotherapy for telangiectasia, reticular and varicose veins”
    - Gloviczki et al

Which sclerosant

<table>
<thead>
<tr>
<th>Indications</th>
<th>STS</th>
<th>Polidocanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varicose veins &lt;8 mm</td>
<td>0.5%-1.0%</td>
<td>0%-3%</td>
</tr>
<tr>
<td>Reticular veins 2-4 mm</td>
<td>0.25%-0.5%</td>
<td>0.01%-0.2%</td>
</tr>
<tr>
<td>Telangiectasia 0.1-2.0 mm</td>
<td>0.125%-0.25%</td>
<td>0.25%-0.6%</td>
</tr>
</tbody>
</table>

Gloviczki et al, AVF guidelines

Which sclerosant

<table>
<thead>
<tr>
<th>Indications</th>
<th>STS</th>
<th>Polidocanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large varicose veins</td>
<td>3.0%</td>
<td>3%</td>
</tr>
<tr>
<td>Medium-sized varicose veins</td>
<td>1%-3%</td>
<td>2%-3%</td>
</tr>
<tr>
<td>Small varicose veins</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Reticular veins</td>
<td>Up to 0.5%</td>
<td>0.5%-1%</td>
</tr>
<tr>
<td>Telangiectasia (spider veins)</td>
<td>0.1%-0.2%</td>
<td>0.25-0.5%</td>
</tr>
</tbody>
</table>

Rabe et al, European guidelines
RCTs: Liquid or foam for truncal veins

<table>
<thead>
<tr>
<th>Study</th>
<th>Number of saphenous veins</th>
<th>Sclerosant</th>
<th>Follow up</th>
<th>Success rate: liquid</th>
<th>Success rate: foam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demagny 2002, Phlebologie</td>
<td>300</td>
<td>STS 1.5-3%</td>
<td>6 months</td>
<td>47%</td>
<td>67%</td>
</tr>
<tr>
<td>Belcaro 2003, Angiology</td>
<td>286</td>
<td>STS 3%</td>
<td>10 years</td>
<td>78%</td>
<td>80%</td>
</tr>
<tr>
<td>Raymond-Martimbeau 2003, UIP abstract</td>
<td>47</td>
<td>STS 3%</td>
<td>1 year</td>
<td>60%</td>
<td>81%</td>
</tr>
<tr>
<td>Hamel-Desnos 2003, Dermatol Surg</td>
<td>95</td>
<td>POL 3%</td>
<td>2 years</td>
<td>40%</td>
<td>84%</td>
</tr>
<tr>
<td>Yamaki 2004, Dermatol Surg</td>
<td>77</td>
<td>POL 3%</td>
<td>1 year</td>
<td>18%</td>
<td>68%</td>
</tr>
<tr>
<td>Rabe 2008, JVS</td>
<td>106</td>
<td>POL 3%</td>
<td>1 year</td>
<td>27%</td>
<td>69%</td>
</tr>
</tbody>
</table>

RCTs: Liquid or foam for reticular veins and telangiectases

<table>
<thead>
<tr>
<th>Study</th>
<th>Number of patients</th>
<th>Sclerosant</th>
<th>Follow up</th>
<th>Patient satisfaction: liquid</th>
<th>Patient satisfaction: foam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benigni 1999, Phlebologie</td>
<td>20 (pilot study)</td>
<td>POL 0.25% (up to 5 sessions)</td>
<td>75 days</td>
<td>60%</td>
<td>80%</td>
</tr>
<tr>
<td>Kern 2004, Dermatol Surg</td>
<td>96</td>
<td>Lateral thigh reticular veins/telangiectasia</td>
<td>POL 0.25% (1 treatment only) (3rd arm glycerine)</td>
<td>5 weeks</td>
<td>59%</td>
</tr>
</tbody>
</table>

Foam vs liquid for tributaries/reticular veins/telangiectasis

- 75 patients, each their own control
- 0.5 ml polidocanol mixed up to 2ml foam
- 0.5ml polidocanol liquid
- Foam was more effective initially but had more local side effects
- No difference after 3 months

Ultrasound or direct injection?

- Foam is easy to see on ultrasound
- Simple to direct it to the target area

Before and after U/S guided foam
Foam vs liquid for tributaries/reticular veins/telangiectasis

- 100 patients with telangiectasis/small vvs < 4mm
  - 1st 50 treated with 0.25-0.5% polidocanol foam
  - 2nd 50 treated with 0.25-0.5% polidocanol liquid

- No difference in efficacy
- No difference in side effects

Uncu, Phlebology 2010

Foam vs liquid for tributaries/reticular veins/telangiectasis

- Double-blind prospective study
- 20 patients, each leg treated with different sclerosant
  - Polidocanol (0.5-1%) liquid and/or foam
  - STS (0.25-0.5%) liquid and/or foam

- No difference between sclerosant, liquid or foam, all were equally effective

Rao et al, Dermatol Surg, 2005

Compression

- Huge variation in practice
- Weight of evidence in favour of compression
- 29 patients with bilateral sclero for telangiectasis
  - 1 week class 2
  - 1 week class 2 plus 3 weeks of class 1
  - Prolonged compression significantly reduced pigmentation compared to control leg

Nootheti et al, Dermatologic Surgery, 2009

Post-sclerotherapy pigmentation

Blood release

Conclusions

- Foam better than liquid for truncal veins
- No clear evidence either way for reticular veins and telangiectasis
- Some evidence that foam more effective but more prone to skin marks
- Releasing trapped blood helps
- High resolution U/S invaluable