

Letter to the Editor

Seroprevalence of dengue virus antibodies in healthy Jamaicans

To the Editor,

The comments made by Arya et al. [1], in the current issue of the journal, regarding our interpretation of the emergence of the more severe forms of dengue, dengue haemorrhagic fever (DHF) and dengue shock syndrome (DSS) in the Jamaican population in the near future are valid and useful [1,2]. These authors are correct in their observations that testing only one sample for dengue IgG antibodies is of limited usefulness in the diagnosis of current infection and that paired samples taken 2 weeks apart could be more useful [1,3].

The epidemiological patterns of dengue virus infection, DHF and DSS may be determined by qualitative and quantitative testing of dengue RNA, proteins, and antibodies [3]. Traditionally dengue infection is diagnosed by the haemagglutination inhibition (HAI) test or immunoglobulins (Ig) M and G enzyme-linked immunosorbent assays (ELISA) [3,4]. Viral cultures and molecular tests, such as reverse transcriptase polymerase chain reaction (RT-PCR) assay, are useful and effective in the diagnosis of dengue infection while the virus circulates in the blood [2,5]. Successful use of these methods relies on the patient, with signs and symptoms of dengue, presenting for medical attention and blood samples being taken during the early acute phase of illness when the patient is viremic [4]. The timely presentation of patients at health care facilities is crucial but depends on a number of variables including cultural and socioeconomic factors [6].

Currently viral cultures and molecular testing options are not widely available in the Jamaican health care system as there is only one dedicated virus laboratory in the country with its 2.6M population.

The use of reliable on site rapid immunochromatographic tests as a practical option for diagnosis of dengue in Jamaica was reported by Palmer et al. [7] who evaluated an IgM capture ELISA and a rapid immunochromatographic test, which detected both IgM and IgG, for the diagnosis of dengue fever. The rapid test was reported to be sensitive, specific and as effective as an IgM capture ELISA in the diagnosis of dengue fever [7]. Of course these methods do not circumvent the delay which might attend the appearance of dengue IgM antibodies in the blood of dengue infected patients and the ambiguity of IgG antibodies diagnosed on a single sample. So far, rapid dengue antigen tests have not been evaluated in the Jamaican health care setting.

The recommendation to use rapid on- site immunochromatographic tests for dengue virus non structural protein 1, (NS1) in Jamaica, a dengue endemic country, is a promising one which we would certainly consider.

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