Diagnostic Venous IVUS During Saphenous Ablation: How, When, and Why?

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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.

Calvin 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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weiss</td>
<td>2 years</td>
<td>90.5%</td>
</tr>
<tr>
<td>Rosenblatt</td>
<td>2 years*</td>
<td>95.7%</td>
</tr>
<tr>
<td>Kistner*</td>
<td>1 year</td>
<td>97%</td>
</tr>
<tr>
<td>Whiteley*</td>
<td>1 year</td>
<td>99.2%</td>
</tr>
</tbody>
</table>

Multi-center registry results show that of patients who are reflux-free at one year, 92% remain so at latest follow-up out to 5 years.

Reference:
What to do with C4-C6 disease?

- Diagnostic Venous IVUS During Saphenous Ablation: How, When, and Why?
  - No reimbursement

From the American Venous Forum

Combined saphenous ablation and iliac stent placement for complex severe chronic venous disease

Peter Neglais, MD, PhD, Kathleen C. Hollos, BA, and Sehadeh Reja, MD, Jackson, Miss

JOURNAL OF VASCULAR SURGERY
Volume 44, Number 4
October 2006

Follow up on 97 patients at 5.5 years

- Place IVUS into the sheath
- Watch catheter pass through SFJ with transcutaneous U/S
- Watch IVUS as it passes into the IVC

- 5Fr Laser
- 7Fr VNUS (RF)
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 10 (C4 and C5 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

- No complications
- 2/10 had what appeared to be significant iliac vein compression
  - 1 patient agreed to move forward with iliac vein stenting (2nd setting)
  - 1 patient 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