PREVALENCE, ASSOCIATED FACTORS, AND PROGNOSTIC OF AKI IN MALARIA IN SUB-SAHARAN AFRICANS

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Introduction

AKI is one of the most feared complications of severe malaria, with an overall incidence ranging from 0.57% to 60% and a mortality rate of up to 45%. We conducted this study to determine the prevalence of AKI in malaria, AKI-associated factors and the impact of AKI on vital prognosis.

Variables	P Value, OR, IC 95%
Diabetes melitus	p=0.044; OR= 3.375; [0.850-13.393
herbal medicine	p=0.045; OR=1.509; [0.513- 4.439]
Respiratory distress	p=0.034; OR= 2.758; [0.907-8.389]
Anemia	p=0.002; OR= 0.407; [0.232 0.713]

Figure : Multivariate analysis of AKI associated factors

Conclusion

AKI is common during malaria. AKI is associated of the severity of malaria, the presence of comorbidities and use of nephrotoxic products. AKI is independently associated with increased risk of death in malaria.

Patients et methods

This was a multicenter, retrospective, descriptive, and analytical study over a 5-year period from January 1, 2019 to December 31, 2023, in the nephrology and infectious diseases departments and intensive care units of Dakar hospitals. We included all admitted patients during this period, regardless of whether they had AKI or not in malaria. AKI was defined according to the KDIGO criteria

Results

A total of 321 patients were included, 158 of whom had AKI, with a prevalence of 49.2%. The study population comprised 242 men and 77 women, with a sex ratio of 3.14. The mean age of patients was 36.25 years (12 and 86 years). Anuria was present in 64.3% of cases, oliguria in 26.8%, and edema in 7.14%. Mean blood urea was 1.20 g/L ± 2.60. Mean creatinine was 34.7 mg/L ± 40.1. Rehydration was performed in 96.8% of cases. Hemodialysis was performed in 19 patients, with an average of 1.89 sessions. Death occurred in 41(25.9%) patients. In multivariate analysis, AKI-associated factors were herbal medicine (p=0.045 [OR=1.509; IC95% [0.513- 4.439]), diabetes (p=0.044 [OR= 3.375; IC95% [0.850-13.393]), respiratory distress (p=0.034 [OR= 2.758; IC95% [0.907-8.389])and anemia (p=0.002 [OR= 0.407; IC95% [0.232 0.713]). AKI was a factor associated with death (p = 0.004; OR = 3.584; IC 95% [1.467-8.754]).

Keywords: Acute kidney injury, malaria, comorbidities, nephrotoxic products