

# FACTORS ASSOCIATED WITH ACUTE RENAL FAILURE IN FALCIPARUM MALARIA INFECTED PATIENTS

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**Abstract.** To identify factors associated with acute renal failure among patients with severe falciparum malaria (MARF), we studied 189 severe malaria patients admitted to the Hospital for Tropical Diseases, Faculty of Tropical Medicine, Mahidol University, in Bangkok, Thailand. Among these, 63 had MARF, and 126 did not. Baseline clinical demographics and laboratory variables were evaluated with univariate analysis. Logistic regression was used to ascertain adjusted odds ratios. By univariate analysis, factors associated with MARF included male gender, fever duration >4 days, patients who lived in a non-endemic area prior to malaria infection, body mass index >18.5 kg/m<sup>2</sup>, oliguria, abdominal pain, impaired consciousness, jaundice, anemia, liver enlargement, total white blood cell count >10x10<sup>9</sup>/l, total bilirubin >3 mg/dl, aspartate aminotransferase >120 U/l, alanine aminotransferase >120 U/l, albumin <3 g/dl, fever clearance time >72 hours, and parasite clearance time >72 hours. A hemoglobin >10 g/dl, patients living in a malaria endemic area, non-oliguria on the day of admission, and splenomegaly were negatively associated with MARF. After multivariate logistic regression, oliguria during the first 24 hours of admission and a history of living in a non-endemic area prior to malarial infection were factors associated with MARF. We conclude the most significant factors associated with MARF were oliguria on the day of admission and living in a non-endemic area prior to malaria infection.

**Keywords:** *Plasmodium falciparum*, severe malaria, renal failure, risk factor

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