Hemodynamic Approach on Venous Reflux (ASVAL)  

Does it work?  

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DOES ASVAL WORK?  

• Improvement on hemodynamics?  
• Improvement on symptoms?  
• Less recurrences?  

Phlebectomy with preservation of a refluxing SV = ASVAL  


Improvement of Hemodynamics @ 4 yrs FU

Complete abolition of reflux 70%

Reduction of SFJ diameter

| Table II: Evaluation of the diameter of the superficial vein after obliteration of the refluxing vein under local anesthesia |
|---|---|---|---|---|---|
| Preop | SFJ diameter, mm | 4.2 | 3.4 | 4.2 | 3.8 |
| Postop | SFJ diameter, mm | 2.0 | 1.4 | 2.0 | 1.8 |

Improvement of symptoms @ 4 yrs FU

Symptoms relief 80%

Cosmetic improvement 90%

I do not have any relevant financial relationships with any commercial interest
Few varicose vein recurrences after ASVAL (11.5%)

Freedom of VVs recurrence and secondary procedures
- Higher than freedom of persistent GSV reflux (13% and 4.5% vs 33.3%)
- Meaning that a significant proportion of patients had a GSV reflux without any clinical recurrences

ASVAL

WHY DOES IT WORK?
- ASVAL is based on the ascending theory
- Criteria for the patients' selection are available

Increasing evidences for the ascending evolution theory

Progression of the disease is from tributaries towards the saphenous trunk
ASCENDING EVOLUTION CONCEPT

GSV reflux is not considered as the cause of the varices

=> the trt should not be focused on the GSV

Varices should be the target of the trt even if the GSV is refluxing...

= ASVAL method
To preserve the refluxing GSV
Improve its hemodynamics
Help it recovering

= We know...

<table>
<thead>
<tr>
<th>Preop GSV reflux location</th>
<th>PREVAIT</th>
<th>No PREVAIT</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>90</td>
<td>920</td>
<td></td>
</tr>
<tr>
<td>Above Knee (AK)</td>
<td>47.3%</td>
<td>47.8%</td>
<td>NS</td>
</tr>
<tr>
<td>AK + Below Knee</td>
<td>55.3%</td>
<td>16.7%</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Whole GSV</td>
<td>7.8%</td>
<td>66.7%</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

Less freq. PREVAIT after ASVAL when (preop) reflux was located above knee

<table>
<thead>
<tr>
<th>Preop origin of varices</th>
<th>PREVAIT</th>
<th>No PREVAIT</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>90</td>
<td>920</td>
<td></td>
</tr>
<tr>
<td>Thigh</td>
<td>2.2%</td>
<td>19.9%</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Thigh + calf</td>
<td>27.8%</td>
<td>20.1%</td>
<td>NS</td>
</tr>
<tr>
<td>Upper calf</td>
<td>20.0%</td>
<td>34.5%</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Whole calf</td>
<td>46.7%</td>
<td>12.8%</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

Less freq. PREVAIT after ASVAL when (preop) varices at the thigh or upper calf

Identifications of predictor factors for success

= good indications for ASVAL (80%)

= Hemodynamic or anatomical
- Limited GSV dilatation < 10 mm
- Segmental SV reflux, uniq. collat.
- Reversibility test +

= Clinical
- Nulliparity +++
- Young age
- Cosmetic concern
- Low CEAP (C2), few symptoms

When can't we save the saphenous vein?

= Indications for saphenous ablation (20%)

= Hemodynamic ou anatomical
- Major GSV dilatation: > 10 mm
- Numerous saphenous aneurysms
- History or presence of saphenous thrombosis

= Clinical
- Limited or absent varices + major saphenous reflux +++
- C4-C6 +/-
- ASVAL failure +/-
Does ASVAL work? YES

Good hemodynamic and clinical results, few recurrences.

- 95.5% of the patients did not need an additional treatment after ASVAL, even if the GSV reflux was persisting.

The ASVAL method works in respect of good indications!