

# FACTORS ASSOCIATED WITH SEVERE CLINICAL MANIFESTATION OF DENGUE AMONG ADULTS IN THAILAND

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**Abstract.** A retrospective study was conducted by reviewing medical records of 323 adult patients hospitalized with dengue infection at the Hospital for Tropical Diseases, Bangkok, Thailand between 2006 and 2010 in order to determine factors associated with severe clinical manifestations of dengue. Of 323 patients, 95 (29.4%) had dengue fever (DF) and 228 (70.6%) had DHF, which were categorized as grade I (67 patients, 29.4%), grade II (62 patients, 27.2%), grade III (95 patients, 41.7%) and grade IV (4 patients, 1.8%) following 1997 WHO definitions. Using the revised 2009 WHO definitions, 233 patients (72.1%) had non-severe dengue infection and 90 patients (27.9%) had severe dengue infection. Of the 233 patients with non-severe dengue infection, 193 (82.8%) were classified as having non-severe dengue infection with warning signs and 40 (17.2%) were classified as having non-severe dengue infection without warning signs. Using stepwise multivariate logistic regression analysis, having a hematocrit >2% above the reference range [odds ratio (OR) 3.235; 95% confidence interval (CI) 1.807-5.793] or having an alanine aminotransferase level >120 IU/l (OR 1.896; 95% CI 1.018-3.531) were associated with having DHF grades II-IV, whereas female gender (OR 2.042; 95% CI 1.143-3.648) or having a mean arterial pressure <80 mmHg (OR 2.275; 95% CI 1.302-3.975) were associated with severe dengue. These findings may help clinicians to determine patients at risk for severe manifestations of dengue infection, which could lead to proper management of these cases.

**Keywords:** dengue hemorrhagic fever, severe dengue, associated factors, Thailand

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