TANDEM LESIONS: STENT OR NOT, FIRST OR SECOND

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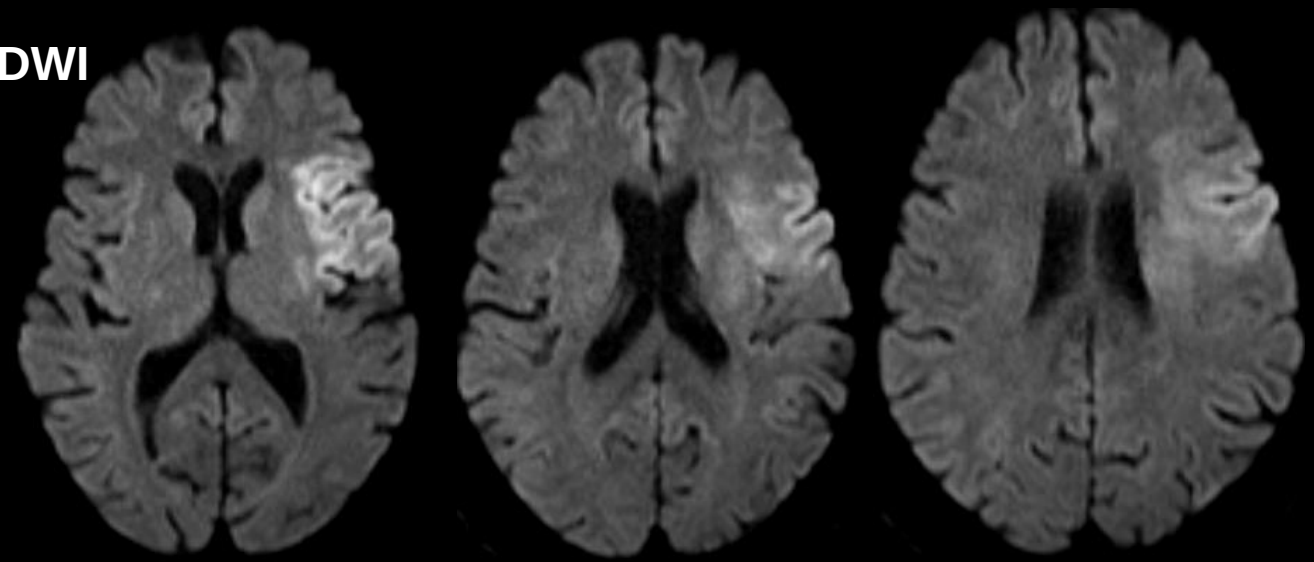
Disclosure

I have no actual or potential conflict of interest in relation to this program/presentation.

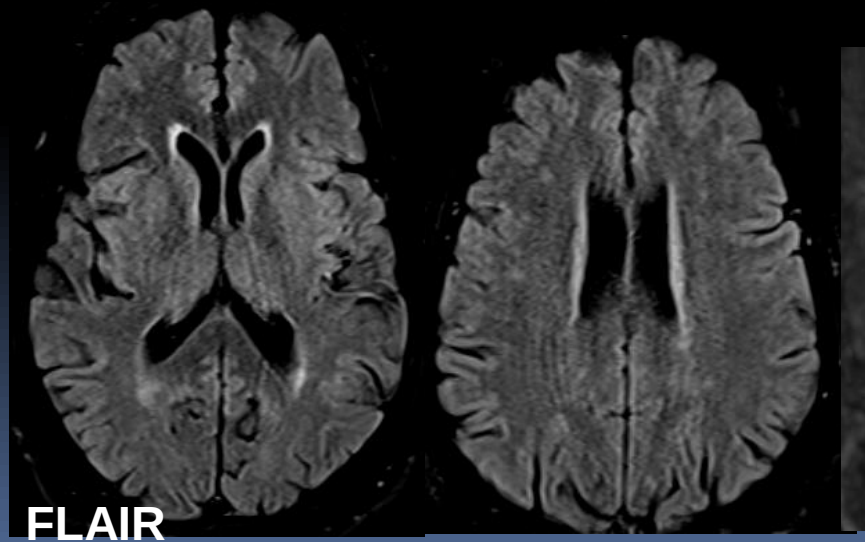
Tandem occlusions

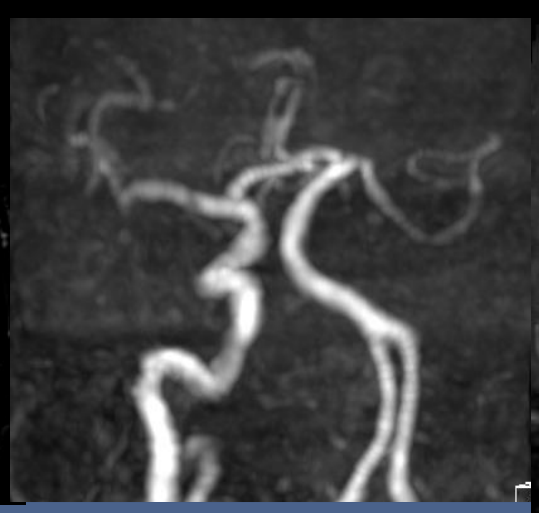
- Occlusion involving cervical ICA with concomitant intracranial LVO (ICA or proximal MCA) occlusion
- Poor response and outcome with IV thrombolysis

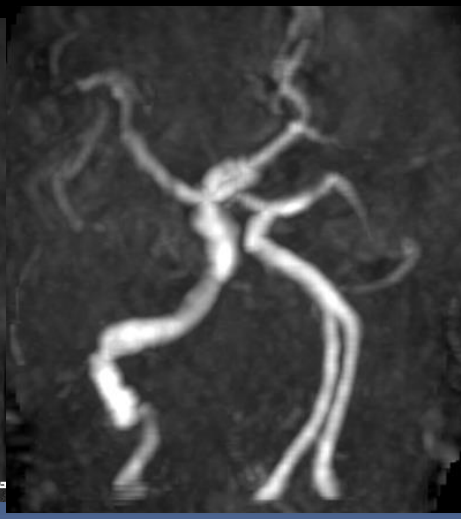
65y/M, Rt. hemiplegia, global aphasia , 4 hours
NIHSS 14

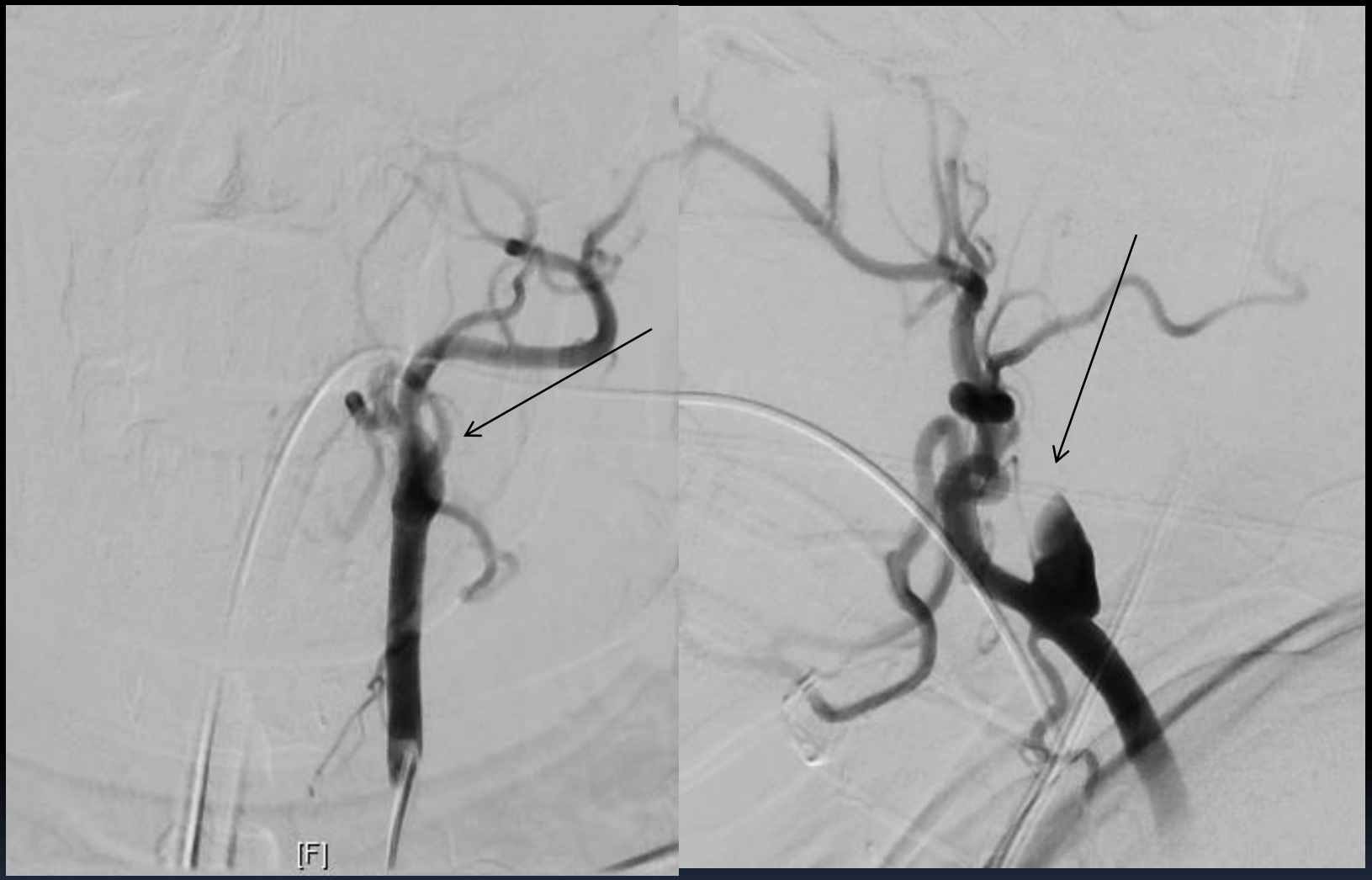


DWI ASPECTS 6
IV tPA





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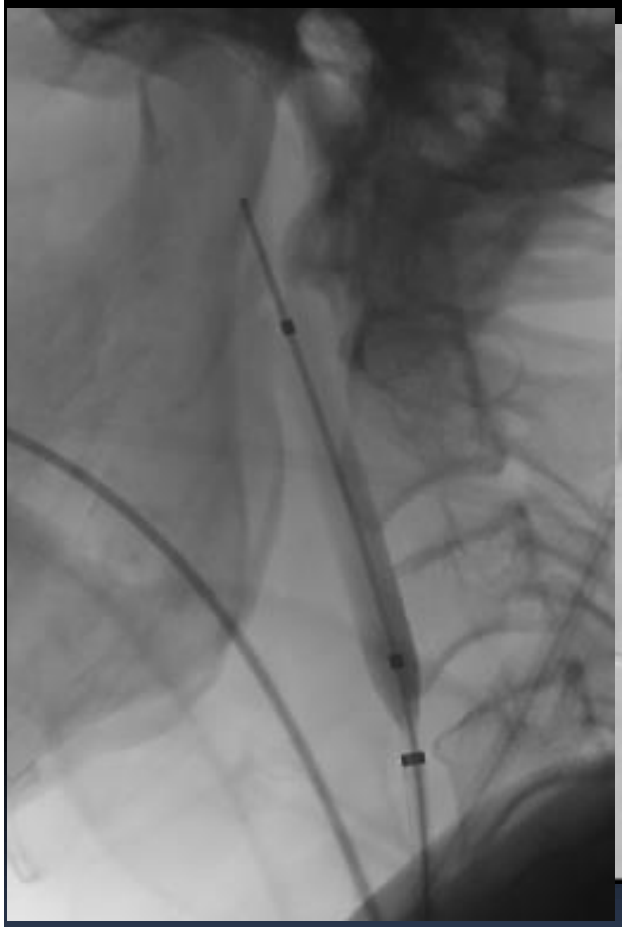

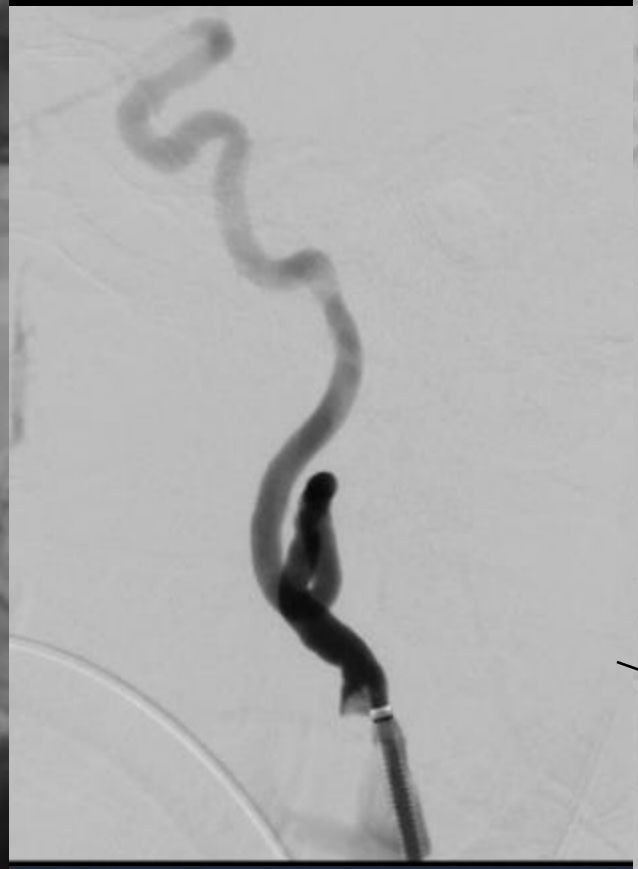

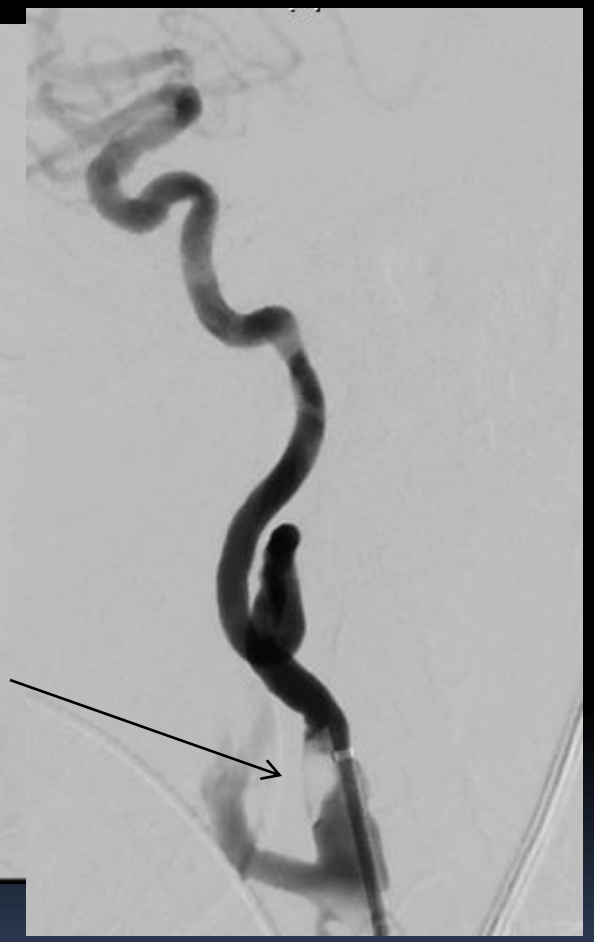

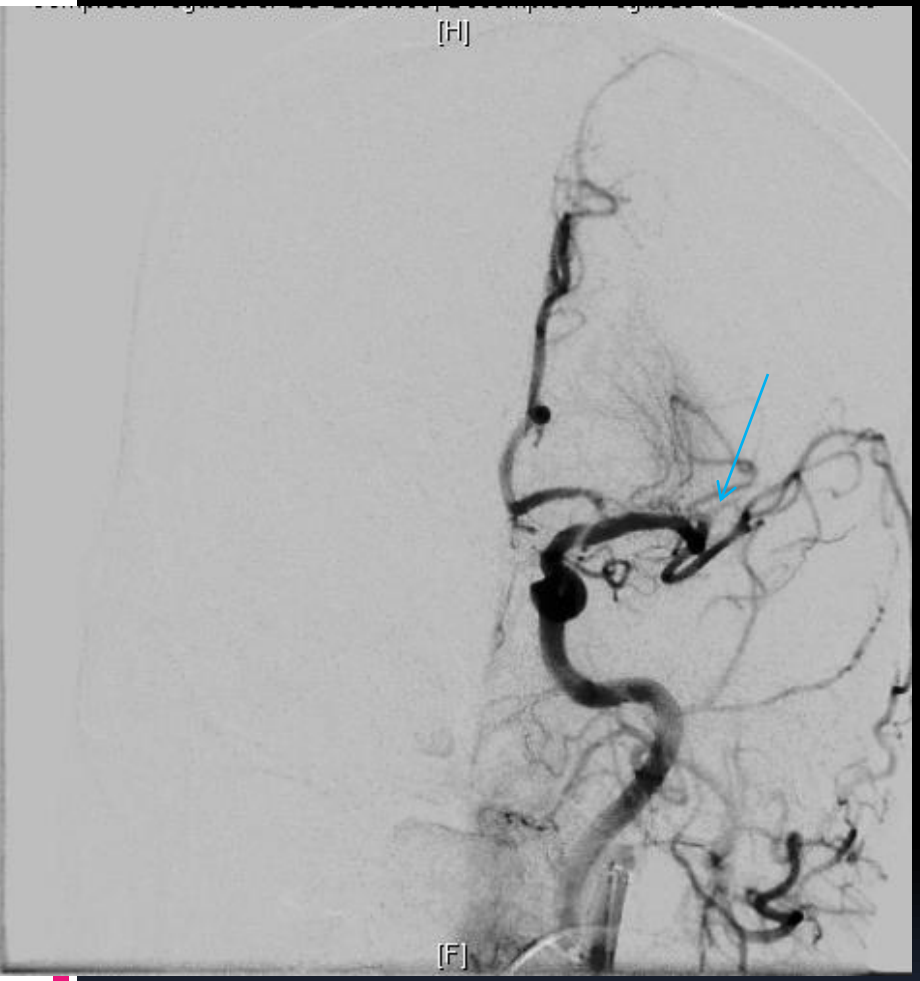
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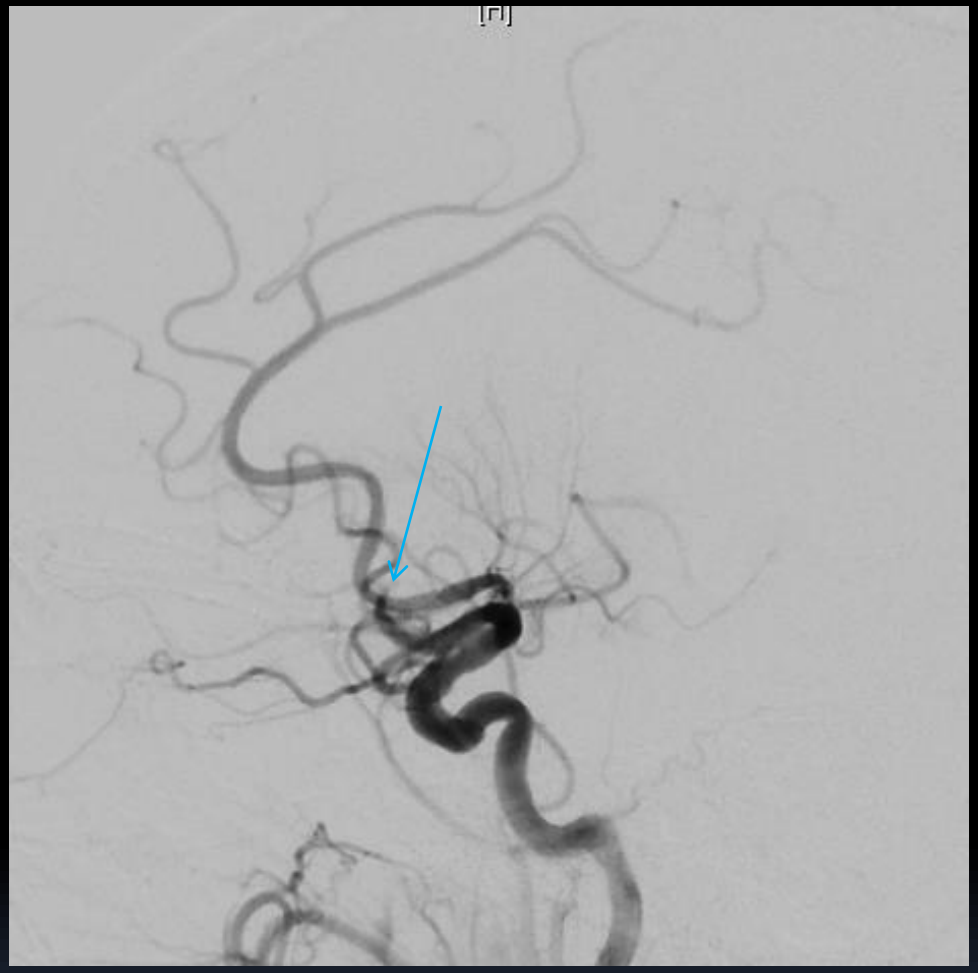
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What should we do next?

A. Stenting of the ICA lesion first followed by distal thrombectomy

B. Distal thrombectomy first followed by ICA stenting

C. Distal thrombectomy first and do not stent ICA

Why should we stent ?

- Symptomatic severe stenosis which must be treated
- To pass large guiding catheter across the stenosis
- Improve collateralization
- Risk of reocclusion/dissection with angioplasty
- Recurrence of stroke due to embolization

Why we should not stent? Only plasty enough

- Increased risk of ICH due to dual antiplatelet loading dose
- If restenosis , COW will take care
- All the pts. may not need stenting

Intracranial thrombectomy first

- Save time, earlier recanalization

Overview of evidence on emergency carotid stenting in patients with acute ischemic stroke due to tandem occlusions: a systematic review and meta-analysis

Coelho A et al., J Cardiovasc Surg . 2018 Jan.

- 23 studies, 1000 pts. (780 pt. EVT with stenting)

CONCLUSION:

- No benefit from emergency stenting in parameters such as successful revascularization (TICI≥2b), clinical outcome (mRS≤2) or 90-day mortality
- Significantly longer time to recanalization in the emergency ICA stenting gp
- Increase risk of complications in stenting gp

Management of tandem occlusions in acute ischemic stroke -intracranial versus extracranial first and extracranial stenting versus angioplasty alone: a systematic review and meta-analysis

Mitchell P Wilson et al. J Neurointerv Surg. 2018 Aug.

- 33 Studies, 1102 pts.(158 extracranial Tt. First/158 intracranial Tt. First; 509 stenting/76 plasty alone)

RESULTS:

- No statistical difference in 90-day mRS≤0-2 for patients treated with extracranial versus intracranial first approaches 53% (95% CI 44% to 61%) vs 49% (95% CI 44% to 57%) (P=0.58)

- No statistical difference in 90-day mRS≤0-2 for patients treated with extracranial stenting versus angioplasty alone, 49% (95% CI 42% to 56%) vs 49% (95% CI 33% to 65%) (P=0.39)
- Procedure related complication more in extracranial gp and stenting gp

- No statistical differences in procedure time, safety and sICH

Carotid Artery Stenting and Intracranial Thrombectomy for Tandem Cervical and Intracranial Artery Occlusions

Byungjun Kim, MD, Byung Moon Kim, MD ✉, Oh Young Bang, MD, Jang-Hyun Baek, MD, Ji Hoe Heo, MD, Hyo Suk Nam, MD, Young Dae Kim, MD, Joonsang Yoo, MD, Dong Joon Kim, MD, Pyoung Jeon, MD, ... Show more

Neurosurgery, nyz026, https://doi.org/10.1093/neuros/nyz026

Published: 08 March 2019 **Article history** ▾

- Multicenter study
- CAS-EVT vs EVT
- 75 pts. (56 CAS-EVT/19EVT)

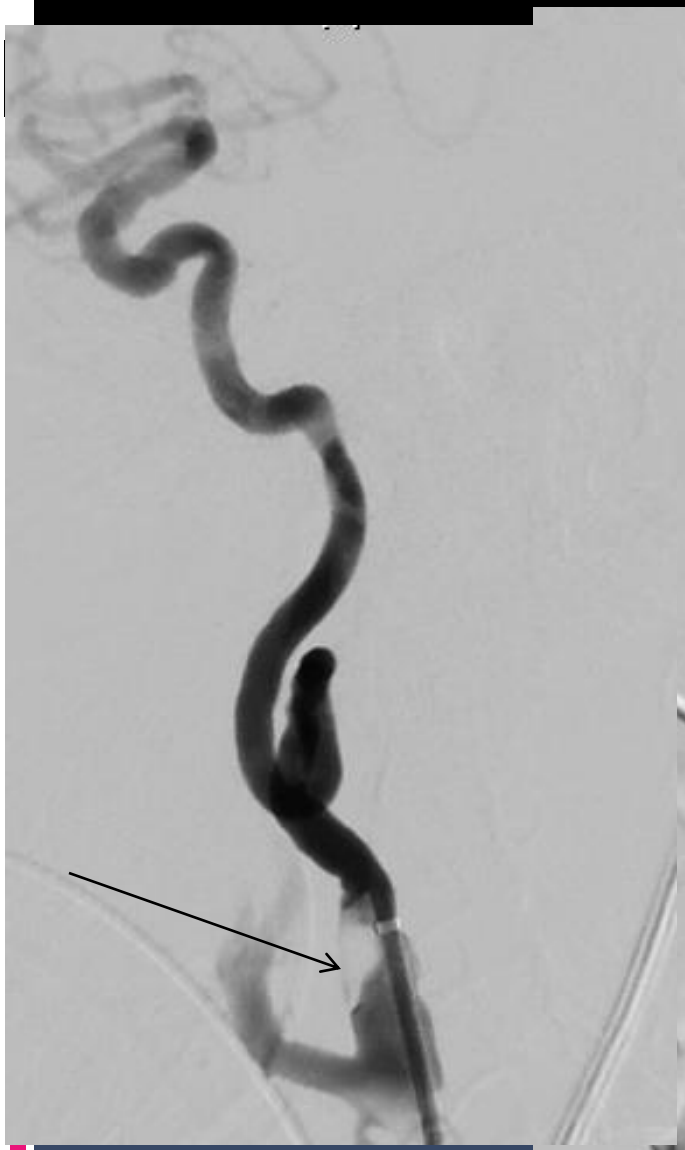
RESULTS:

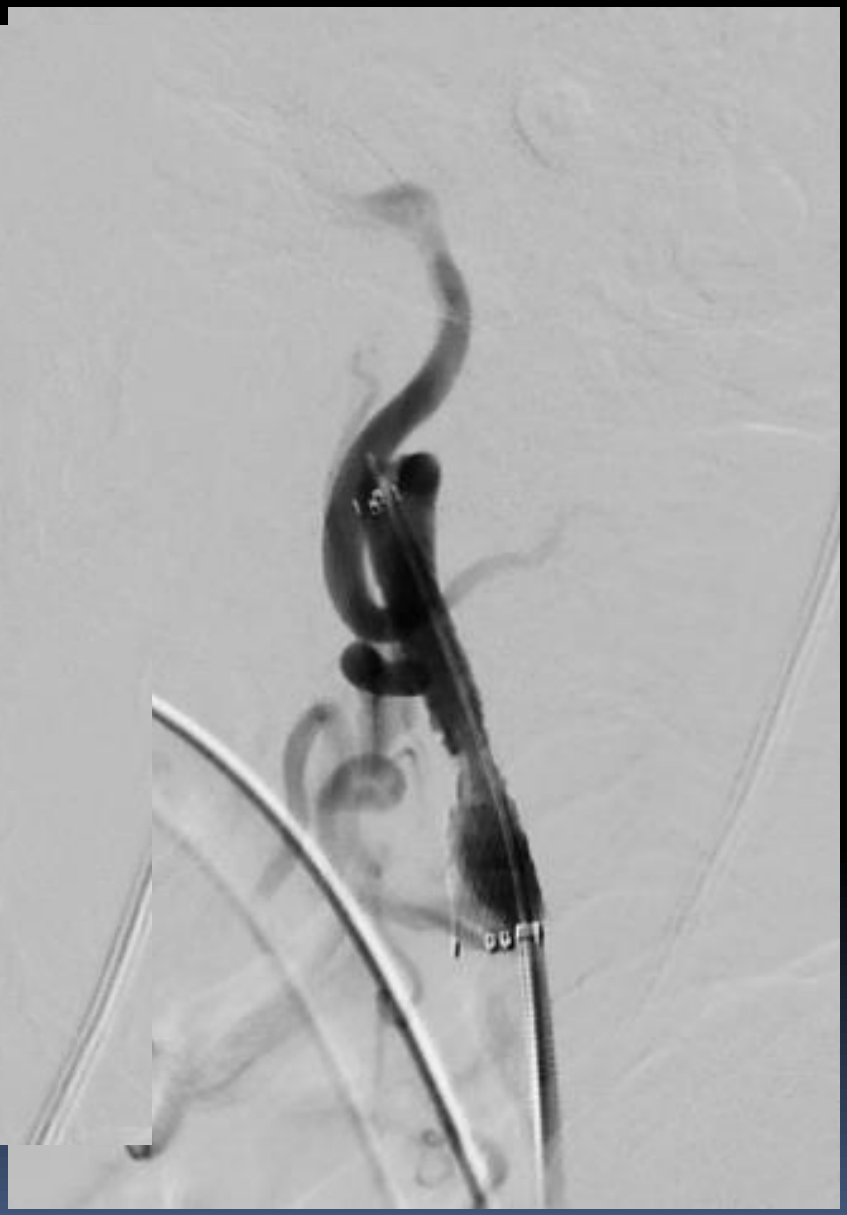
- Significantly higher recanalization (94.6% vs 63.2%, *P* = .002) and good outcome rates (64.3% vs 26.3%, *P* = .007) in the CAS-EVT

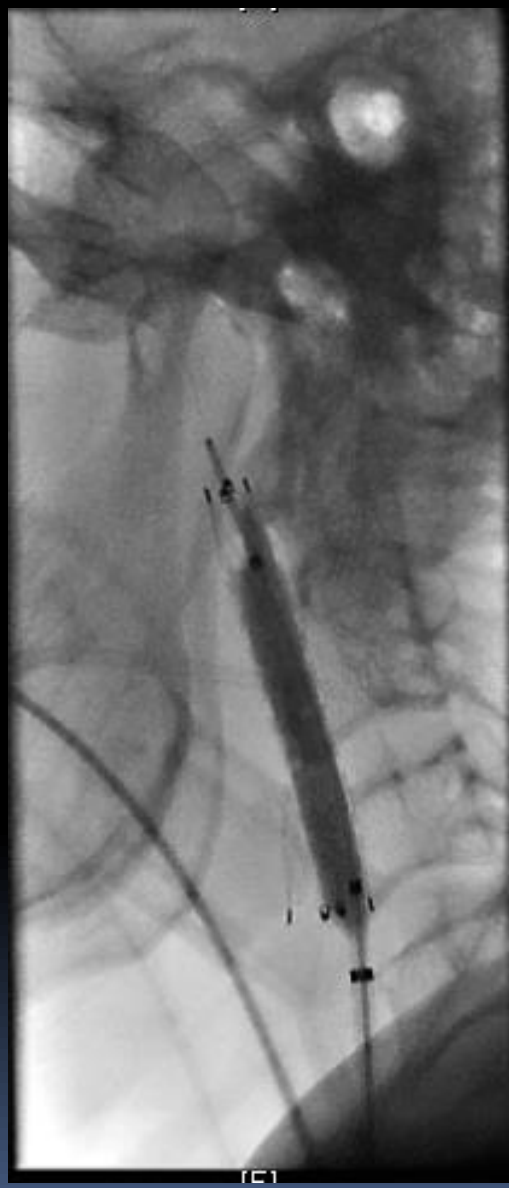
- Significantly lower mortality in the CAS-EVT (7.1% vs 21.6%, *P* = .014)

- No significant difference of symptomatic ICH between 2 groups (10.7 vs 15.8%; *P* = .684)

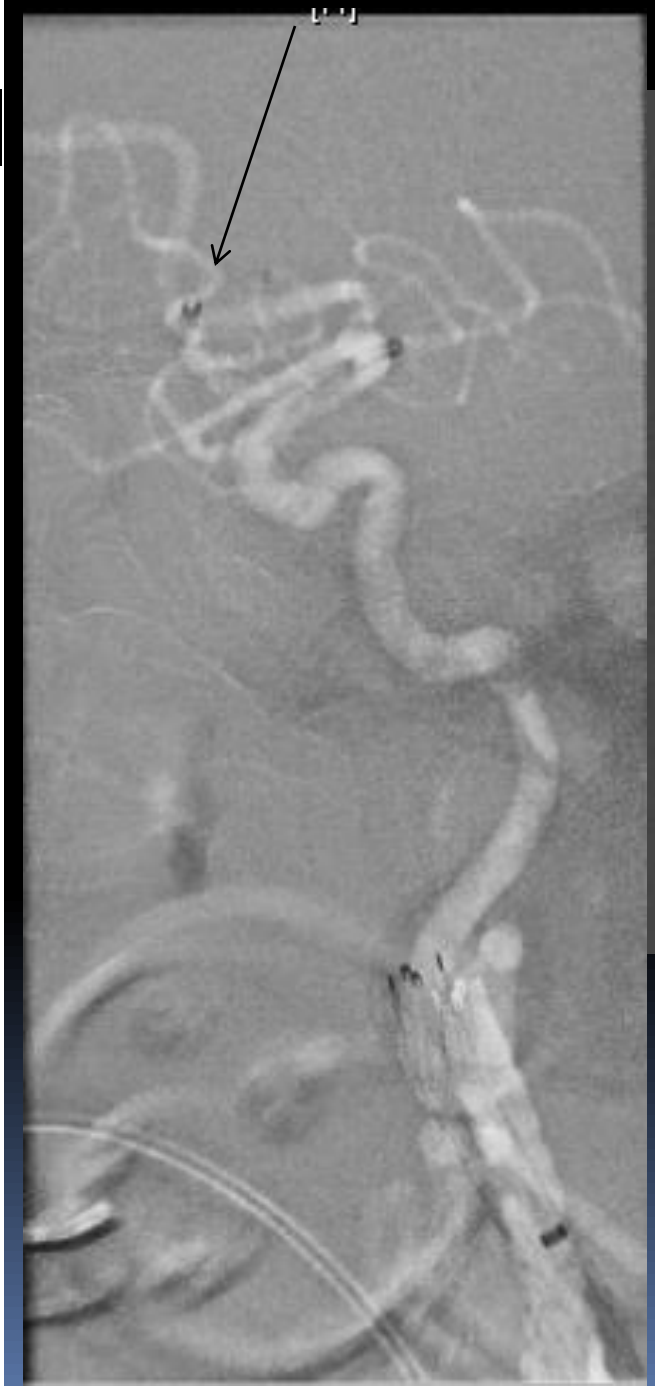
Did not load with dual antiplatelet

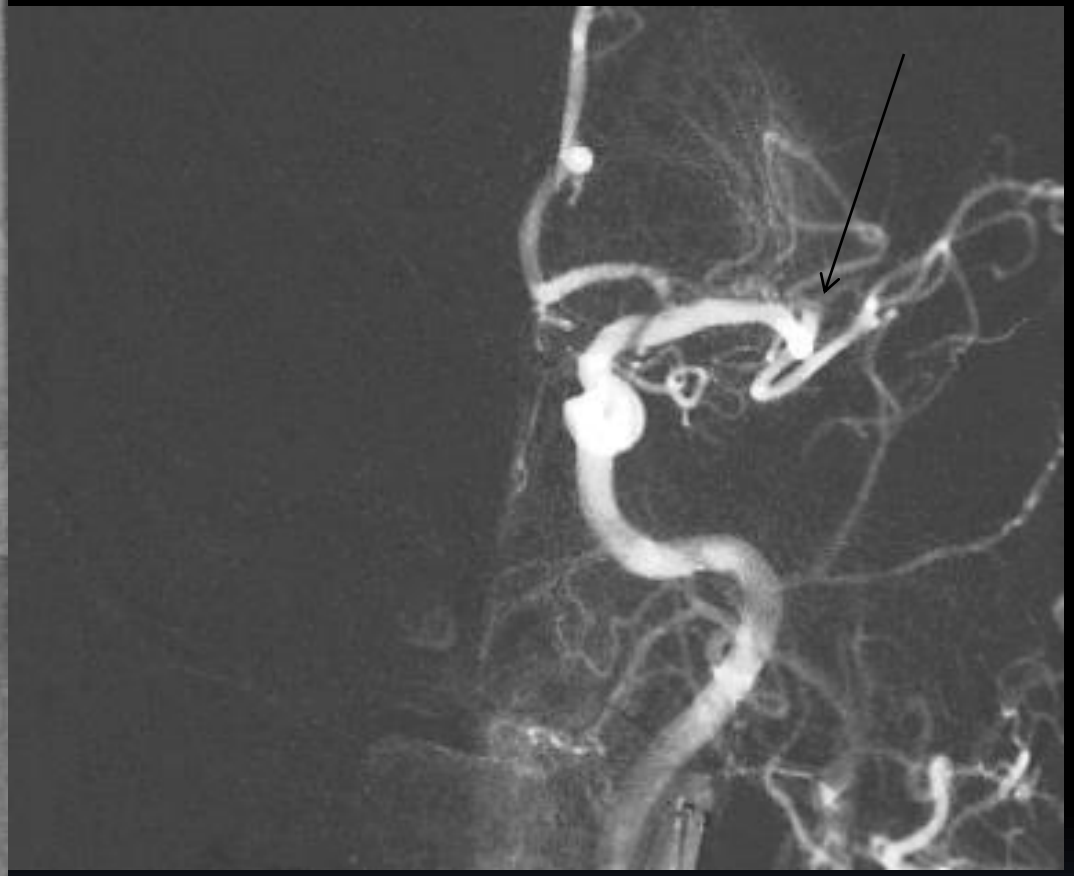




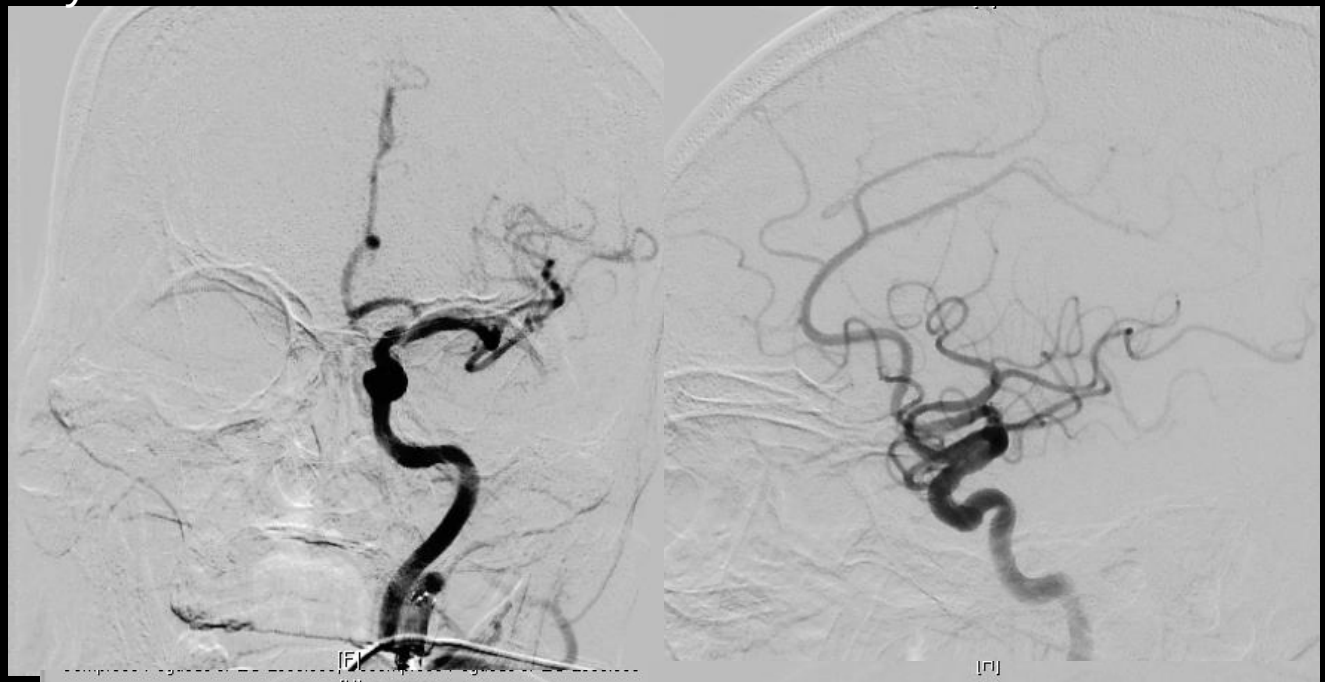


Reperfusion catheters

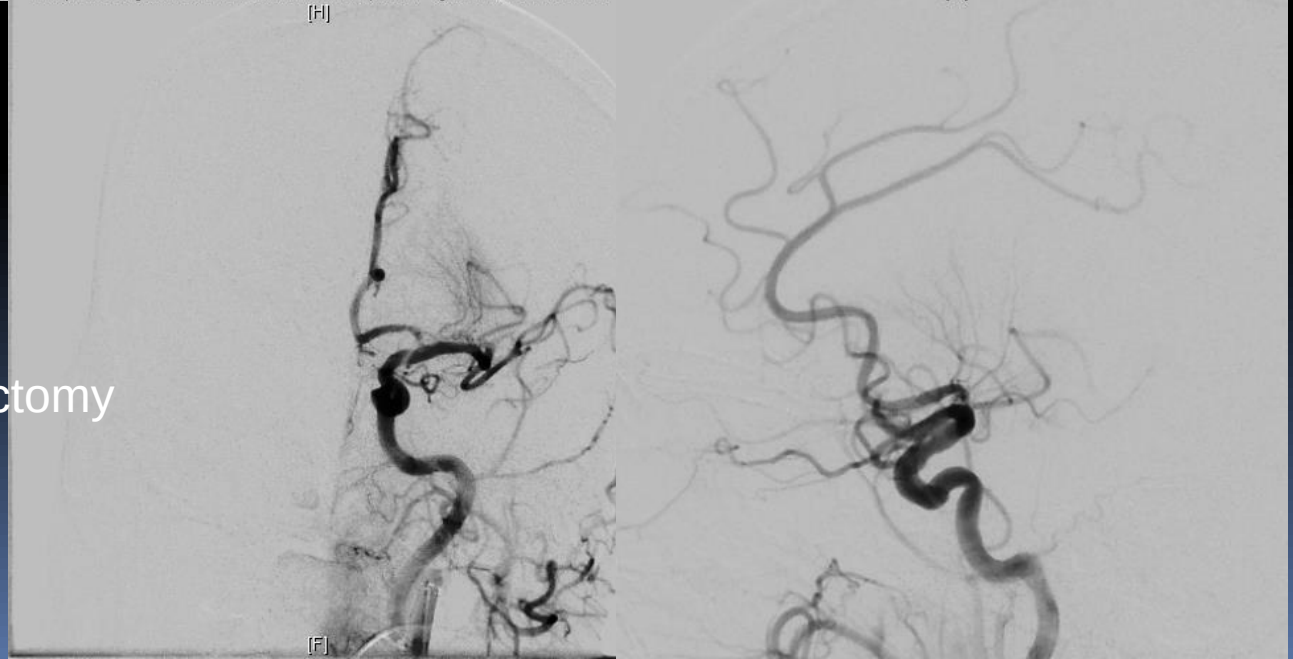




Post thrombectomy TICI 3

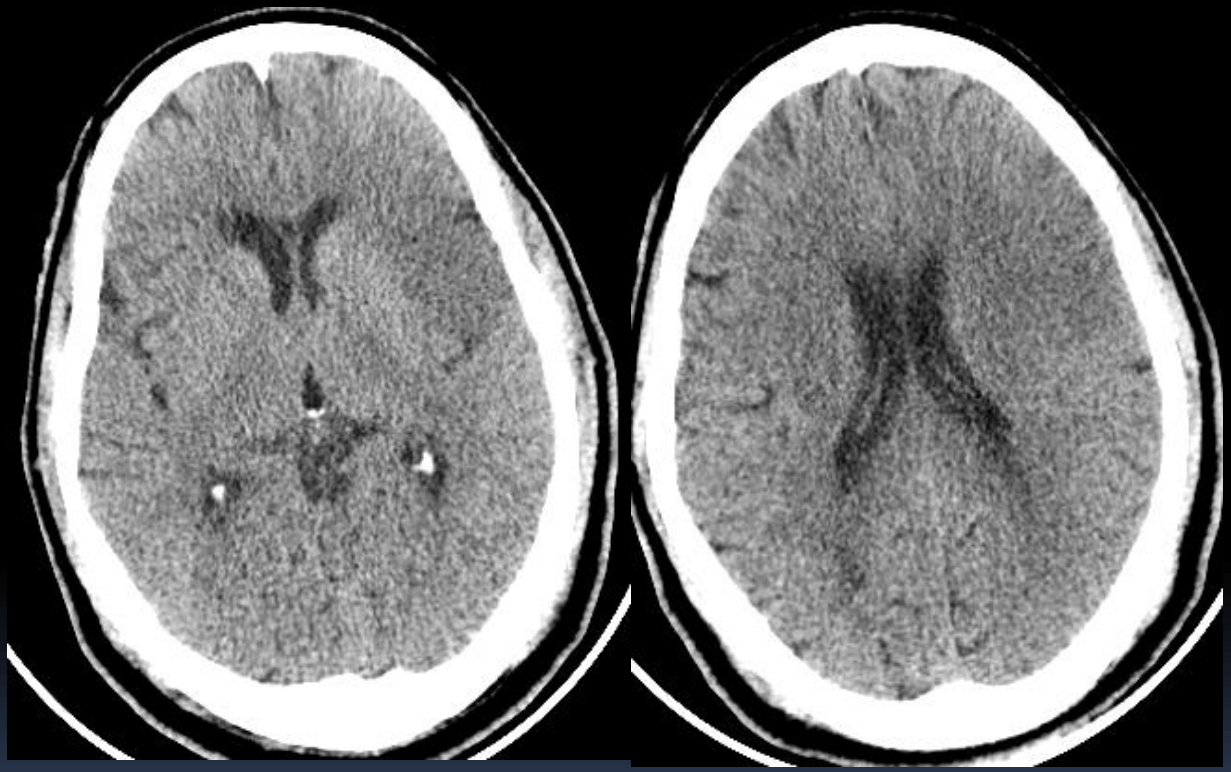


Pre thrombectomy



24 Hour CT

Started on dual antiplatelets
On discharge good flow in stent
NIHSS 4



Conclusion

- No consensus guidelines
- No strong evidence in favour of one treatment approach over other
- Case based approach
- Intracranial thrombectomy first and carotid stenting in later sitting seems to be preferred option

Thank you!