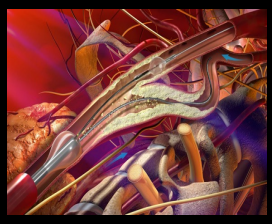
Endovascular treatment of patients with symptomatic carotid thrombus using flow reversal



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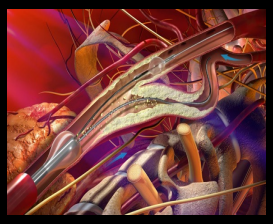


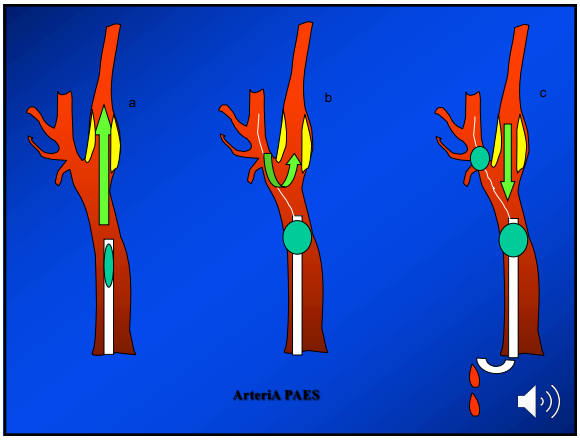
No Disclosures

Flow Reversal

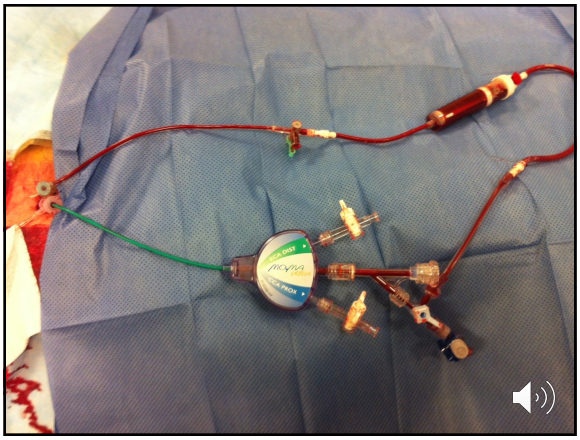
- Flow reversal was used for the first time in 1998 using a small cut down at the base of the neck and cannulating the common carotid artery (CCA) and the internal jugular vein. Both introducers were connected with a tube with a filter in the middle of it. After clamping the CCA flow reversal was established by the gradient of pressure from the CCA and the jugular vein.

Treatment of patients with symptomatic floating thrombus using Flow Reversal

- Patient 1) 52 year/old gentleman with motor Tia's (transitory left hemiplegia) Color duplex depicted a right internal carotid mobile floating thrombus. Patient was anticoagulated with intravenous Heparin and taken to the angio room. Gore Flow reversal system was used. Transcranial Doppler monitoring was applied. With aspiration, small fragments of thrombus were retrieved when the guide wire crossed the thrombus. Under flow reversal a 8mm by 3 cm Wallstent was deployed covering the rest of the thrombus and an ulcer, the patient made an uneventful recovery and after 3 years he remained asymptomatic with a patent stent completely apposed the internal and common carotid artery.



Patient 1



Parodi et al. JVS 2005

- 200 cases of carotid stenting using the ArteriA device. (May-1999 to Dec-2003)
- ASA III and IV.
- 52 % Symptomatic. All > 80 % stenosis.
- 76 % males. Age Avge.: 70.4 Yrs (57 to 82).
- Primary disease: 169 patients, Restenosis: 18 patients, Radiation induced stenosis:13 patients.

Results:

- *Complications: Stroke/Mortality:*
- Operative Ipsilateral Stroke : 0
- Operative contra-lateral minor Stroke: 1
- One case of Hyperperfusion Syndrome on day 5th. Cerebral Hematoma.
- Prolonged Hypotension with AMI: 1 patient.

Stroke/Mortality: 1.5 %

Conclusions

- Flow reversal method is effective to treat carotid stenosis with floating thrombus. Three consecutive patients with symptomatic floating moving thrombus in the internal carotid artery were treated successfully without complications.
- Flow reversal prevents distal embolization when the lesion is instrumented
- The procedure can be done under local anesthesia and using systemic anticoagulation