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Original Research Paper

Neurology

RARE PRESENTATION OF DENGUE AS ACUTE FLACCID QUADRIPLEGIA

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KEYWORDS :

INTRODUCTION:

Dengue is an arboviral infection usually present as fever, arthralgia, headache and rash.Neurological complication of Dengue and its presentation as Acute flaccid quadriplegia is rare but it is reported in medical literature. The incidence of neurological complications is variable, 1-25%. It includes viral encephalopathy,Aseptic meningitis,Guillain-Barre Syndrome (GBS), Convulsions. Dengue fever as preceding infection in GBS is rare. Here we report a case of Dengue fever which complicates into Acute Flaccid Quadriplegia.

Case Report:

A 14 year male child presented in our hospital in july 2022 with complain of weakness in Bilateral lower extremity which progressed in ascending pattern involving both upper limbs, neck muscles and eventually over a period of 2 days of hospital admission,he required ventilator support with invasive ventilation. His nasal speech and swallowing difficulty and facial asymmetry were suggesting that involvement of lower cranial nerves. There was no sensory and bowel and bladder involvement.

On examination findings power was 0/5 in all 4 limbs. DTR(Deep Tendon Reflex) were absent in all 4 limbs, All superficial reflexes were absent. Gag reflex was absent, features of bilateral LMN facial palsy were present. He was kept on ventilatory support ppin view of Respiratory failure. His vital parameter, Higher mental function and sensory system examination were within normal limit.

1 week Before his presentation as limb weakness, He was admitted in private hospital for complain of fever, arthralgia and generalised malaise. He was diagnosed there as Dengue viral fever on basis of laboratory investigation. Patient was later referred to our hospital in view of further complication as motor weakness. In our hospital patient underwent CSF studies and Nerve conduction study and findings were consistent with Acute inflammatory Demyelinating polyneuropathy(AIDP).

He was then treated with intravenous immunoglobulin (2mg/kg) Total 50gm for his weight, given over 5 days. Supportive care is given and tracheostomy is done due to requiring prolong mechanical ventilation. Over a period of 1 month he made uneventful recovery. He was discharged when he was off mechanical ventilation and his power is improved to 3/5 in all limbs.

Investigation:

CBC: Hb 15, platelet 68000, TLC 3800

NCV: Motor nerve conduction study showed, prolong distal latencies in motor nerves of all 4 limbs. along with slowing of conduction velocity over same nerves. The F wave responses were inelicitable over bilateral peroneal Tibial, median and ulnar nerves. SNAP values were Normal and these findings were suggestive of peripheral demylinating polyneuropathy.

Dengue virus test- rapid IgM antibody test was positive

CSF: colour - clear, Cob web- absent, protein -122mg/dl (raised), glucose- 55 my/dl(normal), cell count-2-3 cells, predominantly lymphocytes. Finding suggestive of Albumino-mythological dissociation.

DISCUSSION:

Traditionally it was considered that dengue is non neurotropic virus, but demonstration of CSF virus particle, presentation of dengue antigen in brain tissue on autopsy sample of cases who were diagnosed with dengue encephalitis has proven it's neurotropism.

There are three mechanism by which Dengue virus affect CNS System:1) Direct viral neurotropism 2) autoimmune reaction. 3) Metabolic reaction. In present case Dengue virus infection complicates as Acute flaccid quadriplegia, by autoimmune mechanism.

CONCLUSION:

Acute Flaccid Quadriplegia(AFP) is rare but possible neurological sequel following Dengue fever. So AFP surveillance should be done in area endemic for Dengue virus infection.

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