How to prevent recurrences and complications after surgery for varicose veins

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No disclosure to declare
How to prevent recurrences and complications after surgery for varicose veins

1. Offer Endothermal Ablation

2. If unsuitable offer UGFS

3. If unavailable offer Surgery
How to prevent recurrences and complications after surgery for varicose veins

• Recurrence rate after surgery 20-30%

• Causes of REVAS
  – 29% technical or tactical errors
  – 29% neovascularizations

More than 50% of recurrent varicose veins originates from the previously operated SF Junction
How to prevent recurrences and complications after surgery for varicose veins

- How to reduce the incidence of REVAS:
  1. Accurate initial diagnosis to reduce tactical recurrences
  2. To be performed by trained surgeons to reduce technical recurrences
  3. Closure of the fossa ovalis
  4. Suture of the sapheno-femoral junction exposed endothelium with a non absorbable suture
  5. Stripping by invagination

N. Frings Relacs Study Arch Dermatol 2012
➢ > incidence of refluxing SFJ after EVLA at 2 years
How to prevent recurrences and complications after surgery for varicose veins
Perform less invasive surgical procedures when indicated

Traditional Surgery still has good results
Use it following modern concepts!

Rasmussen  *Randomized clinical trial comparing endovenous laser and stripping of the great saphenous vein*  *J Vasc Surg* 2013
✓Equal incidence of recurrence between surgery and EVLA

Van den Velden  *Five years results of a randomized clinical Trial of Conventional surgery, endovenous laser ablation and untrasound-guided Sclerotherapy in patients with great saphenous variscose veins*  *Br J Surg* 2015
✓Equal incidence of recurrence between surgery and EVLA; > UFGS

J. Brittenden  *A Randomized trial comparing treatments for varicose veins*  *Class Trial NEJM* 2014
✓Equal clinical results between Surgery, EVLA and UFGS
✓Less efficacy in the ablation of the saphenous trunk for UFGS

I.Flesskamper  *Endovenous laser ablation with and without high ligation compared high ligation and stripping: results of a multicentre randomized controlled trial with up to six years follow-up*  *Phlebology* 2014
✓Equal results at 6 years
How to prevent recurrences and complications after surgery for varicose veins

- DVT
- Damage of the saphenous or sural nerve
- Infections
- Haematomas
- Haemorrhage
- Vascular lesions (very rare)
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• DVT

— Incidence of about 1%: the routinely use of LMWH is not justified: to be given in stratified or at risk patients

• There is also evidence to suggest that those patients given DVT prophylaxis were not necessarily protected from the development of a DVT. One study reported that of the 20 out of 377 patients that developed a DVT, 14 had received prophylactic subcutaneous low molecular weight heparin.

— Immediate deambulation and Elastic stocking are the first mean of prevention

How to prevent recurrences and complications after surgery for varicose veins

- How to prevent neurological damages

<table>
<thead>
<tr>
<th>Stripping to the malleolus</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuriti Safeno-Corto</td>
<td></td>
</tr>
<tr>
<td>Wellwood</td>
<td>1975</td>
</tr>
<tr>
<td>Koyano</td>
<td>1988</td>
</tr>
<tr>
<td>Rutgers</td>
<td>1994</td>
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<table>
<thead>
<tr>
<th>Stripping to the knee</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Negus</td>
<td>1986</td>
</tr>
<tr>
<td>Rinvlin</td>
<td>1991</td>
</tr>
<tr>
<td>Kahn</td>
<td>1996</td>
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</tbody>
</table>
How to prevent recurrences and complications after surgery for varicose veins

• How to prevent neurological damages
  – Perform tailored stripping
  – Use an invaginating technique
  – Use a delicate dissection at the malleolus
How to prevent recurrences and complications after surgery for varicose veins

<table>
<thead>
<tr>
<th>Small saphenous vein</th>
<th>High ligation/Stripping</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVT</td>
<td>1.8 - 3.5 %</td>
</tr>
<tr>
<td>Sural nerve damage</td>
<td>2.1%</td>
</tr>
<tr>
<td>Paresthesias</td>
<td>1.7 - 34 %</td>
</tr>
<tr>
<td>numbness</td>
<td>28%</td>
</tr>
</tbody>
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How to prevent recurrences and complications after surgery for varicose veins

• Infections

  – Delicate dissection
  – The systematic use of antibiotics is not indicated
  – In case of large dissections or at risk patients a short-term prophylaxis may be indicated
How to prevent recurrences and complications after surgery for varicose veins

• Vascular Injuries

<table>
<thead>
<tr>
<th>Lesion</th>
<th>Pz.</th>
<th>%</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial damage</td>
<td>44</td>
<td>0 %</td>
<td>0 %</td>
</tr>
<tr>
<td>Arterial stripping</td>
<td>31,8</td>
<td>34 %</td>
<td></td>
</tr>
<tr>
<td>Amputation</td>
<td></td>
<td>16,6</td>
<td></td>
</tr>
<tr>
<td>Venous lesions</td>
<td>43</td>
<td>65.1</td>
<td></td>
</tr>
<tr>
<td>CFV damage</td>
<td></td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>CFV stripping</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Iatrogenic vascular injuries in varicose vein surgery: a systematic review**

How to prevent recurrences and complications after surgery for varicose veins

• How to prevent recurrences and complications?
  » Ambulatory basis
  » Local - tumescent anaesthesia
  » Delicate surgical act
  » Lower incidence of complications
• Thank you for your attention