Should Upper Extremity Access Be Avoided in BEVAR: When To Use Deflectable Sheaths?

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Disclosures

* Research-grants, travelling, proctoring speaking-fees, IP, royalties with Cook Medical.

* Consultant with Philips

* Speaking fees from Getinge

* IP, Consultant with Terumo Aortic

* Shareholder Mokita-Medical GmbH
First branched EVAR

- Timothy A. Chuter et al:
  An Endovascular System for Thoracoabdominal Aortic Aneurysm Repair.
  JEVT 2001;8:25-33.
Zenith® T-Branch: Off the Shelf Thoracoabdominal Endograft
Market Maturation

Illustrations from Oderich: Endovascular Aortic Repair
Right or Left?

Right brachial access is safe for branched endovascular aneurysm repair in complex aortic disease

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ABSTRACT

Background: The risk of perioperative cerebrovascular events in endovascular repair of thoracic and thoracoabdominal aneurysms is reported from 2% to 15%. The unavoidable use of an upper extremity access during branched endovascular aneurysm repair (b-EVAR) may play a role in embolic brain injuries. For this reason, some advocate the use of a left-sided upper access to avoid crossing the origin of supra-aortic vessels. However, the assumption that right brachial access has a higher risk for stroke during b-EVAR has not been confirmed in the literature.

Conclusions: The postoperative stroke rate in b-EVAR with the use of a right brachial access in our experience was in line with the literature for treatment of thoracic and thoracoabdominal aortic aneurysms. We conclude that the right brachial access with the use of a stabilizing through-and-through wire is a safe approach during b-EVAR. (J Vasc Surg 2017;66:360-6.)
Unavoidable Upper Extremity Access?

- Occlusion/stenosis
- Thrombotic/shaggy
- AV-fistula
- LIMA Bypass
- Antegrade branches after arch-repair
TAAA after Arch-Branch Graft

* „No“ antegrade access
Upper Extremity Access Complications

- Hematoma
- Nerve damage
- Plexus damage
- Stroke
- Rupture
- Ischemia
- Prolonged operating time
Branched EVAR

Hamburg Experience 2015-2017: n=94

- Access complications:
  - Brachial artery revision: 5 (5.3%)

Unpublished data
Brachial Artery Rupture
Radiation Exposure in TAAA-Repair

Rohlffs et al. Unpublished data
Is Upper Extremity Access Really Unavoidable in BEVAR?
How About......

From Oderich: EVAR-Textbook
Case 1

Makaloski et al. 2018; J Endovasc Ther 25:566-70
Case 2

Makaloski et al. 2018; J Endovasc Ther 25:566-70
Case 4

Makaloski et al. 2018; J Endovasc Ther 25:566-70
Use of a Steerable Sheath for Retrograde Access to Antegrade Branches in Branched Stent-Graft Repair of Complex Aortic Aneurysms

Vladimir Makaloski, MD, Nikolaos Tsilimparis, MD, PhD, Fiona Rohlffs, MD, Konstantinos Spanos, MD, E. Sebastian Debus, MD, PhD, and Tilo Kölbel, MD, PhD

- Case series n=4, 8 target vessels
- Technical Success 8/8
- Procedural time unchanged

- Currently n=20
- Technical success 100%
- Preferred sheath: Fustar 10F 55cm

Makaloski et al. 2018; J Endovasc Ther 25:566-70
Endovascular repair of TAAA has matured over 15 years and can be considered gold-standard in TAAA-repair.

Upper extremity access for antegrade branches in TAAA repair is avoidable.

Success rate of femoral access with steerable sheath may become my favorite access in BEVAR.
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