ACCURATE DIAGNOSTIC APPROACH FOR THE DIAGNOSIS OF ACUTE DENGUE INFECTION

Article · April 2013

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Humaira Zafar

Sir, Dengue viral infection (DVI) had now taken an endemic proportion in our country Pakistan. It is amongst the burning Global health issues. The increase in the number of infected people is the key predisposing factor for frequent epidemics at various regions. However, in the absence of specific vaccine and anti-virals, the mainstay for the initiation of early supportive management is the exact diagnosis of acute phase. Hence, the only way to reduce the morbidity and mortality rates.

It is has been proven by the Literature review that nonstructural protein (NS-1) antigen detection by ELISA method along with the molecular studies (viral genotype and serotype detection) are the accurate diagnostic approaches for less than 07 days of infection. [1,2] The detection of IgG and IgM by ELISA method are the ideal ones for more than 07 days of infection. [3]

The advantages of NS-1 detection by ELISA method is that, it is100% specific for acute dengue diagnosis, and no paired samples required for labeling a patient positive or negative. Moreover, there is no cross reactivity with other flaviviruses like Japaneese encephalitis, yellow fever and tick borne fever viral antibodies. [4] In comparison the IgG and IgM detection by ELISA method always require a paired sample which must be taken two weeks apart, in order to label a patient positive or negative. The cross reactivity with other flaviviruses can cause false positive results in case of IgG and IgM detection by ELISA method. [5]

The policies regarding the implementation of accurate diagnostic approach, regular daily surveillance, coordinated correspondence between health regulating administrative bodies, epidemiologist and infection disease units can provide a proactive approach for the prevention and control of disease in our country. [6]

REFERENCES

1. Ahmed SI, Naeem A, Baqai HZ, Sheikh SI, Ranja ZA, Satti AI, et al. NS1 Antigen and Immunoglobulin M detection in the Acute and Early Convalescent Stages of Dengue Fever. JRMC; 2010;14(2):56-9
2. Paulo SU, Fonseca BA. Dengue: A review of the laboratory tests. A clinician must know to achieve a correct diagnosis. Braz J Infect Dis. 2004; 86: 371.
3. Sammuel PP, Tyagi BK. Diagnostic methods for detection and isolation of Dengue viruses from vector mosquitoes. Indian J Med Res. 2006; 1231 (5): 615 – 28.
4. Datta S, Wattal C. Dengue NS1 antigen detection: A useful tool in early diagnosis of dengue virus infection. Ind J Med Microbiol. 2010; 28(2): 107-10.
5. Wichman O, Stark K, Yun Shu P, Niedrig M, Frank C, Huang JH, Jelinek T. Clinical features and pitfalls in the laboratory diagnosis of dengue in travelers . BMJ Infect Dis. 2006; 6: 120.
6. Fisher D. The Vector borne; mosquito transmitted diseases in Singapore. Singapore Med J. 2005; 46 (11): 596.

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