

A case of Artery of Percheron infarct caused by Dengue virus encephalitis

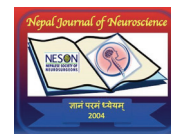
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Date of submission: 24th April 2022

Date of acceptance: 11th May 2022

Date of publication: 25th June 2022



In recent decades the global incidence of dengue has grown dramatically. Approximately half of the world's population is currently endangered.¹ Dengue virus is a Flaviviridae virus with a single-stranded RNA genome. Encephalopathy, encephalitis, acute disseminated encephalomyelitis, branchial neuritis, myelitis, hypokalemic paralysis, opsoclonus myoclonus, and Guillain-Barre syndrome are among the neurologic signs of dengue infection, which occur in 4%–5% of infected cases.^{2,3,4}

In this communication, we describe a patient with dengue virus encephalitis who presented with fever and sudden onset bilateral oculomotor nerve involvement with left side hemiparesis, MRI showing bilateral thalamus and midbrain involvement (artery of Percheron infarct).

A 45-years-old man presented with moderate grade fever of 2 days, headache and sudden onset vertigo, nausea, vomiting, double vision, bilateral ptosis with left sided hemiparesis since morning. On clinical examination, he was conscious and oriented, febrile and vitals were stable. He had bilateral ptosis, adduction palsy, impaired upward and downward deviation, abduction was bilaterally intact with bilateral dilated and non-reactive pupils. Left sided motor hemiparesis (grade 3/5) with brisk deep tendon reflexes and an extensor left plantar response. Sensory and cerebellar systems were within normal limits. He

didn't have a rash or any other signs of bleeding. He had no previous history of high blood pressure, diabetes, or ischemic/valvular heart disease.

Routine investigations including blood gas analysis, blood glucose, electrolyte levels, and liver, renal function tests were normal. Dengue virus IgM antibody was positive in serum, nonstructural protein 1 antigen for dengue was positive in blood. CT scan study was normal. Magnetic resonance imaging revealed hyper intensity in bilateral thalami and midbrain on T2/FLAIR images with restriction in DW images. [Fig 1, 2] After one month of conservative treatment his oculomotor paresis, including ptosis and hemiparesis, had significantly improved.



Figure 1: FLAIR weighted image MRI brain showing hyperintensity involving bilateral midbrain

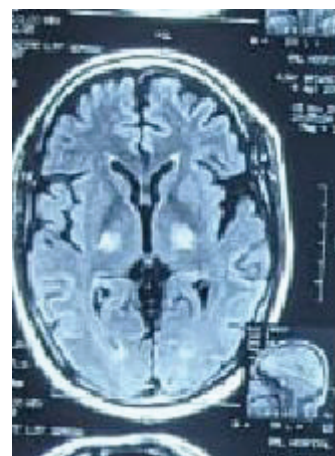


Figure 2: FLAIR weighted image MRI brain showing hyperintensity involving bilateral thalamus

Access this article online

Website: <https://www.nepjol.info/index.php/NJN>

DOI: <https://doi.org/10.3126/njn.v19i2.44609>

HOW TO CITE

Verma A, Garg P, Mishra AK. A case of Artery of Percheron infarct caused by Dengue virus encephalitis. NJNS. 2022;19(2):62-63.



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ISSN: 1813-1948 (Print), 1813-1956 (Online)



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In the brain vascularization the artery of Percheron (AOP) is a rare anatomical variation in which a single arterial trunk arises from the posterior cerebral artery (PCA) to supply both sides of the thalamus and midbrain. Stroke is more commonly associated with thrombocytopenia-related intracerebral haemorrhage in dengue patients, although ischemic stroke as a consequence of dengue infection is uncommon.^{5, 6, 7} Meningovascularitis or a temporary hypercoagulable state can cause ischemic stroke in dengue fever patients. We are reporting a rare occurrence of artery of percheron infarction in patients of dengue virus encephalitis, as well as its MRI findings of a common endemic condition. To the best of author's knowledge only a single case has been reported till date.⁸ It is important that clinician should be familiar with this rare presentation.

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