

Stroke: Left MCA Occlusion with Hemorrhagic Conversion



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Patient history

A 64 year-old man, with an important history of smoking, presented a sudden onset of right hemiparesis and global aphasia while watching TV with his wife.

The patient was taken to an outside hospital and received a CT head negative for a bleed. He was given an IV tPA for presumed left MCA infarct and was transferred to Mount Sinai Hospital for possible mechanical extraction. The patient underwent a CTA and CT perfusion.

Imaging Finding

CTA showed a left MCA occlusion. Perfusion imaging revealed a reduced CBF to the entire left MCA territory with severe reduction centrally. The CBV was markedly reduced centrally and normal peripherally. The TMAX, MTT and TTP values were all prolonged to the entire MCA territory.

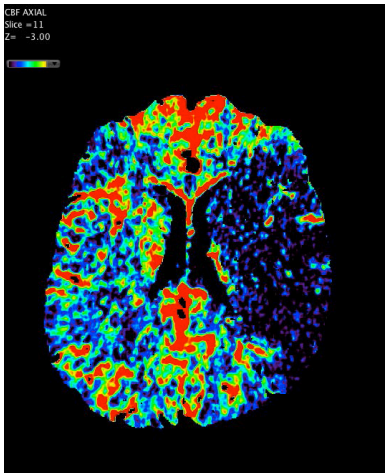
The findings suggested a substantial infarct core and a surrounding ischemic zone. The core matched approximately 2/3 of the overall underperfused tissue.

Discussion

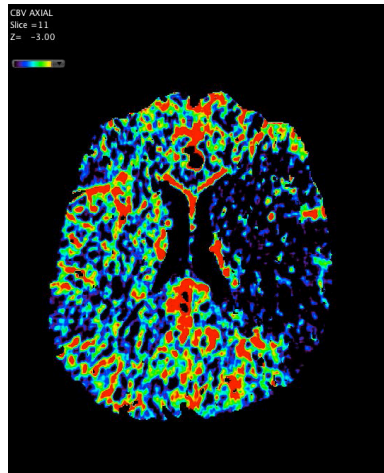
The imaging findings contraindicated interventional radiology because the infarction was too large to undergo mechanical extraction for risk of bleeding.

The patient was admitted to NSICU for close monitoring status post tPA administration. The CT head was concordant with hemorrhagic conversion combined to severe midline shift. The Patient was intubated and placed on hypertonic saline. Further CTs of head were stable and showed no progression.

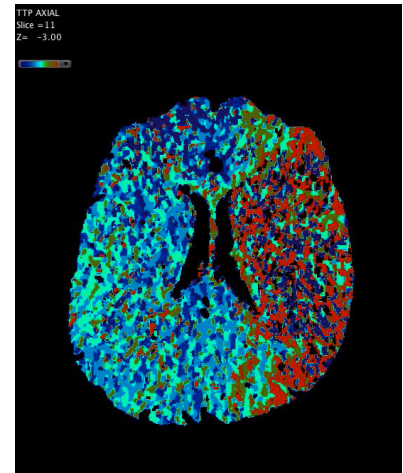
Imaging findings showed that the left MCA regained patency since prior CTA exam, with reperfusion of the more distal left MCA branches. After several days, the patient was discharged to acute rehab on antiaggregant medication for secondary stroke prevention.



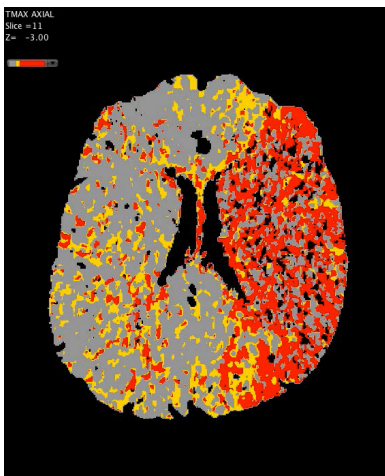
Severe reduction of CBF



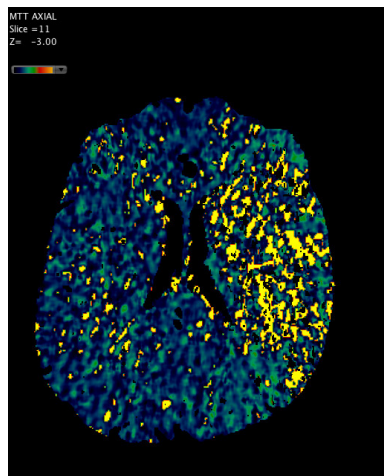
Large area of reduced CBV



Prolonged TTP



Prolonged TMAX



Prolonged MTT

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