Fascial Suture To Close Large Percutaneous Sheath Insertion Sites Cheaply And Effectively: Tips And Tricks

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Disclosures

• None
Fascial Closure Following Percutaneous Endovascular Aneurysm Repair

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The fascia closure technique during EVAR is safe and has few complications. The low frequencies of pseudoaneurysms and other access site complications make the fascia closure technique a durable alternative.

The SMCD reduced both operative time and access for endovascular aneurysm repair (EVAR). Subsequent arterial closure using percutaneous closure devices is costly, whilst open repair risks potential wound complications and delayed access for endovascular aneurysm repair (EVAR). As the evidence strengthens for percutaneous over open femoral artery closure technique a durable alternative.

The fascia suture technique during EVAR is safe and has few complications.
Fascial Closure

• 90% Technical Success
  – Comparable to other endovascular closures
• Go directly to main procedure
• Excellent midterm outcomes
• Fast
• Cheap ($10)
JUST DO IT.
JUST DON'T
Tip 1: Control Puncture
Background / Technique

1. Re-insert large sheath (+dilator) after the completion of the EVAR/TEVAR.
2. Incise the skin transversally. Dissect bluntly down to the Cribiform fascia
3. Place a lying mattress suture, at least 2-0, as a U-suture

4. Make the first throw of a conventional knot, tighten

5. Withdraw the sheath gently, whilst leaving the guide wire in place. Complete the conventional knot

**Tip 2: Hangman’s knot**
Technique

6. Check outcome with wire in place:
   ✓ If haemostasis; check the distal perfusion (clinically, DSA or ultrasound)

Tip 3: Reinsert microcath for DSA
Technique

6. Check outcome with the wire in place:
   ✓ If haemostasis; check the distal perfusion (clinically DSA or ultrasound)
   ✓ If bleeding; re-insert the sheath with dilator: provides temporary hemostasis. Place a new mattress suture or perform conventional cut down
6. Check outcome:

- ✔ If haemostasis; check the distal perfusion (clinically DSA or ultrasound)
- ✔ If bleeding; re-insert the sheath with dilator, gives you temporary haemostasis, make a cut down
- ✔ If poor distal perfusion; make a DSA, ultrasound or perform cut down
Outcomes

- Technical Success 88-97%
- Reop for bleeding 1%
- Reinterventions @ 1y - <1%
Conclusion

- Technically feasible with a high primary technical success rate (>90%)
- Short learning curve
  - Attention to detail
- Low frequency of clinically significant pseudoaneurysm (1%)
- Financially excellent ($10 vs $800)