

## Trans-anterior Communicating Artery Approach for Acute M1 Stroke Thrombectomy in the Setting of Chronic Contralateral Internal Carotid Occlusion

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### Introduction

Several trials have shown the benefit of mechanical thrombectomy for large-vessel occlusion (LVO) with and without intravenous (IV) tissue plasminogen activator (tPA). However, these trials did not look at chronic occlusions with tandem plaques. This is likely due to access issues.

### Methods

A 70 year-old man with a history of coronary artery disease and diabetes was brought to the hospital with the acute onset of global aphasia. The patient was being treated for left carotid occlusion and was taking aspirin and clopidogrel. On arrival, the patient had a National Institutes of Health Stroke Scale (NIHSS) score of 4 and was treated with IV tPA. 45 minutes later the patient deteriorated to NIHSS of 26.

### Results

Using a 9Fr Concentric balloon catheter (Stryker), a Vitek catheter (Cook), and .038-inch exchange wire, the left CCA was cannulated and angiographic runs were obtained. There was no filling of the left ICA. Subsequently, the balloon guide catheter was used to cannulate the right ICA. Via the balloon guide catheter, a 3 Max and Velocity microcatheter (Penumbra Inc.) was advanced over a Synchro2 microwire (Stryker) and brought to the right A1 segment of the ACA. Using fluoroscopic guidance, the wire was advanced through the ACOM to the left A1 and all the way to the left M1 bifurcation. Thereafter, the Synchro2 wire was exchanged for a Solitaire 4mm x 40mm stent retriever. The 3 max catheter was advanced to engage the clot. Using the Penumbra aspiration system, the stent retriever

### Learning Objectives

By the conclusion of this session, participants should be able to: 1) understand technical nuances of trans-anterior communicating artery approaches for thrombectomy; 2) thrombectomy of anterior circulation in setting of chronic ICA occlusion; 3) understand the management of acute ischemic stroke in the setting of chronic cervical ICA occlusion.

### Conclusions

In the setting of a chronic ipsilateral occlusion and a tandem MCA occlusion, the trans-ACOM artery approach can be used for stroke thrombectomy.

### References

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