## **AUTHORS' REPLY**

Dear Sir,

Our paper<sup>(1)</sup> analysed the frequency of various complications in patients admitted to an intensive care unit (ICU) situated in a malaria-endemic area. The primary aim of the study was to examine the association of individual complications with malaria-related mortality. Severe complicated malaria patients with multiple organ failure should ideally be treated in an ICU. Unfortunately, the majority of malaria patients with multiple organ failure do not have access to intensive care facilities for various reasons. While malaria patients with multiple organ failure cannot be effectively treated at a periphery hospital, patients admitted to an ICU do not represent the epidemiological pattern of severe malaria. We are of the opinion that this is an inherent problem in the evaluation of severe malaria patients, and the information available from a tertiary care hospital should be considered along with these shortcomings.

We admit our inability to collect the complete prior medical and pathology history of all patients transferred to the ICU. In the majority of the patients, adequate prior medical information was provided by the referring hospital, but for several patients, it was either grossly inadequate or unavailable. However, we do not feel that the unavailability of prior medical information for a few patients would profoundly influence the primary aim of the study, which was "to determine the association of individual complications with malaria-related mortality."<sup>(1)</sup>

The intended objective of the study was neither to compare the efficacy of different renal replacement therapies nor to compare mortality in a primary care set-up with an intensive care set-up. Similarly, the study was not aimed at examining the consequences of high parasite load on the severity of the disease, because almost all the patients admitted had been administered antimalarial drugs. We had little interest in the consequences of different complications on mortality irrespective of parasite load, duration of illness and treatment received before admission to the ICU.

As indicated in the introduction to our study, a peculiar change has taken place in the pathogenesis of severe malaria. While single complications such as cerebral malaria, acute renal failure (ARF) and jaundice were fairly common a couple of decades ago, most patients with severe malaria currently present with multiple complications. Several reports from India have indicated the shift in severe malaria patients from having a single complication to multiple complications, and this accounts for the increase in mortality rates. The number of patients with one or two complications, specifically the groups with cerebral malaria with ARF and cerebral malaria with jaundice, were too small to make a significant statistical comparison. The highlight of the study is the finding of higher mortality in patients when associated with shock. In our paper, we compared two studies from India with almost similar setups, one from an ICU<sup>(2)</sup> and the other, from a medical college hospital. Only a passing reference to World Health Organization figures was mentioned, and these were, as expected, not comparable.

In conclusion, the highlight of our study is the finding of higher mortality in patients when associated with shock. The information available from a tertiary care hospital should be considered along with the obvious limitations.

Yours sincerely,
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