



Endovascular Emergency Treatment of Carotid Blowout from Head and Neck Cancer or Carotid Patch Infections: Planning, Preparation and Technical Tips

Michael B. Silva, Jr., MD
 The Fred J. and Dorothy E. Wolms Professor of Vascular Surgery
 and Professor of Radiology
 The University of Texas Medical Branch
 Galveston, Texas



VEITH 2024
 November 21, 2024



DISCLOSURES


- Physician Training Grants, Clinical Trials, Medical Advisory Boards
- WL Gore
- Endologix

Management of Carotid and Vertebral Injury and Pathology

- Head and Neck Cancers
- AVF/AVM
- Carotid Blow Out (Treatment or Prevention) – Patch pseudo or infection
- Traumatic Injuries
- Post Surgical or Intraoperative Bleeding
- Aneurysms and Pseudoaneurysms

Open vs Endovascular Management

Head and Neck Cancers and Traumatic Injuries



OPEN vs. ENDO

- Open approach may involve technical challenges for obtaining proximal and distal arterial control as well as limiting occlusion time and has been associated with significant morbidity and even mortality.
- Endovascular techniques including temporary balloon occlusion, coil embolization and covered stent placement may simplify the management of these patients while preserving patency of the internal carotid and vertebral arteries.

Technical Considerations Initial Assessment

Duplex

CTA

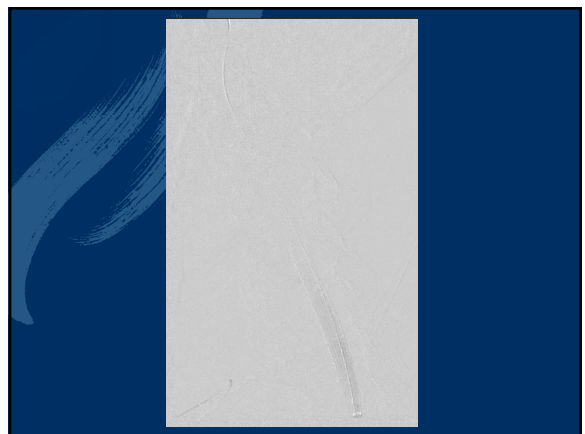
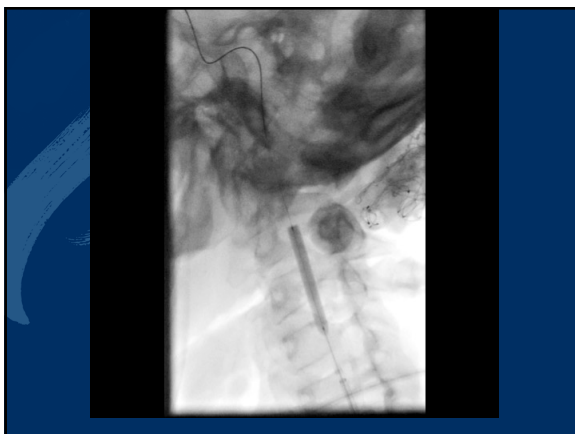
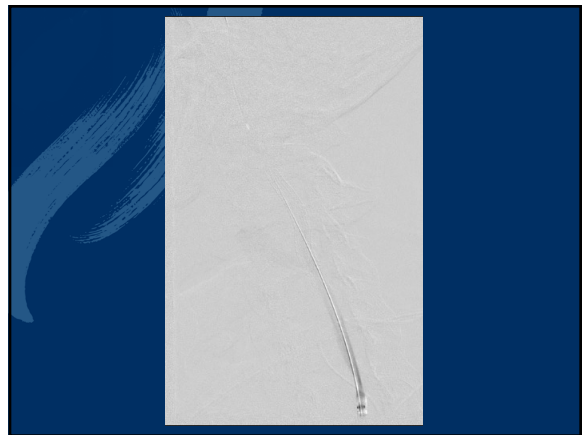
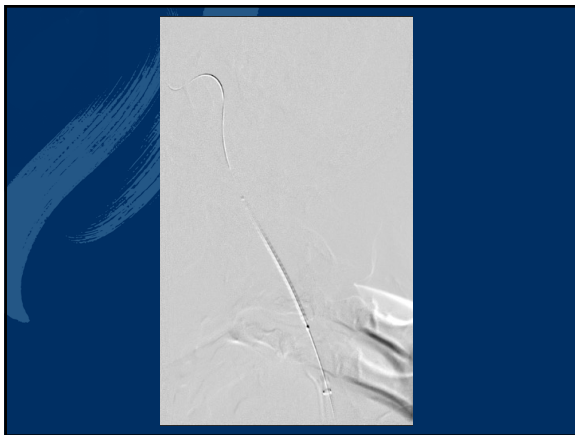
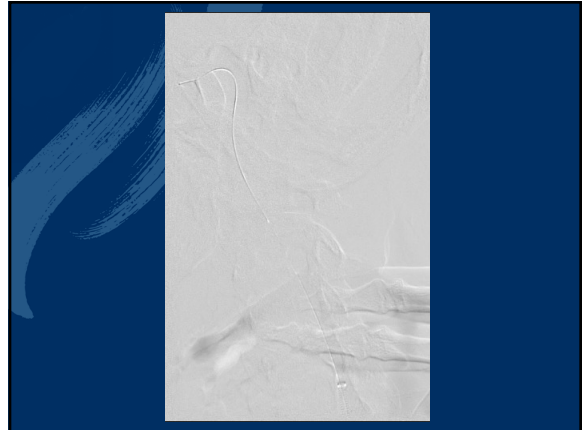
Complete Arch and Cervico-cerebral vessel study prior to intervention if possible

Angiography for Intervention

Identification of Source

Anticoagulation - Is there clot?

These patients are best managed in a Hybrid OR



Technical Considerations Endografting the Carotid Artery

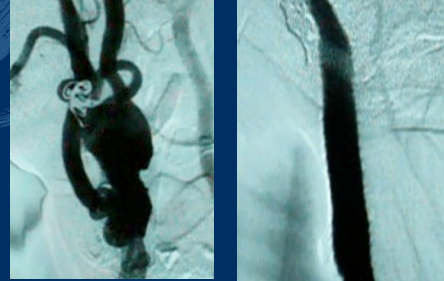
Anticoagulation

7 Fr 90 cm sheath advanced into the common using CAS techniques (allows 5mm-8mm self expanding graft) – 9-10 mm through contra 9 Fr Sheath

0.14" 300cm embolic protection device is deployed in the distal segment of the internal carotid artery

External coil embolization – triaxial cath as needed

Patch Aneurysms and Pseudoaneurysms



Technical Considerations Endografting the Carotid Artery

Balloon occlusion for localizing site of bleeding and sizing for endografts

Build from Internal to common

Telescoping deployment

No more than 2mm increase from one graft to the next

2.5 cm x 5mm in internal

2.5cm x 7mm bridge and 5cm x 9mm in common

May need a second larger sheath for larger grafts

Conclusions

Endovascular control of hemorrhage from multiple etiologies using coils and covered stents is effective

This may be used either therapeutically or prophylactically to control bleeding

Long-term efficacy of these interventions should continue to be monitored with regular follow-up.

Consider prolonged antibiotic administration for open or infected wounds