Should We Consider Diagnostic Deep Venous IVUS During Saphenous Ablation?

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• No relevant disclosures
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  • BD, CSI, Medtronic, Boston Scientific, Philips

Prevalence of Venous Disease

Varicose Veins
80+ million

Swollen Leg
10 million

Skin Changes
2 million

Skin Ulcer
1 million

First Varicose Vein Surgery ~ 86 B.C.

Caius Marius, a Roman tyrant who died in 86 B.C., underwent an operation for his varicose veins.

Marius is praised for both temperance and endurance, of which latter he gave a decided instance in an operation of surgery. For having as it seems, both his legs full of great tumors, and disliking the deformity, he decided to put himself into the hands of an operator. When, without being tied, he stretched one of his legs, and silently, without changing countenance, endured most excessive torments in the cutting, never either flinching or complaining; but when the surgeon went to the other, he declined to have it done, saying

“I see the cure is not worth the pain.”


Clinical Results Summary

<table>
<thead>
<tr>
<th>Reference</th>
<th>Follow-Up</th>
<th>Efficacy Rate (reflux free)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weiss¹</td>
<td>2 years</td>
<td>90.5%</td>
</tr>
<tr>
<td>Rosenblatt²</td>
<td>2 years*</td>
<td>95.7%</td>
</tr>
<tr>
<td>Kistner³</td>
<td>1 year</td>
<td>97%</td>
</tr>
<tr>
<td>Whiteley⁴</td>
<td>1 year</td>
<td>99.2%</td>
</tr>
</tbody>
</table>

*Up to 2 years


²Rosenblatt, M. Treatment of venous insufficiency due to greater saphenous vein reflux with endovenous radiofrequency ablation. Abstract presented at the Society of Interventional Radiology, March 27-April 1, 2003, Salt Lake City, UT.


What to do with C4-C6 disease?

• IVUS During Saphenous Ablation: How, When, and Why?

Follow up on 97 patients at 5.5 years

- Place IVUS into the sheath
- Watch catheter pass through SFJ w/ transcutaneous U/S
- Watch IVUS as it passes into the IVC
Intravascular Ultrasound (IVUS)

- Boston Scientific
  - .014 4fr Field of view 6mm
  - .018 6fr Field of view 22mm
  - .035 8fr Field of view 60mm

- Volcano
  - .014 4fr Field of view 20mm
  - .018 5fr Field of view 24mm
  - .035 8fr Field of view 60mm

IVUS during GSV Ablation

- Consented 15 (C4 – C6 disease) patients undergoing GSV ablation to have diagnostic IVUS
- Obtained access with 7Fr VNUS Sheath
- Passed .018 Boston Sci or Volcano IVUS catheter into the IVC
- Technical success in all patients

IVUS during GSV Ablation

- No complications
- 4/15 had what appeared to be significant iliac vein compression
  - 1 patient agreed to move forward with iliac vein stenting (2nd setting)
  - 3 patients wanted to continue conservative measures (but did have the GSV ablated)
The Good......
• Can offer valuable information
• Easy and safe to do

The Bad......
• Passing IVUS Catheter +/- wire blindly
• Challenging anatomy or occlusive could hinder

and the Ugly.
• Not Reimbursed

Thank You

• Always happy to discuss offline– toddberland@gmail.com