Herpes Simplex Virus Encephalitis mimicking Left Middle Cerebral Artery Infarct: A Case Report

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Abstract

HSV encephalitis (HSVE) is associated with high mortality and morbidity. Atypical presentation may lead to delay in diagnosis. Several reports have shown that HSVE may mimic stroke in terms of clinical presentation and imaging. We report a case with HSVE masquerading left middle cerebral artery (MCA) stroke. A 12-year-old girl presented with seizure and aphasia following a week of fever. On presentation, she was febrile and had global aphasia. No other neurological deficits were noted. CT brain revealed an extensive hypodense lesion at the left fronto-temporal-parietal region. She was empirically treated for meningoencephalitis but was also given antiplatelet therapy to cover for young stroke as the CT mimicked a left MCA infarct. Magnetic resonance imaging (MRI) brain done the next day, however, excluded an infarct. Cerebrospinal fluid (CSF) examination showed high protein, normal glucose and the cell count was nil. The CSF PCR returned positive for HSV a week later, thus confirming the diagnosis of HSVE. She was treated with 3 weeks of intravenous Acyclovir and her aphasia improved within the second week of therapy. The dilemma with this patient was that the CT changes were mainly unilateral, mimicking an MCA infarct. The MRI features which favoured HSVE rather than an infarct were the preservation of basal ganglia and normal circle of Willis outline on magnetic resonance angiography (MRA). In conclusion, although HSVE typically involve bilateral temporo-parietal region on brain imaging, unilateral changes are not uncommon and may mimic MCA infarct. MRI brain is useful to differentiate HSVE from an MCA infarct, in a person presenting with acute neurological deficit.

Keywords: Herpes Simplex Virus Encephalitis, meningoencephalitis, middle cerebral artery infarct

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