Isolated MCA dissection: what to do in the angio suite?

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Abstract

Background: Ischemic stroke due to an isolated middle cerebral artery (MCA) dissection is rare. Currently there are no recommendations on how to treat these patients when mechanical thrombectomy is considered.

Methods: A 42-year-old male patient with history of hypertension presented to the emergency department with an acute two hour left-sided hemiparesis and speech impairment. At admission he was hypertensive and scored 12 points at the National Institutes of Health Stroke Scale. Computed tomography (CT) did not demonstrate any early ischemic area of infarcted tissue and the CT angiography showed a partial right MCA occlusion. Thrombolysis was performed with a symptom-to-needle time of 175 minutes. Patient was taken into the angio-suite and the digital subtraction angiography study disclosed a right M1 occlusion with associated filiform flow distally.

Results: The neurointerventionalist decided to conduct thrombectomy with an aspiration device. After a first attempt with an ameliorated distal flow, a second attempt was taken to achieve full recanalization. At this time, at the topography of the occlusion, a sharp vessel appearance was noted suggesting the presence of an arterial dissection. No further recanalization of the vessel was achieved. The patient developed a partial infarction of the right MCA territory, with no haemorrhagic complication. After a complete investigation, no other stroke aetiologies were found. Modified Rankin Scale at 3 months was 3.

Conclusion: We present a case of an ischemic stroke due to an isolated MCA dissection. This type of dissection can be challenging to manage in the acute setting, with scarce treatment possibilities.