BEVAR by femoral approach with a steerable sheath

Mr Said Abisi
Consultant Vascular Surgeon
Guys and St Thomas’ NHS Trust
London - UK
Disclosure

Speaker name: Said Abisi

I have the following potential conflicts of interest to report:

- [x] Consulting: Gore, Cook, Bentley, Cryolife
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [ ] Other(s)

- [ ] I do not have any potential conflict of interest
BEVAR traditionally

Antegrade branches with antegrade approach

Predictable technique

Upper limb access:
Axillary or proximal brachial approach

Stroke
Haematoma
Nerve damage
Is there a need for different approach.... femoral

- In limited situations ...perhaps

- Specific anatomy

- Practicality in specific graft design
Hostile arch and access
Specific design
Femoral access in BEVAR

Patients with previous ascending aortic procedures and excessive anatomical changes.

Branched endografts with fenestrations or upward branches i.e. retrograde and antegrade together
Three new techniques for creation of a steerable sheath, a 4F snare, and bidirectional sheath inversion using existing endovascular materials

TECHNIQUES

Steerable sheath. A regular sheath is introduced in the vessel. This sheath must be large enough to accommodate a second sheath inside and nonflexible enough to support the system without deforming. A second, longer flexible sheath is introduced inside the first with a folded

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ultrasonic microvibrators applied to the femoral artery using high frequency ultrasound. The use of many newer devices in most hospitals. We present three novel techniques, bench-tested in our institution, that permit the creation of inexpensive, custom-made endovascular devices with improved properties and potentials. For all techniques, simple endovascular material is sufficient.

The utility of this technique for fenestrated endovascular aneurysm repair (EVAR) was tested using a glass model of an aortic aneurysm; for the experiments, a thoracic stent graft was fenestrated and a drain was used to simulate an extremely angulated renal artery. The fenestration was marked with one inferiorly placed radiopaque marker, with length equal to the diameter of the fenestration (Appendix Fig 1, online only).

A 10F nonflexible sheath was used for the initial vascular access. An 8F long flexible sheath was inserted through the 10F sheath, constituting the steerable element of the sheath. A 2.0F guidewire was introduced into the 8F
Can be used in inner branches

Prof M. Lenit Vascular Dept, Ospedale S. Maria Della Misericordia, Perugia
Potential problems

Kink

Time and learning curve

Pelvic Ischaemia risk
Highly dependent on flexible bridging stents

BeGraft Plus 7-8 Fr

Viabhan and Covera also described
Homemade - step by step 1

Controlled by clip
Homemade - step by step 2
• LA
• FEMORAL ACCESS
• SHORT SCREENING
In summary

• Femoral access provides an alternative solution in BEVAR.
• Should be reserved for appropriate and well selected cases.
• Learning curve should not prolong the procedure.
• May become the main technique and could save time with increasing experience.
BEVAR by femoral approach with a steerable sheath

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