A Case Series of Falciparum Malaria-induced Acute Renal Failure

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Abstract

Falciparum malaria is a disease of tropical climates which affects 270 million people annually and has an overall mortality of 1%. While the incidence of acute renal failure in malaria is less than 1%, mortality is reported to be as high as 45% in those with renal failure. We report the clinical course and outcome in 5 patients with falciparum malaria-induced acute renal failure treated at the Singapore General Hospital between June and July 1997. All 5 males, with mean age of 35.2 ± 13.1 years, were admitted with history of fever and reported travel to a known malarious zone. Mean laboratory parameters upon admission included serum creatinine 725 ± 515 µmol/L and serum urea 47 ± 31 mmol/L. Three patients with hypotension on admission were started on haemodiafiltration, of whom 2 were subsequently converted to haemodialysis as their haemodynamics improved. Two remaining patients were started on intermittent bicarbonate haemodialysis. The overall mortality in our series was 20%, with 1 patient having died of complications of adult respiratory distress syndrome, disseminated intravascular coagulation and multiorgan failure. The remaining 4 survived and recovered their renal function. The single patient mortality occurred in the patient with admission serum creatinine of 1632 µmol/L, a value significantly higher than that of the 4 patients who survived (mean serum creatinine, 499 ± 106 µmol/L, P <0.002). These results suggest that falciparum malaria associated with acute renal failure is associated with a high morbidity, but early presentation and intervention with appropriate antimalarial and renal replacement therapy is associated with improved survival and recovery of renal function.

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