Optimal Current Strategies And Techniques For Treating An Acute Stroke After CEA: The Treatment Paradigm Has Changed

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Disclosures

Consultant
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Stroke after CEA: Process

• Procedural acute deficit
  • Angio and EVT if visible thrombus/thrombosis
  • No urgent effective tx for ICH
  • Delay in reperfusion has major consequence
• Post-procedural deficit
  • Rapid response team with neurological examination – in house stroke response much better in post EVT era
  • CT/CTA vs direct to Angio with ConeBeam CT (exclude ICH). Higher NIHSS tend to go straight to angio

Case Example

• 78 yo RH symptomatic (TIA) R ICA stenosis
• CAD s/p MI 2014; DM2
• Uncomplicated CEA 18:30
• Acute left sided weakness 30 minutes after CEA noted at 19:30
• Transferred to UIHC. NIHSS 4
• CTA/CTP on arrival at 22:19

Normal CT

CTA Source Images
Perfusion Imaging

Catheter Angio: Stump Occlusion

Post Suction with 6Fr catheter

Post Stent

Acute Deficit after CEA

- Hyperperfusion syndrome - Seizure or hemorrhage – often delayed, requires CT
- Intracranial Hemorrhage
- Small vessel embolic occlusion – tPA contraindicated
- Large artery occlusion
  - Distal embolic - EVT
  - Local thrombosis – Explore or EVT

EVT for Acute Thrombosis after CEA

- 11 patients from 4 centers over a 5 year period
- Mean time from CEA to symptom onset 22 hours
- CT/CTA/CTP (except for one intraprocedural thrombosis and dissection diagnosed by DUS
- 4 had tandem distal intracranial thrombus
- All stented with good technical results

Spiotta et al, Neurosurgery 2015
Case example 1

- 54 yo progressive asymptomatic stenosis
- Uncomplicated L CEA in AM
- Neuro intact in PACU at 1155
- 1500 aphasic and R Hemiparesis
- Code stroke called
- Symptoms waxed and waned – completely improved
- CT/CTA at 15:33

Pseudoaneurysm and dissection

Post Stent

Triage in the Interventional Suite

Single Contrast Injection and C-arm CT Acquisition

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Pause Time

NCCT

CECT

CBF

CBV

MTT

TTP

Courtesy of Dr. Charles Strother, University of Wisconsin