FATE OF GROIN AFTER RADIOFREQUENCY ABLATION OF VARICOSE VEINS

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Disclosure

I'm

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☐ I do not have any potential conflict of interest
Varicose Veins

Between 10% and 20% of the world population suffer from varicose veins in the lower extremities.

This has an important impact on health care costs.
Classic Saphenectomy
Neovascularisation and non-ligation of terminal tributaries of great saphenous vein (GSV) are main causes of recurrence after open surgery for varicose veins.
Modification

- Vin and Chleir 2012
- 3-S (saphenous section sclerotherapy)

- Cañizares Díaz, et al 2013
- **High crossectomy without vascular sectioning**
Increasingly competitive techniques in front of High-ligation and stripping

- Endovenous thermal ablation:
  - Radiofrequency
  - Endovenous Laser

→ Similar midterm results
→ Less side effects

High-ligation and stripping should not be considered as the gold standard nowadays
The endovascular procedures, without touching, groin can minimize the possibility of the neovascularisation.

Duplex ultrasound scan findings two years after great saphenous vein radiofrequency endovenous obliteration

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Objective: To assess the clinical and duplex ultrasound scan findings in the groin and thigh 2 years after great saphenous vein (GSV) radiofrequency endovenous obliteration (RFO).

Methods: Sixty-three limbs in 56 patients with symptomatic varicose veins and GSV incompetence were treated with RFO, usually with adjunctive stab-avulsion phlebectomies, and examined at a median follow-up of 25 months, by using a color-coded, duplex sonography protocol that mandated views in at least two planes of the saphenofemoral junction (SFJ) and its tributaries and at three GSV levels in the thigh.

Results: The commonest duplex finding in the groin was an open, competent, SFJ with a ≤5-cm patent terminal GSV segment conducting prograde tributary flow through the SFJ (82%). Despite the presence of a total of 104 patent junctional tributaries, SFJ reflux was uncommon, affecting only five limbs. GSV truncal occlusion was observed in 90% of treated GSVs. Limited segmental treatment was successful in three limbs with a midthigh reflux source well below competent terminal and subterminal valves. Six GSV trunks had partial or no occlusion, but only one refluxed. These were anatomical RFO failures (9.5%) but were clinically improved, including the refluxing limb. Neovascularity was not identified in any groin. Thigh varicosities were observed in 12 limbs, including telangiectasias and isolated small tributary branches. New varicosities, linked to refluxing thigh perforators (two), or patent SFJ tributaries (three), were present in five limbs.

Conclusion: RFO is the ideological opposite of high ligation without GSV stripping. It leaves physiologic tributary flow relatively undisturbed, does not incite groin neovascularity, eliminates the GSV as a refluxing conduit in >90% of limbs and has a 2-year, postadjunctive phlebectomy varicosity prevalence of 7.9%, with symptom score improvement in 95% of limbs with an initial score higher than zero. (J Vasc Surg 2004;39:189-95.)
However, it may increase the likelihood of the reflux terminal tributaries of great saphenous vein (GSV).
Patients and Methods:

This is a prospective study on all cases admitted to the vascular unit, King Fahd Hospital of University, Saudi Arabia who had more than 1 year follow up after RFA for varicose veins of GSV.
• Indication for RFA was CEAP C2-C6
• Contraindication: Diameter of long saphenous vein >15 mm
• ClosureFast (Covidien) catheter was used for RFA
• Catheter was advanced to 2 cm below the SF junction
• Stab avulsion below knee was performed
The objective of this study is to assess the groin, one year after great saphenous vein radiofrequency ablation (RFA) for varicose veins, to confirm the previous advantage and check for any other complications.
Follow up

• 1 week: complications eg. Hematoma, DVT
• 6, 12 months: Duplex ultrasonography

• Assessment of the groin was performed that mandated views at the saphenofemoral junction (SFJ) and its tributaries and check for presence of neovascularisation.
**Patient characteristic**

<table>
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<th>Value</th>
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<tr>
<td>Side</td>
<td>Rt/Lt 68/74</td>
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<tr>
<td>Class</td>
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<td>C2</td>
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</tr>
<tr>
<td>C5</td>
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</tr>
<tr>
<td>C6</td>
<td>3</td>
</tr>
<tr>
<td>BMI</td>
<td>31.73±8.26</td>
</tr>
<tr>
<td>GSV diameter</td>
<td>7.48±2.51</td>
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</table>
There was no reflux at SFJ with partial recanalisation of GSV in 16 (11%) cases.
Neovascularity was identified in 4(2.8%) limbs.
Junctional tributaries were patents in all and were dilated in 46(32%) limbs, with mean diameter 4.1mm±1.2.
<table>
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<tr>
<th>Age</th>
<th>48.26 ±10.11</th>
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<td>GSV diameter</td>
<td>8.2±2.1</td>
<td>6.4±1.9</td>
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<td>GSV recanalisation</td>
<td>10 (22%)</td>
<td>6 (6%)</td>
<td>0.00316</td>
</tr>
</tbody>
</table>
Conclusion
• RFA, does not incite groin neovascularity

• It eliminates the GSV as a refluxing conduit in >90% of limbs at one year.

• However, it disturbs physiologic tributary flow in >30% of cases.
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