

Zika Virus Disease Associated Guillain-Barre' Syndrome

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Editorial

Guillain-Barre' syndrome (GBS), a neurological complication identified in a new Zika virus infection outbreak in French Polynesia was reported in 2013. Since 2015, the incidence of GBS has increased in Brazil. Using the criteria proposed by the 2014-GBS Classification Group which is based on clinical bases, the diagnosis of GBS is feasible even in resource-limited areas. Typically, GBS occurs after minor viral and bacterial infections, contributing to acute immune-mediated polyradiculoneuropathy, beginning distally, and 4-week-period proximal progression. With a median of 6 days after Zika virus infection, the neurological symptoms of GBS are developed. Patients experience generalized weakness, a varying degree of sensory disturbance, cranial nerve involvement, and areflexia. Age and men increase the risk of GBS. Mostly occur 2-8 weeks after an infection. GBS with a global incidence of 1-4 per 100,000 persons-years is the leading cause of non-traumatic paralysis. Presently, the United States Centers for Disease Control and Prevention state that GBS is strongly associated with Zika virus infection, in addition to upper respiratory tract infections, particularly influenza and pseudo-influenza and gastrointestinal tract infections, particularly *Campylobacter jejuni*. Cytomegalovirus and Epstein-Barr virus infections are also associated with GBS. Most patients with GBS occur for unknown reason. In a recent study, 57% of patients with GBS were able to walk without assistance. The same study also demonstrated that there might be autoantibodies in post-Zika virus-GBS patients that cannot be fully detected by the current methods and suggesting the absence of antigenic mimicry between GA1 and Zika virus antigens in patients with GBS.

Casting doubt on the relevance of the anti-GA1 antibodies to neuropathy was also suggested. GBS is a potentially treatable syndrome with rapid suspicion on the clinical bases. The link between Zika virus infection and GBS urgently needs further investigations.

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**Attapon Cheepsattayakorn^{1,2,3*} and
Ruangrong Cheepsattayakorn⁴**¹Editor-in-Chief, *Journal of Human Virology and Retrovirology*, USA²10th Zonal Tuberculosis and Chest Disease Center, Thailand³5th Office of Disease Prevention and Control, Ratchaburi, Department of Disease Control, Ministry of Public Health, Thailand⁴Department of Pathology, Faculty of Medicine, Chiang Mai University, Thailand

***Corresponding author:** Attapon Cheepsattayakorn, 10th Zonal Tuberculosis and Chest Disease Center, 143 Sridornchai Road Changklan Muang Chiang Mai 50100 Thailand, Tel: 66 53 140767; 66 53 276364; Fax: 66 53 140773; 66 53 273590; Email : Attapon1958@gmail.com; attaponche@yahoo.com

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