Effectiveness of percutaneous closure for large bore arterial access – is there scope for day case EVAR?

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Disclosures

No potential conflicts of interest
Introduction

- Percutaneous large-bore arterial access and closure is effective for endovascular aortic procedures
- pEVAR closure technical success 92 – 95%
- Access-related complication rate of 4-8%
- “Fear of access site complications is a strong motivator for overnight observation” *

* HANLEY SC et al. Safety and feasibility of endovascular aortic aneurysm repair as day surgery. Jour Vasc Surg, 2018
Our Study

To assess percutaneous large bore arterial access technical success rates

To assess the timing of complications

5 year data collection

≥12Fr sheaths
Our Study

228 patients, 351 accesses/closures
Mean age = 76 (range 22-94)
Gender – M = 196 (86%), F = 32

Average sheath size 16 Fr (range 12-24)

Procedure Type

- EVAR
- TEVAR
- rEVAR
- Other aneurysm

Elective 82%
Emergency 18%
Local 38%
Spinal 7%
General 55%
Results

Technical success – 329/351 (94%)

Total complications related to access – 25/351 (7%)
  • Failure to deploy = 8 (2%)
  • Failure to close (once deployed) = 14 (4%)
  • False aneurysm = 2/351 (<1%)
  • Iliac dissection = 1/351 (<1%)

Prevalence of CFA Calcification and Groin Scarring

<table>
<thead>
<tr>
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<th>Successful Closure</th>
<th>Failed Closure</th>
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</thead>
<tbody>
<tr>
<td>Circumferential CFA Calcification</td>
<td>10%</td>
<td>14%</td>
</tr>
<tr>
<td>Groin Scarring</td>
<td>11%</td>
<td>23%</td>
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Discussion

Technical success comparable at our centre to data large meta-analyses

Access-related complications apparent on the same day of the procedure

Is there a role for day-case percutaneous EVAR?
Discussion

• 70-79% successful same day discharge

• 4% access complications, 4% re-admission

• Access complications occur in first 3-6 hours
Discussion

Outpatient endovascular aortic aneurysm repair: experience in 100 consecutive patients


Safety and feasibility of endovascular aortic aneurysm repair as day surgery

Stephen C. Hanley, MD, PhD; Oren Steinmetz, MD; Eva S. Mathieu, PhD; Daniel Obrando, MD; Kent Mackenzie, MD; Marc-Michel Corriveau, MD; Cherie Z. Abraham, MD; and Heather L. Gill, MD, MPH.

Montreal, Quebec, Canada; Boston, Mass; and Portland, Ore.

Short Stay EVAR is Safe and Cost Effective

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Conclusion

• Comparable technical success rates in this single centre data set compared to large meta-analyses

• Access-related complications present same day

• Role for day case EVAR (in selected patients)
Thank you for listening


MEERTENS MM et al. Safety of percutaneous femoral access for endovascular aortic aneurysm repair through previously surgically exposed or repaired femoral arteries. Jour Endovasc Ther (2022)

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