

Hyperdense Middle Cerebral Artery Sign

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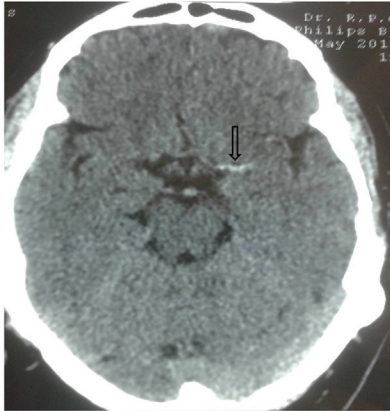


Fig. 1: Hyperdense MCA sign. Noncontrast axial CT scan of the brain showing hyperattenuation of the left middle cerebral artery (arrow)

A 62 year male presented to the emergency of our hospital at 8.20 am with history of sudden onset weakness right half of body and deviation of face towards left since 7.50 am of the same day. Patients had no history of headache, seizures, nausea, vomiting or urinary or faecal incontinence. He was a known hypertensive with poor compliance to medication. He was a not a known diabetic and was a non-smoker. At the time of presentation his pulse was 62 beats/ minute and was

regular. His blood pressure was 164/90 mmHg. Nervous system examination revealed global aphasia; right 7th supranuclear palsy and features of upper motor neuron hemiparesis on right side. The NIH stroke scale was 15. Detailed cardiovascular examination was normal. Rest of the examination was within normal limits. A clinical diagnosis of stroke was kept with a deficit of right side UMN hemiparesis with right seventh supranuclear palsy with global aphasia. Non contrast CT revealed a hyperdense middle cerebral artery on left side with a CT density of 67 HU. The findings refer to the radiological sign of 'hyperdense middle cerebral artery sign'.

The 'hyperdense middle cerebral artery sign' (HMCAS) is the focal increased attenuation of the middle cerebral artery on CT and is the direct visualization of occlusive thrombotic material within the lumen. It is an earliest visible sign of middle cerebral artery ischaemic stroke and is visible

long before parenchyma changes appear. The sign has a high specificity (90-100%) but low sensitivity about 30%.^{1,2} The frequency of disappearance of HMCAS following intravenous thrombolysis as well as intra-arterial thrombectomy is determined by location (proximal versus distal), length and volume of middle cerebral artery thrombus.³⁻⁵

References

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