In the news

ZIKA VIRUS HITS THE HEADLINES AT AAN 2016

Zika virus (ZIKV) was high on the agenda at the American Academy of Neurology (AAN) Annual Meeting in Vancouver, Canada (April 2016), with new evidence that the virus has serious neurological complications. The announcements, which highlighted neurological consequences beyond congenital defects, came just days after scientists at the Centers for Disease Control and Prevention (CDC) concluded that ZIKV infection during pregnancy can lead to microcephaly.

Jim Sejvar from the CDC addressed the meeting to highlight evidence that ZIKV infection can lead to Guillain–Barré syndrome (GBS). Sejvar focused on work that his team has recently conducted in Brazil — one of the worst-hit areas in the ZIKV outbreak. The researchers identified 50 cases of GBS, indicating a prevalence of 7.4 per 100,000 people in this population. Almost 90% of the patients with GBS had a history of illness that was consistent with ZIKV infection. Taking into consideration the increased incidence of GBS reported during an outbreak of ZIKV in French Polynesia in 2013, and in 12 other Central and South American countries currently affected by ZIKV, Sejvar concluded that strong evidence exists of a link between ZIKV and GBS.

"I have never seen anything like what we are seeing in the current outbreak," Sejvar commented. "In the countries that have been hit heavily by Zika, there is often limited access to critical care, such as artificial ventilation, and there is excess morbidity and mortality in these regions. There needs to be a focus placed on the health burden of GBS."

Evidence of an association between ZIKV and another neurological complication was also presented at AAN 2016. The work, led by Maria Lucia Brito Ferreira from the Restoration Hospital in Recife, Brazil, identified two patients who developed acute disseminated encephalomyelitis (ADEM) in association with confirmed ZIKV infection. They also saw four patients who developed GBS after ZIKV infection.

"At present, it does not seem that ADEM cases are occurring at a similarly high incidence as GBS cases, but these findings suggest that clinicians should be vigilant for the possible occurences of ADEM and other immune-mediated illnesses of the CNS," says Sejvar. "The remaining question is why does ZIKV appear to have this strong association with GBS and potentially other inflammatory diseases of the CNS? Hopefully, ongoing investigations of ZIKV and immune-mediated neurological disease will shed light on this question."

Owing to the presence of the *Aedes aegypti* mosquito, a ZIKV outbreak is expected in Puerto Rico later this year, and Sejvar revealed that he and his colleagues at the CDC have initiated a programme of prospective surveillance for GBS on this island. This monitoring, he said, will enable the researchers to follow the incidence of GBS as ZIKV infection spreads, and to gain further insight into the association between ZIKV and GBS.

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