

# EVALUATION OF RAPID IMMUNOCHROMATOGRAPHIC NS1 TEST, ANTI-DENGUE IgM TEST, SEMI-NESTED PCR AND IgM ELISA FOR DETECTION OF DENGUE VIRUS

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**Abstract.** Dengue virus (DENV) causes various clinical symptoms of differing severity based on time of infections. The existing laboratory methods, semi-nested PCR and Dengue IgM ELISA, still have limitations for diagnosis. A commercially available rapid immunochromatographic dengue NS1 antigen and IgM antibody tests in comparison with semi-nested PCR and IgM ELISA for confirmation of DENV infection were evaluated. In total, 237 single acute serum specimens and 50 paired sera of dengue patients were examined using the rapid dengue NS1 antigen test, IgM antibody test, semi-nested PCR and Dengue IgM ELISA. The NS1 and IgM rapid tests showed sensitivity of 70.6%, and 75.6%, respectively, and specificity of 73.4% and 97.1%, respectively. The combination of NS1 and IgM tests enhanced diagnosis. Thus rapid dengue NS1 antigen and IgM antibody tests are highly appropriate for diagnosis of dengue infection as it is rapid, easily applicable, sensitive and highly specific.

**Key words:** dengue, rapid immunochromatographic test, semi-nested PCR, IgM ELISA

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