

CLINICAL CHARACTERISTICS AND RISK FACTOR FOR FATALITY OF ELDERLY PATIENTS WITH DENGUE HEMORRHAGIC FEVER

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BACKGROUND AND PURPOSE: Compared to dengue illness involving children that has been well studied, little is known about dengue infection in adult patients in general and in elderly patients in particular. The aim of this study is to clarify the clinical characteristics of dengue hemorrhagic fever (DHF) in non-elderly and elderly adults, and to identify risk factor(s) for fatality in elderly DHF patients.

MATERIALS AND METHODS: Retrospective analyses of adult patients with DHF during a dengue epidemic caused by dengue virus serotype 2 in southern Taiwan between June and December 2002. The adult patients included were divided into two groups: the elderly (age ≥ 60 years) and controls (age 19 to 59 years) for comparison. To determine the independent risk factor(s) for fatality in elderly with DHF, patients in the elderly group were further divided into fatal and non-fatal subgroups for analyses.

RESULTS: Among the 308 included patients with DHF, 121 were elderly and 187 were controls. Compared to controls, elderly patients had significantly higher frequency of dizziness ($P < 0.001$), lower incidences of fever (38°C) ($P = 0.007$), abdominal pain ($P < 0.001$), bone pain ($P < 0.001$) as well as skin rashes ($P = 0.003$), higher incidence of prolonged prothrombin time ($P = 0.022$), lower mean serum albumin ($P < 0.001$) as well as hemoglobin level ($P < 0.001$) and longer hospitalization ($P < 0.001$). Patients in the elderly and control group showed no differences in occurrence of dengue shock syndrome (DSS) ($P = 0.307$) and fatality rates ($P = 0.116$). When comparing the fatal ($n = 5$) and nonfatal ($n = 116$) subgroup in the elderly patients, there were significant differences in age ≥ 70 years ($P = 0.017$), male ($P = 0.010$), chronic obstructive pulmonary disease ($P = 0.001$), DSS ($P < 0.001$), gastrointestinal bleeding ($P = 0.041$) and concurrent bacteremia ($P = 0.008$). Multivariate analysis showed DSS (odds ratio = 31.20, $P = 0.005$) was independent risk factor for fatality in the elderly with DHF.

CONCLUSIONS: The present data demonstrated the differences in clinical manifestations between the elderly and non-elderly adults with DHF. DSS is risk factor for fatality in the elderly with DHF.

Keywords: Dengue Hemorrhagic Fever, Elderly Patients, Fatality