

Stroke: Left M1 Occlusion and Minor Peri-insular Infarct



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Patient history

Patient is a 42 year old previously healthy man who was last seen normal at 10pm upon going to sleep. He complained of some nonspecific neck and jaw pain that night. The following morning, the patient's wife was unable to encourage the patient out of bed. He was noted to have dysarthria and right sided weakness. He was taken to an outside hospital where a noncontrast CT of the head was performed.

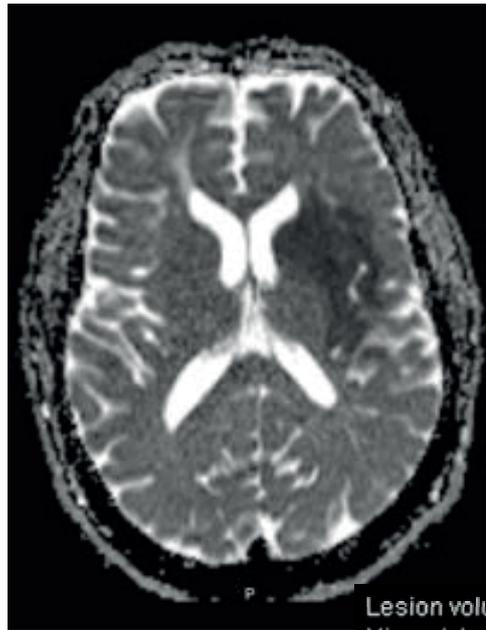
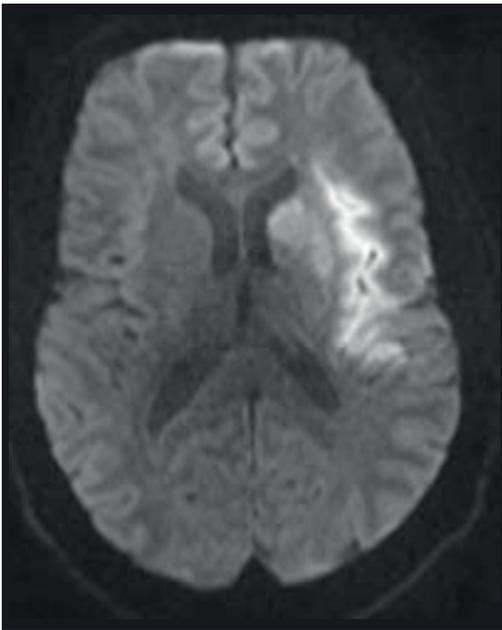
The patient is a right handed welder who has no significant past medical history, but who had undergone a dental procedure 2 days ago. The patient was noted to have an NIH stroke scale of 18 which included points for a mixed (mostly expressive) aphasia, minor facial paresis, dense right upper extremity and lower extremity paresis, severe dysarthria, and partial sensory loss with neglect.

Imaging Findings

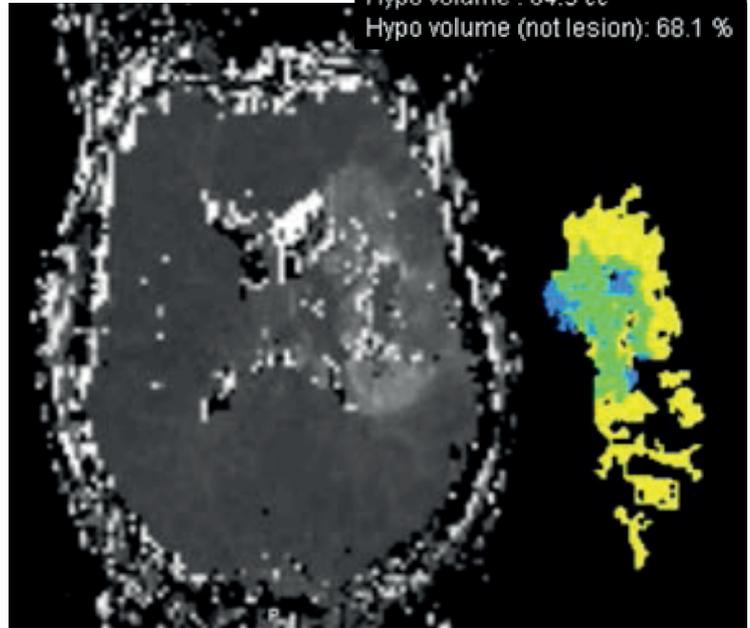
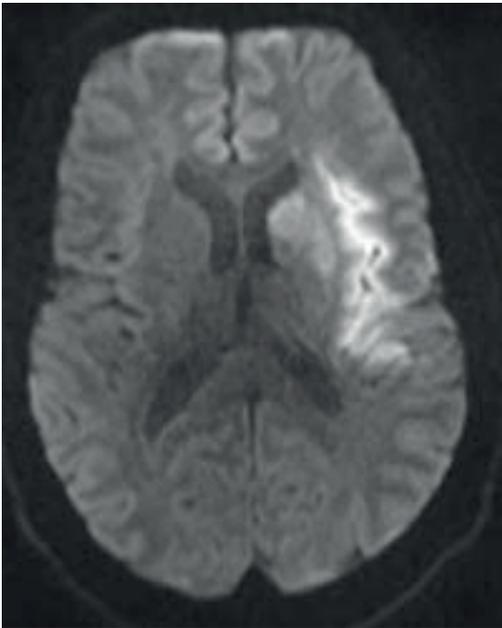
The MRI with perfusion showed evidence of a left M1 occlusion and a minor L peri-insular infarct with a large territory of hypoperfusion. Again, the Olea Medical® software helped to quickly quantify the size of the lesion and determine the relative and actual size of the ischemic penumbra. It should be noted that a little bit of fine tuning is required but the operator to ensure a low noise to signal ratio in the lesion definition.



Non contrast CT prior to transfer

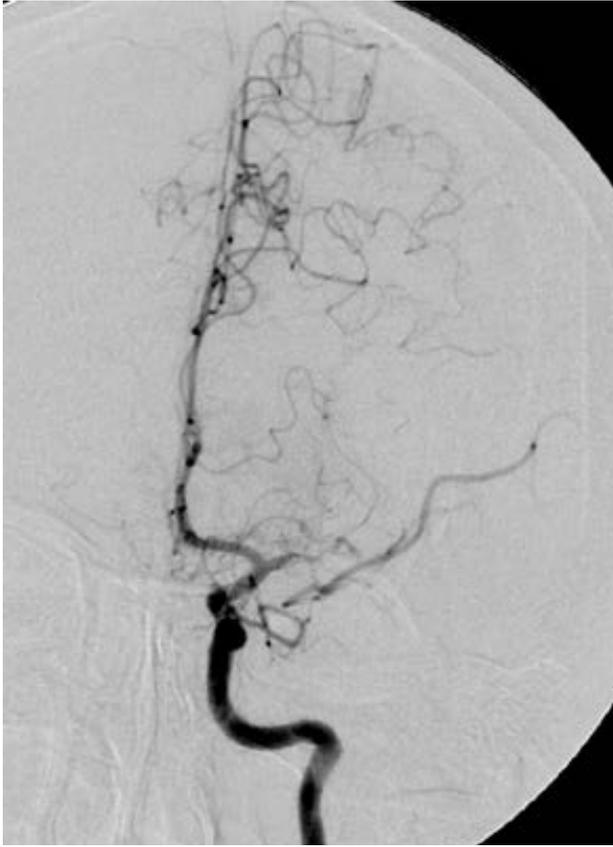


Lesion volume value: 26.956 cc
Mismatch ratio: 3.1
Hypo volume : 84.5 cc
Hypo volume (not lesion): 68.1 %

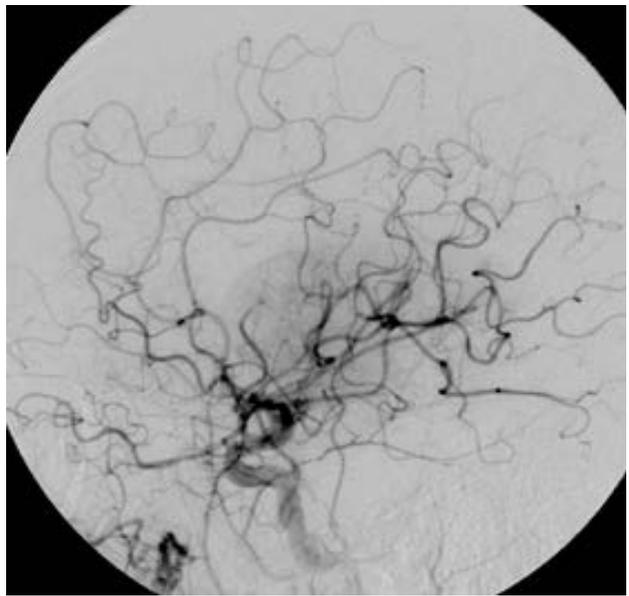
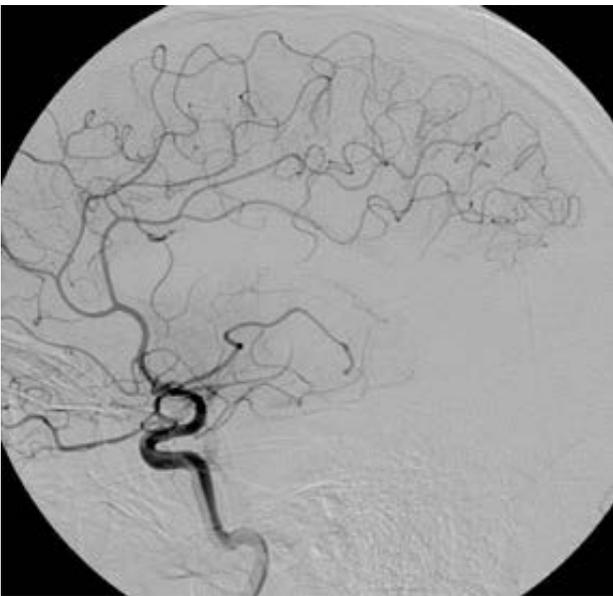
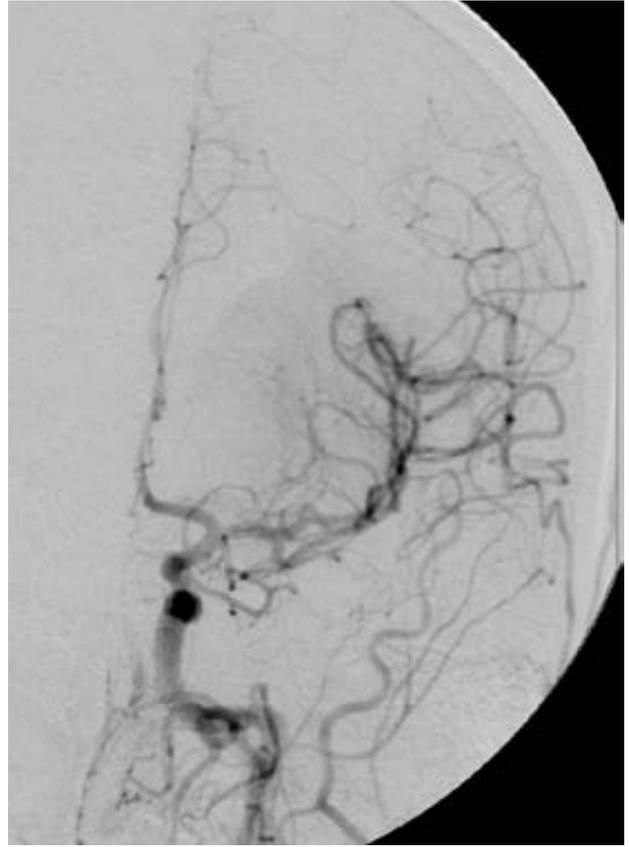


Post-processing result DWI,PWI series

Pre-Intervention



Post-Intervention



Discussion

The patient was taken for angiography 14 hours after last seen normal. The patient was revascularized with the penumbra reperfusion device. The patient made a significant recovery and was discharged home two days later with outpatient therapy with an NIH stroke scale of 2. Further workup revealed a patent foramen ovale and a cervical carotid dissection. Discharge medications: Aspirin 81mg po daily, Lipitor 40 mg po daily.

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