DENGUE FEVER SCORE SYSTEM -A NEW STRATEGY FOR EARLY DETECTION

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Background: Dengue fever, rickettsial diseases and Q fever are some of infectious diseases in southern Taiwan that often manifest as acute febrile illness of initially unconfirmed etiology. A retrospective observational study was conducted to identify factors helpful for early diagnosis of acute dengue virus infection.

Methods: We compared the clinical and laboratory findings of 89 adult patients with dengue fever at presentation during 2002-2004 in Municipal Hsaio-Kang Hospital, together with 14 patients with scrub typhus, 104 cases of Q fever and 35 cases of Murine typhus from three Taiwan hospitals. (Kaohsiung Medical University Hospital, Municipal Hsaio-Kang Hospital and National Cheng Kung University) during 1995-2005. Based on the findings two scoring systems were designed for the early detection of dengue fever.

Results: By using these two scoring systems, we prospectively evaluated the usefulness of these tables to detect 101 dengue fever cases during the outbreaks in Kaohsiung city (89 cases) in 2005 and Tainan city (12 cases) in 2002-2004. The scoring system when used both without and with laboratory data had a sensitivity of 88.12% and 88.12%, a specificity of 94.87% and 89.74%, a positive predictive value of 95.7% and 91.75%, and a negative predictive value of 86.05% and 85.37%, respectively.

Conclusions: These scoring tables may be helpful for the differential diagnosis of fever in adults including dengue fever. These scoring tables are particularly useful when rapid confirmatory diagnostic tests are not available and thus, enables the diagnoses of dengue fever early enough to initiate appropriate therapy and prevention strategy.

Key words: dengue fever, dengue hemorrhagic fever, dengue fever score system