Taline Monteiro Klein, J Neurol Neurophysiol 2019, Volume 10
DOI: 10.4172/2155-9562-C1-098

Investigation of Zika virus infection and its relation with Guillain-Barré syndrome in patient samples from Brazil

Taline Monteiro Klein
University of São Paulo, Brazil

After the initial outbreak of infection with Zika arbovirus in French Polynesia an increase of Guillain-Barré syndrome (GBS) cases were observed in the same geographical location. Later the epidemic reached South America, and it had been established that 1 in every 4000 cases of Zika infection were complicated by this disease. GBS is believed to result from immune mediated damage to peripheral nerves, but in most cases the precise nature of the autoimmune mechanism responsible is unclear. To establish the real relationship between ZIKV infection and GBS onset we received GBS samples (urine, serum/plasma and CSF) from 54 patients. These samples were submitted to qRT-PCR to identify the presence of ZIKV. We found that 27 patient samples were positive for the presence of this virus. Later sera and CSF samples were tested for the presence of neutralizing anti-ZIKV antibodies by PRNT50 assay. We could observe that 15 sera samples had neutralizing anti-ZIKV antibodies that were capable to neutralize ZIKV cytopathic effects, and 8 of these sera were positive also for ZIKV RNA by qRT-PCR, indicating that this virus could persist more than 20 days in these GBS patients. We obtained two viral isolates from these qRT-PCR positive samples (1 serum and 1 CSF), that were submitted to complete genome sequencing. Now, we are conducting experiments to evaluate the cytokine profile of these samples. We are evaluating also the capacity of anti-ZIKV antibodies detected in some samples to recognize (cross-reactivity) nervous tissues.

Biography

Taline Monteiro Klein is a PhD Student from Basic and Applied Immunology Program of Medicine School of University of São Paulo, Brazil. She has completed her Master degree from the same institution.

talineklein@usp.br

Notes: