

ELECTROLYTE DISTURBANCES AND ABNORMAL URINE ANALYSIS IN CHILDREN WITH DENGUE INFECTION

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Abstract. Serum electrolytes and urine analysis results were retrospectively reviewed in children with either dengue fever (DF) or dengue hemorrhagic fever (DHF). Children who had positive serology for dengue infection and serum electrolytes determined before starting intravenous fluid were included in the study. During the years 2004-2007, 73 DF patients, age 9.29 ± 3.62 years, and 77 DHF patients, age 10.04 ± 3.64 years were enrolled in the study. The patients were admitted to the hospital on average on days 4.12 ± 1.1 and 4.25 ± 1.4 of febrile illness for DF and DHF, respectively. The prevalence of hyponatremia in patients with DF was 61% and DHF was 72% ($p = 0.149$). The mean serum sodium levels in patients with DF and DHF were 133.5 ± 3.52 and 133.5 ± 3.20 mEq/l ($p = 0.938$), respectively. The prevalence of hyponatremia in patients with mild (grade I), moderate (grade II) and severe (grade III-IV) DHF were 70, 77, and 78% ($p = 0.729$), respectively, and the mean serum sodium levels were 134.1 ± 3.05 , 132.9 ± 3.33 , and 132.5 ± 3.28 ($p = 0.189$), respectively. The prevalence of hypokalemia in patients with DF was 14% and 17% in patients with DHF ($p = 0.588$). A high urine specific gravity reflecting dehydration was found in 63% of patients with DF and 60% of patients with DHF ($p = 0.77$). The prevalences of hematuria in patients with DF and DHF were 18% and 27% ($p = 0.182$), respectively and proteinuria were 15% and 27% ($p = 0.072$), respectively. The prevalences of hematuria and proteinuria were not different among patients with mild, moderate and severe DHF. No patients had gross hematuria or developed acute renal failure requiring dialysis. Mild hyponatremia is a common electrolyte disturbance and renal involvement is mild in patients with DF and DHF.

Key words: dengue fever, dengue hemorrhagic fever, electrolyte disturbance, urine analysis

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