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The Association between Nutritional Status and Blood Pressure among Pediatric Patients with Dengue Hemorrhagic Fever in Indonesia

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Objectives: Dengue hemorrhagic fever is an acute viral infectious disease transmitted by *Aedes aegypti*. This disease mostly affects children and has atypical clinical manifestations in many cases. The aim of this study was to determine the association between nutritional status and blood pressure among pediatric patients with dengue hemorrhagic fever in Bendan Regional Public Hospital, Pekalongan City, Indonesia.

Methods: The design of this study was analytical observational with a cross-sectional study using secondary data from medical records at Bendan Regional Public Hospital in Pekalongan City, Central Java Province, Indonesia. Pediatric patients, ranging in age from 0 to 18 years, were included in this study. The data was collected from January to December 2021. The nutritional status was calculated using an indicator of weight for height and body mass index for age according to the Indonesian Ministry of Health standard in 2020. Blood pressure was measured on the first day of hospitalization. The statistical analysis was explored using SPSS 25.

Results: A total of 15 pediatric patients, including 7 males (46.7%) and 8 females (53.3%), were involved in this study. The mean age of the patients was 10.13 years, ranging from 2 to 16 years. The nutritional status was classified into 3 types, which were 80% normal, 6.7% obese, and 13.3% wasted. Blood pressure was classified into 4 types: 20% hypotension, 60% normal, 13.3% prehypertension, and 6.7% hypertension. The analysis of the data using a chi-square test showed that there was a significant association between nutritional status and blood pressure among pediatric patients with dengue hemorrhagic fever ($p = 0.00$).

Conclusions: Nutritional status was significantly associated with blood pressure among pediatric patients with dengue hemorrhagic fever at Bendan Regional Public Hospital, Pekalongan City, Indonesia. The greater the nutritional status or body mass index, the higher the blood pressure.