A misleading hyperdense MCA sign

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A man aged 67 years developed progressive drowsiness, left-sided weakness, and low-grade fever of 4-day duration.

CT of the brain showed hypodensities in the right temporal and inferior frontal lobe and a hyperdense middle cerebral artery (HMCAS; figure 1). The MCA attenuation value was 50 HU. MR angiography showed patent intracranial arteries (figure 2). Herpes simplex virus type 1 PCR was positive in CSF.

HMCAS is seen in thromboembolic MCA occlusion resulting in vessel attenuation value increase from 40 HU (flowing blood) to 80 HU (thrombus). It may also be seen with elevated hematocrit or calcification of intracranial arteries. The false positive entities show low attenuation values.

In our patient, the HMCAS was seen as a result of the relative hypodensity of the surrounding cerebral parenchyma.

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