Zika Virus and Guillain-Barré Syndrome

NEW PRODUCT

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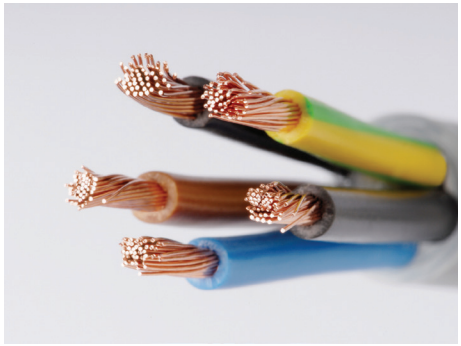


Zika virus (ZikV) was first isolated in 1947 from a rhesus monkey in Uganda's Zika forest, but it did not cause significant outbreaks of human disease until 2013-14 in French Polynesia. Since then, the virus has been rapidly spreading in the Americas, with outbreaks also reported in tropical Africa, Southeast Asia, Pacific Islands and sporadic cases reported in Europe. It is even threatening the forthcoming Olympic Games in Rio de Janeiro.

Zika virus disease is spread to humans primarily through the bite of an infected Aedes mosquito species. The most common symptoms are fever, rash, joint pain and conjunctivitis. However, the major concern is the associated risk of severe foetal brain defects (microcephaly) for pregnant women infected with ZikV. There is also an increased risk of developing Guillain-Barré Syndrome (GBS). GBS is a rare and serious condition of the peripheral nervous system that can develop from a viral or bacterial infection. It is thought that infection may trigger the immune system to attack nerve roots and peripheral nerves. However, the unusual increase in the rate of GBS in parallel with ongoing ZikV infection is not yet adequately explained.

A recent study by Cao-Lormeau et al.[1] investigated a GBS outbreak associated with Zika virus infection in French Polynesia. The study was conducted between October 2013, and April 2014, at the height of the largest ZikV outbreak that French Polynesia had experienced at that time. Patients with suspected ZikV were also screened for GBS: 42 patients were diagnosed with GBS and 41/42 (98%) of these had ZikV IgG or IgM antibodies.

All of the patients with GBS also had neutralizing antibodies against ZikV. Anti-glycolipid antibodies were detected in 31% (13/42) of patients using the BÜHLMANN GanglioCombi™ ELISA: nine of those had the typical "AMAN type" pattern (combination of GM1 and GD1a).



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BÜHLMANN Laboratories manufactures a high quality line of neuroimmunology ELISA kits specifically for quantitative measurement of various combinations of gangliosides. These can be used for screening and typing.

A recent addition is the exciting new BÜHLMANN GanglioCombi™ MAG ELISA. This assay combines assays of MAG and gangliosides on the same microtitre plate and enables targeted screening of the most prominent immune-mediated neuropathies. The kit features all enzyme label-conjugates and allows for an efficient and complete work-up in two steps. Results may be simply interpreted and related to one of four titre categories: Negative (0-30%), Grey Zone (30-50%), Positive (50-100%), Strongly Positive (>100%).

Circle 7 to find out more about BÜHLMANN neuroimmunology ELISAs or visit
www.alphalabs.co.uk/neuroimmunology

References:
1. Cao-Lormeau V, et al. Guillain-Barré Syndrome outbreak associated with Zika virus infection in French Polynesia: a case-control study. Lancet 2016;387(10027):1531–9.

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