

Zika Virus Infection and Immuno-Cross-Reactivity to Dengue: An Issue in the Pathogenesis of Congenital Microcephaly

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Dear Editor,

Zika virus infection is currently a global medical concern. The infection is already seen in many tropical countries and the main concern is the congenital microcephaly due to infection in pregnant mothers. It is believed that the direct viral invasion causes the neuropathology (1) and the involvement occurs in stem cells during the organogenesis phase (2). A recent study showed an interesting finding that “dengue virus sero-cross-reactivity drives antibody-dependent enhancement of infection with zika virus” (3). It was mentioned that the immuno-cross-reactivity to dengue was an important factor leading to congenital anomaly problems (3).

However, there is still a myth regarding the epidemiological discrepancies of the congenital anomaly incidence in South America and other areas of the world (4). This cannot be explained by the immunopathogenesis due to immuno-cross-reactivity theory. In fact, other additional factors such as different specific environmental insult as well as genetic factors in different settings might be the cause of the problem in South America and this is an issue for further studies (5).

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