

Unusual presentation of more common disease/injury

Unusual manifestation of dengue fever

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Dengue fever is an important public health problem in India and has various serious manifestations, which if not identified and treated at appropriate time can lead to dire consequences. Quadriparesis during the course of dengue infection is quite unusual and rarely reported. The authors hereby report a case of acute motor quadriparesis due to Guillain–Barre syndrome during the course of dengue infection, who showed gradual response to conservative treatment.

BACKGROUND

Dengue fever is the most common mosquito-borne arboviral infection found in tropical and subtropical climates. Clinical presentation varies from flu-like illness to potentially lethal dengue haemorrhagic fever. Various neurological manifestations have been reported, but there are only few isolated case reports documenting acute motor quadriparesis during dengue fever.¹

CASE PRESENTATION

A 30-year-old male developed acute progressive weakness of all four limbs that initially began in his lower limbs over 2 days. Fifteen days prior to neurological symptoms, he had a typical clinical course of dengue with high-grade continuous fever for 7 days. There was no history of trauma, vomiting and diarrhoea, rash, bleeding manifestation, back pain, intramuscular injection or recent vaccination, no personal or family history of such weakness. His vitals were stable, afebrile on presentation and general examination was unremarkable. Cranial nerves examination was normal. Motor examination showed hypotonia, decrease power in all 4 limbs (1/5), all deep tendon reflexes were absent and plantars were bilaterally flexor. There was no sensory or bladder/bowel involvement.

INVESTIGATIONS

Investigation revealed haemoglobin 16 g%, total leucocyte count 3500/mm³ and platelet count 42 000/mm³. Serum biochemistry and urine examination were within normal limit. NS1 antigen and immunoglobulin M antibody for dengue were positive. Nerve conduction velocities were grossly delayed with slowing of distal latencies suggestive of demyelinating neuropathy. Lumbar puncture revealed raised proteins (65 mg/dl) without any pleocytosis.

TREATMENT

He was treated conservatively, as intravenous immunoglobulin therapy could not be given due to financial constraints.

OUTCOME AND FOLLOW-UP

He gradually recovered over 4 weeks and was discharged without any neurological sequelae.

DISCUSSION

Dengue infections are usually asymptomatic, but can present with classic dengue fever, dengue haemorrhagic fever or dengue shock syndrome. Neurological manifestations of dengue include: encephalitis, encephalopathy, aseptic meningitis, mononeuropathies, Guillain-Barre syndrome (GBS), myelitis, intracranial haemorrhage and thrombosis.¹ However, there is a paucity of literature documenting intriguing association of motor weakness in dengue infection. Of the 16 patients with dengue fever with quadriparesis evaluated by Kalita and colleagues,² in seven motor quadriparesis was due to myositis. GBS complicating dengue infection has also been documented.^{3–5}

GBS has been known to follow vaccinations, epidural anaesthesia and thrombolytic agents. It has also been associated with *Campylobacter*, lyme disease, Epstein–Barr virus, HIV, cytomegalovirus, mycoplasma infections.³ It is an uncommon neurological sequel of dengue fever manifesting as rapidly evolving areflexic ascending motor paralysis with or without sensory disturbance. Weakness typically evolves over hours to few days and is frequently accompanied by tingling dysaesthesias in extremities. The lower cranial nerves are also frequently involved, causing bulbar weakness with difficulty in handling secretions and maintaining airway.

Deep vein thrombosis (DVT) is an important cause of morbidity and mortality in GBS-like orthopaedic or general surgery patients due to prolonged immobilization. Time to developing DVT or pulmonary embolism varies from 4 to 67 days after onset. Children have a very low incidence of DVT. There is a lack of clinical studies that address methods of prophylaxis against thrombosis in GBS, duration of prophylaxis, or monitoring of patients at risk for thrombosis. In the acute phase in bed-bound adult patients, subcutaneous unfractionated or fractionated heparin and support stockings are recommended for non-

ambulant adult patients until they become able to walk independently. Prophylactic treatment with subcutaneous enoxaparin (40 mg daily) reduced the incidence of DVT from 15% in the placebo group to approximately 5% in the treated patients, support stockings reduced the risk by almost 70% in patients at moderate risk for development of postoperative thromboembolism.⁶

Learning point

- ▶ This report intends to make clinicians aware of such associations of quadriparesis with dengue infection especially in endemic areas like India.

Competing interests None.

Patient consent Obtained.

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