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Guillain Barre Syndrome: An Unusual Complication of Dengue Fever

Dr. Rajesh Chaudhary[1*], Dr. B. S. Gupta[2], Dr. Rajeev Gupta[3], Dr. Ankur Garg[4], Dr. R. S. Khedar[5]
[1]Resident, Department of Internal Medicine, Fortis Escorts Hospital, Jaipur, Rajasthan, India
[2]Senior Consultant, Fortis Escorts Hospital, Jaipur, Rajasthan, India
[3]HOD, General Medicine, Fortis Escort Hospital, Jaipur, Rajasthan, India
[4]Senior Resident, Fortis Escorts Hospital, Jaipur, Rajasthan, India
[5]Senior Consultant, General Medicine, Fortis Escorts Hospital, Jaipur, Rajasthan, India

***Corresponding Author:**
Name: Dr Rajesh Chaudhary
Email: rajesh.phulera@gmail.com

Abstract: As the spread of dengue fever is increasing, atypical manifestation are also on rise, these are more common during the epidemic period, although they may remain unreported because of lack of awareness. GuillaIn barre syndrome is one of the atypical presentation which is rarely reported.
Keywords: Dengue fever, G.B. Syndrome

INTRODUCTION

Dengue fever is a common mosquito borne viral infection in tropical and subtropical countries caused by flav-ivirus and has become a major health problem [1] after rainy season. Dengue fever varies in severity, mild form non-specific influenza like self-limiting illness to severe complicated dengue haemorrhagic fever and dengue shock syndrome. Sometimes it presents as more atypical form which may be potentially serious and result in increased morbidity and mortality.

It is critical that doctors who monitor dengue illnesses, should be aware and alert to these atypical manifestations [1].

Here we report a case of dengue fever who presented with G B Syndrome, which is rarely reported complication of dengue fever.

Table 1: Complications of dengue infection

Common	Rare
Dehydration	Myocarditis
Bleeding disorder	Liver failure
Pneumonia	Bone marrow failure
Thrombocytopenia	Encephalopathy
Hepatitis	Pancreatitis
Hypotension	Hemo-phagocytosis
Bradycardia	Orchits
	Oophritis
	G B syndrome
	Transverse myelitis

CASE REPORT

A 51 year old male admitted to fortis escorts hospital Jaipur with chief complaines of fever with chills, headache, and nausea for three days. He was a known case of coronary artery disease. For this he was on cardio-protective and antiplatelet drugs. He was diagnosed to have dengue fever based on his clinical presentation, thrombocytopenia, and positive dengue IgM serology. His other investigation MP, widal test and serology for scrub typhus were negative. His febrile illness lasted three days. He was managed with iv fluids, antibiotics (for secondary prophylaxis) and supportive treatment. Four days after his fever satteled, he developed progressive weakness and numbness of both lower limbs. Initially he had difficulty standing up from sitting position but two days later he was unable to walk. There was no any sphincter dysfunction. Muscle Weakness mainly was proximal and symmetrical. There

was generalised areflexia and distal symmetrical loss sensation to pinprick. Later on patient developed further decrease in platelet count. Initially it was 1,40000 /ul and gradually decreases up to 25,000 /ul. His serum vitamin B-12 was more than 2000 pg/ml (200-800 pg/ml). Magnetic resonance imaging study of brain and spine were normal. His cerebrospinal fluid (CSF) was clear and contained 5 lymphocyte /ul, glucose 4.6 m mol/ul, and protein 131 mg/dl. Nerve conduction study was consistent with demylinating polyneuropathy. Right common peroneal nerve shows prolonged distal latency,reduced CAMP amplitute,decrease NCV with block(2.0 mV v/s 0.5 mV). Right posterior tibialis nerve shows prolonged distal latency, normal CAMP amplitute, decrease NCV with conduction block(7.9 mV v/s 3.9 mV). Left common peroneal nerve shows prolonged distal latency, reduced CAMP amplitute, decrase NCV with prolonged F-wave latency. Left posterior tibialis nerve shows prolonged distal latency, normal CAMP amplitute,decrease NCV with conduction block(7.2 mV v/s 3.0 mV). In sensory nerve conduction study both sural nerve shows prolonged distal latency, reduced SNAP amplitute,and decresed NCV. After 2-3 days patient showed gradual improvement in muscle power of both the lower limbs. As patients deficit were mild he did not received any treatment for this parapasia and gradually recovered.

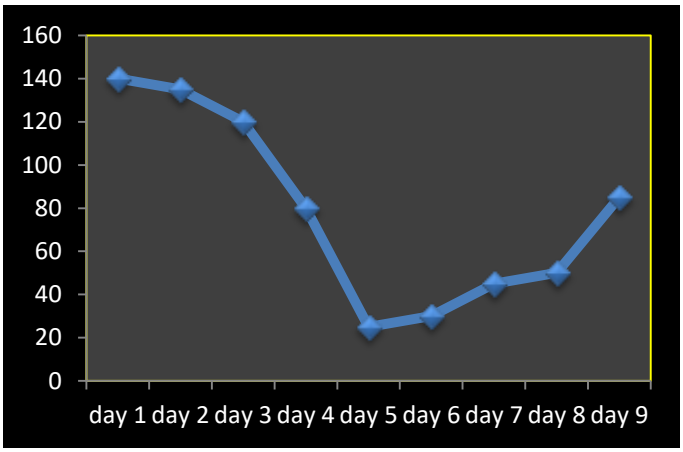

Fig. 1: Platelet count in thousands

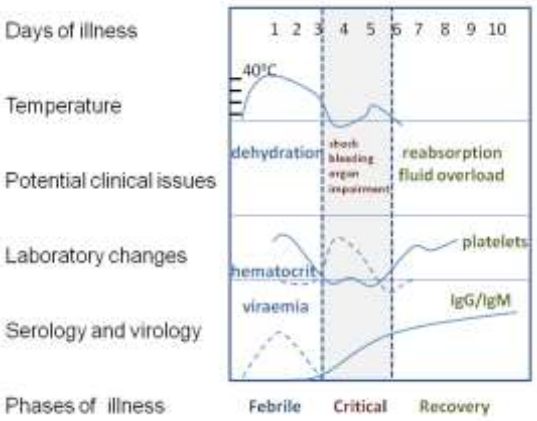

Fig. 2: Phases of Dengue fever (Days of illness)

DISCUSSION

Occurrence of G.B. Syndrome during the recovery phase of dengue infection is very rare. It is an abnormal immunological response to prior dengue infection. The close temporal relationship and the fact that the preceding infection was well defined clinically with serological confirmation makes it unlikely that they are coincidental [2].

Severity of GBS varies in different patients, after involvement of respiratory muscles patient may require ventilator support and immune-modulatory treatment. This patient had no sign and symptoms of respiratory system involvement, and did not require treatment. However, nerve conduction study showed demyelination and recovery was good.

Although GBS following dengue fever is rare, it is important that antecedent infections be defined as

accurately as possible both clinically and serologically in the light of fact that infectious agent may underlie the clinical and immunologic heterogeneity of GBS3[3].

Encephalopathy, encephalitis, aseptic meningitis, intra cranial haemorrhages, thrombosis, mono and polyneuropathies, myelitis is the other atypical neurological manifestation of dengue infection.

Dengue virus have four serotype, among these four serotype 2 and 3 have been primarily reported to cause neurological manifestation [4, 5].

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