

## **ABSTRACT**

### **INTRODUCTION**

Dengue fever, a mosquito-borne viral infection, is prevalent in tropical regions and can present with a wide range of symptoms. While a range of neurological manifestations of dengue have been reported, Guillain-Barre Syndrome (GBS) following dengue haemorrhagic fever is a rare occurrence. We present a case of a young boy who developed acute flaccid paralysis suggestive of GBS following dengue haemorrhagic fever.

### **CASE HISTORY**

A fifteen-year-old boy presented with bilateral lower limb weakness, which progressed over three days. He initially experienced bilateral feet numbness, followed by bilateral hand numbness. On the same day, he faced difficulty climbing stairs and eventually lost the ability to walk. Upon admission, he exhibited flaccid paralysis of both lower limbs with global areflexia, but no objective sensory impairment. Over the course of hospitalization, he developed dysphagia, palatal weakness, bilateral lower motor neuron-type facial weakness, and weakness in both upper limbs. Two weeks before the onset of paralysis, he had been treated for dengue haemorrhagic fever with typical symptoms and plasma leakage confirmed on ultrasound. Initial investigations revealed abnormal nerve conduction tests, and a lumbar puncture did not show typical cytoprotein dissociation, but the nerve conduction studies were consistent with an acute inflammatory demyelination polyneuropathy. Dengue IgG was positive,

supporting the diagnosis of post-dengue GBS. The patient received intravenous immunoglobulin (IVIg) treatment, leading to remarkable improvement within days.

## **DISCUSSION**

Dengue is a common viral infection in tropical regions, with various neurological manifestations, including GBS. GBS is an autoimmune polyradiculoneuropathy characterized by ascending paralysis and tingling sensations in distal extremities. While GBS is most commonly associated with pathogens like *Campylobacter jejuni*, EBV, CMV, *Mycoplasma*, and certain vaccinations, dengue as the causative agent of GBS is relatively uncommon. The pathogenesis of post-dengue GBS is believed to be immune-mediated, involving molecular mimicry and proinflammatory cytokines triggered by the dengue virus.

## **CONCLUSION**

Dengue infection is a significant public health concern in tropical countries, including Sri Lanka. Therefore, when a patient presents with acute flaccid paralysis and global areflexia, clinicians should consider post-dengue GBS as a possible diagnosis, particularly in patients with a history of dengue infection. Early recognition and treatment with Intravenous Immunoglobulins can lead to favorable outcomes, as demonstrated in this case report.