Severe Guillain-Barré Syndrome during recent Dengue Outbreak in the South of Brazil

Case Presentation: Fourteen days before admission, a 62-year-old woman was diagnosed with dengue virus infection. She had typical clinical features - high fever, retro-orbital pain, headache, muscle pain and cutaneous rash – and positivity to NS1 antigen. She recovered well and remained asymptomatic for 5 days. However, 2 days before hospital admission, the patient presented with progressive paraparesis and lower limbs paresthesia. At the first neurological exam at the emergency room, she had distal lower limb weakness (MRC = 4) and walk impairment. In less than 24 hours, she rapidly evolved to global paresis (MRC = 1-2) associated with diminished upper limbs reflexes, lower limbs areflexia, dysphagia and urinary retention. After ICU admission, she required orotracheal intubation and mechanical ventilation due to ventilation distress. Sudden changes in heart rate and blood pressure suggested autonomic dysfunction. Cerebrospinal fluid analysis revealed protein elevation (111 mg/dl) and normal cell counts. Due to the probable Guillain-Barre Syndrome (GBS) diagnosis, the patient underwent 7 plasmapheresis sessions on alternate days. During ICU period, she had other complications such as neuropathic pain, ventilation associated pneumonia and urinary tract infection. She received intense physical and ventilatory rehabilitation. The first sign of clinical improvement was the resolution of dysautonomic symptoms. On the 12th day, she started to recover spontaneous movements from axial muscles. Tracheostomy was removed on day 24. After 46 days, she was discharged with partial recovery, being able to stand and walk with assistance, and partial diuresis control. She was referred to outpatient rehabilitation and neurological follow-up.

Discussion: Dengue virus infection was very uncommon in the Rio Grande do Sul state, but recent outbreaks and spread of Aedes aegypti vector changed the disease epidemiology. Fast evolving neurological manifestations of dengue are rare and may be overlooked by general practitioners. Case reports of GBS after dengue virus infection are scarce. Management of severe GBS requires quick diagnosis with rapid treatment, ICU support and intensive rehabilitation to reduce disease related morbidity and mortality.

Comments: Dengue virus infection should be considered in the diagnostic workup of triggers for GBS, including in regions with previous low prevalence. Plasmapheresis is an alternative treatment when human immunoglobulin is not available.