After Thrombolysis For Acute Stroke, Which Is A Better And Safer Way To Treat Carotid Stenosis – CEA Or CAS

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"The benefit of performing CEA diminishes with time from the event... The nearer to the time of stroke/TIA, the less important the actual degree of stenosis in predicting benefit from CEA."

Guidelines for CEA

- "The benefit of performing CEA diminishes with time from the event... The nearer to the time of stroke/TIA, the less important the actual degree of stenosis in predicting benefit from CEA."
- NASCET 50-99%
- CEA within one week

Time from event and benefit

Rothwell et al., Lancet, 2004
The impact of thrombolysis

- Thrombolysis should be administered to patients with ischaemic stroke presenting within 4.5-6 hours of onset of symptoms

High risk group of patients?

- Patients with stroke secondary to carotid atherosclerosis are considered higher risk of further events within a narrow time frame than patients with amaurosis fugax or TIA

- Therefore patients with symptomatic carotid atherosclerosis that receive thrombolysis may represent a high-risk group of patients

Systematic review evaluating safety of 114 CEA procedures performed within 14 days of thrombolysis for acute ischaemic stroke

- Point estimate of 30-day stroke or death rate: 4.93% (95% CI 1.83 - 9.44).
- Represents strong recommendation with low quality evidence.

Urgent Carotid Surgery and Stenting May Be Safe After Systemic Thrombolysis for Stroke

- No significant difference in post-op bleeding rates requiring re-operation
- No correlation between time from thrombolysis to intervention and complications

Swedish National Registry 2008 – 2012

- 3998 patients underwent carotid intervention
- 79 patients received thrombolysis
- 3919 patients did not receive thrombolysis
- 71 patients had CEA

30 day stroke/death rate:

- 2.8%
- 3.0%
Safety of endovascular intervention post-thrombolysis

- Included 4 carotid angiography only; no stroke/death

Safety of endovascular intervention post-thrombolysis

- Included 6 carotid stent patients; no stroke/death

Safety of endovascular intervention post-thrombolysis

- Insufficient data to conclude safety of stenting

Conclusion

- Hyper-acute patients receiving thrombolysis represent a high-risk subgroup
- Benefit of CEA most marked with early intervention, and it is safe following thrombolysis
- Insufficient data to comment on safety of endovascular intervention post-thrombolysis