Update On Fascial Suture Closure For PEVAR: Safety, Technical Tips And How It Saves Time And Money

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The Fascia Suture

No pre-suturing necessary!


Disclosures

I have the following potential conflicts of interest to report:

Educational Program
W.L Gore & Associates

Co-founder
Meliora-Vision

Co-founder
MV Arterica

The Fascia Suture

Fascia distance to vessel wall

Access closure time
Access related costs
Complication rate
Independent risk factors for failure
Outcome – Access closure time

Box-plot of access closure time by FST and Prostar (p<0.001)
Adjusted for experience:
Basic level (p=0.044), Proficiency level (p=0.014)

Freedom from complications

Kaplan-Meier plot of time to first access related complication (index site) in FST and Prostar, p=0.18 (log rank test)

Freedom from reinterventions

Kaplan-Meier plot of time to first reintervention in FST and Prostar, p=0.14 (log rank test)

Type of complications

<table>
<thead>
<tr>
<th>Type of complications</th>
<th>FST</th>
<th>Prostar</th>
<th>P-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleeding</td>
<td>8%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Thrombosis/stenoses</td>
<td>4%</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Technical error (device)</td>
<td>0%</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Neuralgia</td>
<td>2%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Total until discharge</td>
<td>15%</td>
<td>24%</td>
<td>-0.72</td>
</tr>
</tbody>
</table>

*Adjusted for operators levels (proficiency/basic) by logistic regression

Technical failure rate

<table>
<thead>
<tr>
<th>Experience level</th>
<th>FST</th>
<th>Prostar</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency level</td>
<td>4%</td>
<td>7%</td>
<td>-1.00</td>
</tr>
<tr>
<td>Basic level</td>
<td>27%</td>
<td>30%</td>
<td>-0.84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator experience</th>
<th>Basic</th>
<th>Proficiency</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal demand</td>
<td>≥15 procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic level</td>
<td>≥15-59 procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proficiency level</td>
<td>≥60 procedures</td>
<td></td>
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</tbody>
</table>

Access closure cost

<table>
<thead>
<tr>
<th>Per patient</th>
<th>FST</th>
<th>Prostar</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euro (median)</td>
<td>349</td>
<td>1181</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Technical tips after 15 years

- Proper puncture (not too high!!...or low)
- Blunt dissection not to destroy the femoral fascia (fingers and retractors)
- Monofilament suture and sliding knot
- Massive groin hematoma is the only contraindication

Advantages

- Fast, safe and cheap
- No-touch technique leaving nothing behind makes it good for calcified and/or tiny vessels
- No pre-suturing makes it good for emergency

Limitations

- Not percutaneous
- Learning curve

Conclusions

- FST is a safe, fast and cheap technique
- FST is not contraindicated for calcified or tiny access vessels
- FST is well suited for emergency repair

Thank you!