



A RARE CASE OF GUILLAIN BARRE SYNDROME ASSOCIATED WITH DENGUE FEVER

Internal Medicine

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ABSTRACT

Dengue is an arboviral infection that usually present with fever, myalgia, arthralgia, headache. It is a major public health problem globally (1). Neurological complications of dengue fever are rare but have been reported in the literature. Guillain-Barre syndrome (GBS) is a rare neurological complication of dengue viral infection (2). It is more commonly reported with Campylobacter jejuni, Epstein-Barr virus, and Cytomegalovirus infection (3).

KEYWORDS

Dengue Fever, Guillain Barre Syndrome

A 37 year old male construction worker by occupation came with chief Complaint of fever since 3 days, sudden in onset gradually progressive not associated with chills

No history of Loose stools

No history of Nausea, vomiting and headache

No history of Convulsion

Patient was non Diabetic and non hypertensive

Patient was vitally stable.

On further Lab Investigations patient came Dengue NS1 antigen positive and treatment was started accordingly.

On next day patient had complaint of B/L lower limb weakness, sudden in onset gradually progressive associated with tingling sensation Pulse-80/min, Blood pressure-120/80mm of Hg, Respiratory Rate-28/min

No Pallor, Icterus, Cynosis, Clubbing.

On CNS examination patient was conscious, cooperative, well oriented with time, place, person

B/L pupil normal reacting to light

Cranial Nerve Examination- Normal

Cerebellar sign absent. Sensory system intact

Tone Rt UL- Normal LL- Flaccid Lt UL- Normal LL- Flaccid

Power Rt UL- 5/5 Rt LL- 1/5

Lt UL- 5/5 Lt LL- 1/5

Deep tendon reflex – Absent in B/L lower limb

Plantar Reflex Rt- Absent Lt- Absent

Investigations :

Hb- 10.9gm%

TLC- 6000/mm³.

N/L/M/B- 79/17/3/1.

Platelets -80,000/mm³.

BUL- 18.

Creatinine – 0.9

HIV – Negative

HbsAg – Negative

HCV – Negative

CSF Analysis suggestive of Albuminocytological dissociation

Nerve Conduction Study

Motor Nerve

Left Median- Prolonged latency, Reduced amplitude (CMAP) and velocity

Right Median- Moderate reduced CMAP

Left Ulnar- Prolonged latency, Reduced amplitude (CMAP) and velocity

Right Ulnar- Normal

Tibial- Prolonged latency, Reduced amplitude (CMAP) and velocity

Sensory Nerve

Ulnar- Prolonged latency, Reduced amplitude (CMAP) and velocity

Sural- Prolonged latency, Reduced amplitude (CMAP) and velocity

Interpretation: B/L motor and sensory neuropathy affecting limbs suggestive of acute demyelinating motor sensory neuropathy (AIDP).

Treatment

- Patient initially started with intravenous fluids, antipyretics for Dengue fever.
- After patient diagnosed with Guillain Barre Syndrome, Total dose of 2gm/kg of intravenous immunoglobulin given over 5 days.
- Along with medical treatment patient was also advised physiotherapy.
- Patient gradually improved over after initiation of treatment regained power 5/5 in all limbs on day 6.

Neurological Manifestations Of Dengue Fever

- The various neurological manifestations reported include encephalitis, myelitis, Guillain-Barre syndrome (GBS), and myositis.
- Acute disseminated encephalomyelitis (ADEM) may be occasionally encountered.
- Posterior reversible encephalopathy syndrome (PRES) is uncommon and possibly related to dysregulated cytokine release phenomena.

DISCUSSION

1. Dengue virus can cause a spectrum of disease varying from asymptomatic illness to dengue fever (DF) to the severe illness of dengue hemorrhagic fever (DHF).
2. Guillain-Barre syndrome is an acute, frequently severe, mainly a demyelinating polyradiculopathy that is autoimmune in nature.
3. GBS is an uncommon neurological sequel of dengue fever and the neurological picture induced by the dengue virus is similar to GBS caused by other infections.
4. This immune injury can be directed toward the myelin or axons of peripheral nerves. Pro-inflammatory cytokines that participate in the immune response of dengue fever may have an important role in the pathogenesis of GBS. These chemical substances such as TNF, complements, and interleukins may have a causal role in etiopathogenesis of GBS (4).

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