Right brachial approach for left carotid stenting in hostile aortic arch

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Disclosure

Speaker name: Liza Batista Siqueira Carrijo

I have the following potential conflicts of interest to report:

☑ Consulting – Gore Medical®
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☐ I do not have any potential conflict of interest
Background

• Carotid artery stenting (CAS) is an alternative treatment for carotid artery disease

• Limiting factors of the procedure
  • Severe aortoiliac disease
  • Unfavorable aortic arch configuration (type II-III, diseased aortic arch, bovine arch)
  • Supra-aortic vessel takeoff and course

Case report 1

- 56-year old female
- Obese, hypertensive, former smoker, previous stenting in brachiocephalic trunk (10x19mm Palmaz Genesis™) and left subclavian artery (8X39mm Express LD™)
- Left carotid artery stenosis
  - preoperative mitral valve replacement
Case report 1

• Left carotid stenting - right brachial artery approach
• Devices:
  • 5x20mm Power Flex PRO®
  • 6Fr introducer sheath (Destination®)
  • Angioguard® embolic protection system
  • 8x40mm Precise®
  • 5,5x20mm Aviator®
Case report 2

- 79-year old female

- Asymptomatic, hypertensive, obese

- Transient ischemic attack in 10/2016 (right hemiparesis)
Case report 2

• Left carotid stenting - right brachial artery approach

• Devices:
  • 6Fr introducer sheath (Destination®)
  • BHW® buddy-wire technique
  • Emboshield NAV6® embolic protection system
  • 3.5x20mm Trek®
  • 8x40mm Precise®
  • 5x20mm Aviator®
Discussion

• High complexity aortic anatomy requires a different approach
  • Direct carotid puncture
    • Short distance: bifurcation- sheath insertion
    • Diseased common carotid
    • General anesthesia
    • Hematoma formation

Discussion

• High complexity aortic anatomy requires a different approach

  • Brachial approach
  • No aortic arch manipulation
  • Easy and quick catheterization of left common carotid
  • Stability of sheath/guiding catheter
  • Upper limb ischemia

Gürel E, GünaydJn ZY, Karagöz A, BektaG O, BayramoLlu A, Çelik A, Vural A. Stenting of Variant Left Carotid Artery Using Brachial Artery Approach in a Patient with Unusual Type of Bovine Aortic Arch. Case Reports in Cardiology Volume 2016, Article ID 9512318,
Conclusion

• “High endovascular risk” patient

• Increase indications of CAS to include patients with extreme complex vascular anatomy

• Systematic pre-CAS imaging strategy focusing on anatomy above and below the bifurcation
• Thank you