Correspondence

Severe Malaria Studies: Challenge to Balance Clinical Medicine and Public Health

To the Editor—[Q1] The continued discussion [1] of issues raised in my recent commentary [2] is an example of the tension that exists between the efforts of clinical medicine to improve treatment for severe malaria and public health efforts to control malaria infection and thus prevent malaria-related mortality.[Q2] This dichotomy has a long history, going back at least to those Indian Medical Service officers of the early twentieth century who espoused either improved chemotherapy (eg, S. P. James) or control of mosquitoes (eg, Ronald Ross).

As Maude et al [1] indicate, the vast majority of malaria deaths occur far beyond the reach of any medical system capable of intensive care. However, setting up any clinical trial capable of measuring severe malaria outcomes necessarily provides essential nursing care, which is often decisive in the survival of patients with severe malaria. Regardless of the intervention, well-executed severe malaria clinical trials will reduce mortality and thus require larger sample sizes than one would estimate from baseline mortality figures. Any severe malaria intervention trial would need to be approved by multiple human research ethics review boards, reflecting both the countries involved and the sponsors of the trials. In my experience, none would accept a protocol that provided much less than optimal therapy, which is often considerably better than what is currently available at district hospitals in virtually all areas of malaria endemicity. Once you accept this requirement, the size of any severe malaria intervention trial seeking significant mortality differences increases greatly. This largely explains why well-executed severe malaria trials, such as the South East Asian Quinine Artesunate Malaria Trial (SEAQUAMAT) and, subsequently, African Quinine Artesunate Malaria Trial (AQUAMAT), require multiple research groups in several countries where malaria is endemic, hundreds of severely ill patients, and durations of multiple years [3].

As noted in the original commentary [2], large numbers of children (primarily in Africa) and adults (primarily in Asia) still die from malaria. These deaths occur largely in areas where access to basic health services is still poor and/or sociopolitical conflicts occur. It is much simpler and more effective to introduce long-lasting insecticide-treated bednets (LLINs) and basic outpatient malaria chemotherapy than it is to devise and assure hospital care for patients with severe malaria. In a resource-constrained world it is quite logical for a Minister of Health in any country where malaria is endemic to favor public health interventions to reduce malaria transmission over improved clinical care in hospitals, especially given the dramatic reductions in childhood all-cause mortality seen in places such as Zanzibar, where a substantial level of good clinical services was already present prior to the introduction of mass LLIN [4].

The creative tension between clinical medicine and public health will not be resolved by polarized approaches. However, decisions on research for new malaria interventions are currently being made by relatively few large funding bodies, which choose between competitive research groups that advocate different grant proposals. These funding bodies need to be aware of the challenges created by this professional competition and how it translates into differing approaches to reducing mortality due to severe malaria.[Q3]

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References


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2 Au: Is the sentence that begins “The continued discussion...” OK as edited? If not, please revise.

3 Au: Are the acknowledgments OK as edited, or should something else be included in the conflict of interest statement.