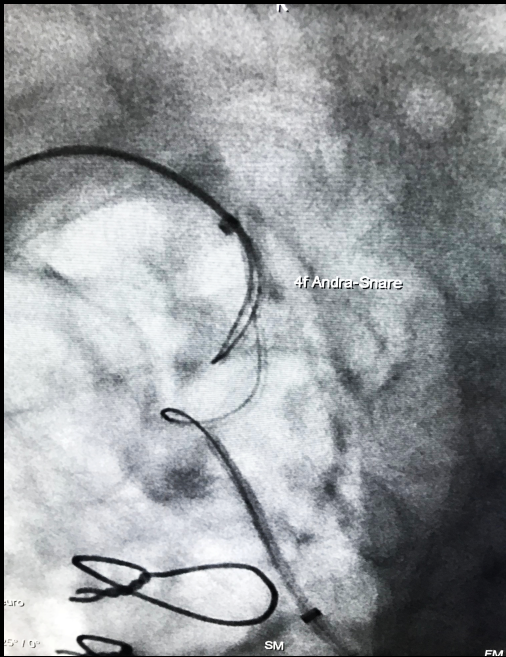




VASCUPEDIA



Endovascular treatment of subclavian artery occlusive disease: Step by step case presentation and decision making

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Case Presentation

- 72 y/o female patient
- **Symptoms:** drop attacks, severe dizziness and upper extremity claudication
- **Comorbidity:** Coronary heart disease (previous CABG), hypertension, current smoker, chronic kidney disease
- **CT-A:** calcified CTO of the brachiocephalic trunk and the right common carotid artery
- **Duplex Ultrasound:** Patent right subclavian artery with retrograde flow of the right vertebral artery
- **TCD:** Vertebrobasilar insufficiency

Which would be your treatment option?

Endovascular approach?

Transfemoral approach?

Transbrachial approach?

Surgical treatment?

retrograde TEA by a supra-/transclavicular approach?

subclavian-subclavian-bypass?

(Re-)sternotomy?

Our strategy: Endovascular first

First step:

- Transfemoral positioning of a 6F 90 cm Shuttle (Cook) sheath in the aortic arch
- Angiography of the arch and the supra aortic perfusion

Second step:

- Right transbrachial, ultrasound guided approach and selective angiography
- Transbrachial positioning of an 4F AndraSnare AS-10 (Andramed) distal of the occlusion

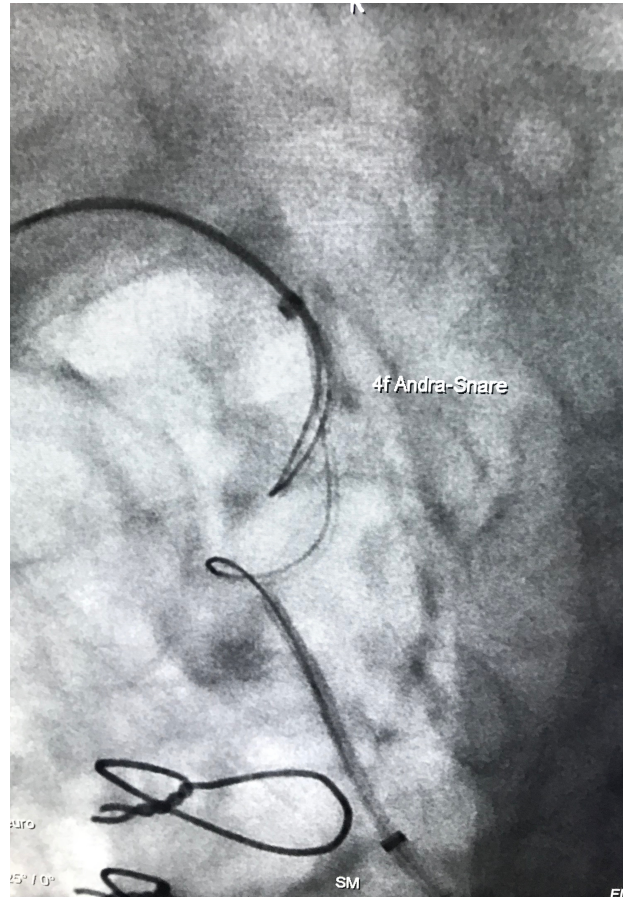


Our strategy: Endovascular first

Third step:

- Transfemoral crossing using a 0.014'' (ChoicePT Floppy Guidewire, 300 cm, Boston Scientific) and a 0.018'' (V-18 ControlWire, 300 cm, Boston Scientific) guidewires as well as the corresponding support catheters (Quick-Cross-Spectranetics)
- Snaring of the 0.018'' wire and creating a pull-through guidewire
- Pre-dilatation of the brachiocephalic occlusion with a 3 x 40 mm and afterwards with a 6 x40 mm low-profile balloon (Medtronic, Pacific Plus)

Our strategy: Endovascular first

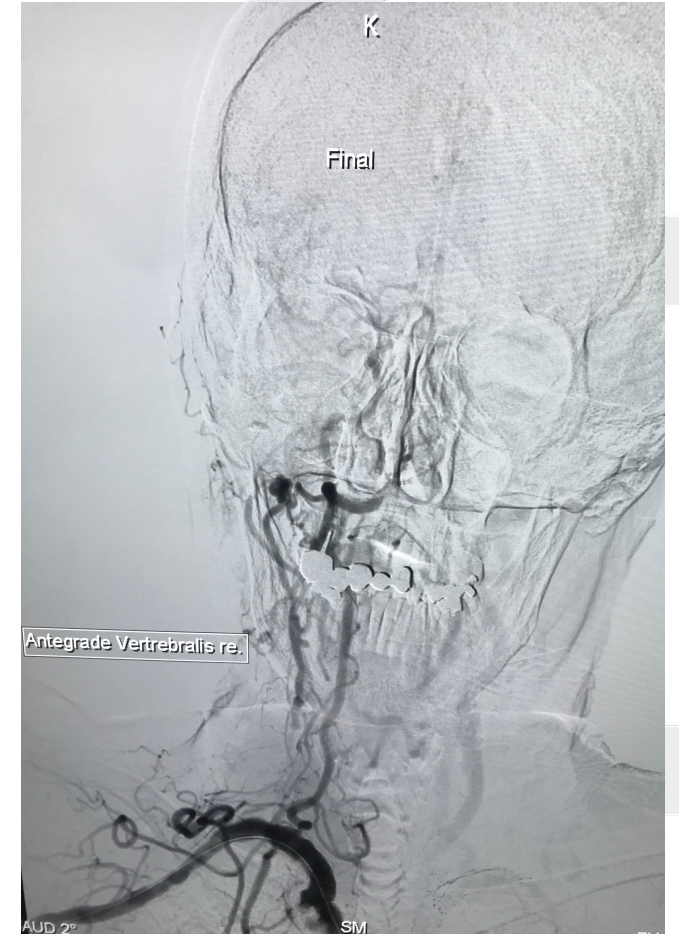


Recanalization, snaring and pre-dilatation with the use of the pull-through guidewire. Note the calcification.

Our strategy: Endovascular first

Fourth step:

- Stent deployment in the brachiocephalic trunk (8x25 mm Dynamic Balloon-Expandable Stent, Biotronic)
- Final angiography and documentation of the antegrade perfusion of the right vertebral artery



Immediate palpable right radial pulse. Symptom free after the procedure.

Questions to Vascupedians

- Would you prefer another treatment modality?
- Is a severely calcified subclavian CTO a contraindication for endovascular treatment?
- Would you use a distal protection device?
- Do you prefer balloon expandable stents over self expandable stents in cases of proximal subclavian occlusion?
- Do you think that the launch of DCBs up to 12 mm might lead to a paradigm shift also in the treatment of upper extremity atherosclerosis?
- Do you prefer stent grafts over BMS?