

LABORATORY PREDICTORS OF DENGUE SHOCK SYNDROME DURING THE FEBRILE STAGE

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Abstract. The clinical manifestations of dengue hemorrhagic fever (DHF) consist of three successive stages: febrile, toxic and convalescent. The toxic stage is the critical period, which may manifest as circulatory disturbance or even profound shock in some patients. We attempted to determine predictors for the risk of dengue shock syndrome (DSS) during the febrile stage. One hundred one children with acute febrile illness were enrolled in the study, with a mean age of 11 years old. The diagnosis included dengue fever (DF) 21 cases, DHF grade I 30 cases, DHF grade II 33 cases, DHF grades III and IV 10 cases; children with other febrile illnesses (OFI) 7 cases were used as controls. Complete blood counts, coagulation tests, von Willebrand factor antigens (VWF:Ag) and ristocetin cofactor activity (VWF:Rcof) were determined daily during hospitalization and 2-4 weeks after discharge from the hospital. The results revealed any one of the following abnormal laboratory findings during the febrile stage served as a predictor for risk of DSS: increase in hematocrit >25%, a platelet count <40,000/ μ l, an activated partial thromboplastin time >44 seconds, a prothrombin time >14 seconds, a thrombin time >16 seconds or a VWF:Ag or VWF:Rcof >210%. The relative risk ranged from 4.8 to 10.9. Simple laboratory investigations with complete blood count, coagulation test or the more sophisticated von Willebrand factor, are helpful in predicting the risk for DSS during the febrile stage.

Key words: dengue shock syndrome, dengue hemorrhagic fever, predictors

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