

Editorial

Severe malaria in African children: Still a challenge

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Malaria remains one of the leading causes of morbidity and mortality in children from sub-Saharan Africa. Mothers and caretakers should be able to recognize the symptoms of a sick child and, in areas without health workers at hand, even to suspect malaria and start early home-based treatment before seeking help at a health centre or a hospital, thereby hopefully decreasing the risk of the child developing severe malaria.

As malaria is a febrile illness with highly non-specific symptoms, the final diagnosis depends on the identification of parasites by microscopy or by tests identifying the parasite derived proteins like histidine-rich protein 2 [1]. At the health centre level a microscopist might or might not be available. If a malaria film cannot be examined or parasitological test results are likely to be delayed, a presumptive clinical diagnosis has to be made for which several algorithms have been suggested [2,3]. It is important not to miss a case of severe or complicated malaria as the consequence may be fatal, and antimalarial treatment should be started based on the clinical diagnosis. Furthermore, false negative test results might occur due to poorly prepared or poorly stained malaria films or due to poor quality microscopes or inexperienced technicians. There-

fore, in endemic areas severely sick children should on suspicion of malaria always receive appropriate anti-malarial treatment.

Treating a sick child for malaria without having an exact diagnosis might, however, not only be a vast of money but could even put the child at danger as the symptoms might be due to another severe disease, and thus preventing the child from receiving treatment for the infection causing the symptoms, let alone that in endemic areas a sick child may have parasites in the blood without suffering from malaria. Therefore, even in the case of having a positive malaria film, a thorough evaluation is needed to exclude any other infection, and antibiotics should be given to cover bacterial meningitis if cerebrospinal fluid examination is inconclusive or for other bacterial infections if suspected. However, even if the clinician prescribes treatment for both malaria and for a bacterial infection the costs of purchasing the drugs may in settings where these are not given for free force the mother to choose only to buy one of the drugs.

To decrease case fatality rates, complications to malaria as described in this issue of the Journal of Pediatric Infectious Diseases by Nmorsi et al. [4] should be identified and promptly treated thus posing a huge challenge on the responsible staff in settings with lack of adequate medical equipment and laboratory facilities. As in Nigeria [4] many children might develop convulsions which can be due to cerebral malaria or hypoglycemia, but also may reflect “simple” febrile

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seizures. The treatment of choice is diazepam, which easily and fast can be administered as rectal suppositories. However, if the convulsion is caused by hypoglycemia this should be treated promptly by glucose intravenously, though sublingual administration could be a promising option for rescue treatment [5]. Severe anemia has been shown to be an important factor for mortality in children with malaria; however, indirect evidence suggests that when blood is readily available the risk can be significantly diminished [6]. Hypovolemia should be treated; if there is a shortage of intravenous fluids nasogastric tubes would be a good option, especially as the risk of overloading is diminished when the fluid is administered orally. Furthermore, the tube can be used to feed the child until able to eat itself. Respiratory distress is a serious symptom in severe malaria and a strong predictor of mortality as also documented by Nmorsi et al. [4] and should be treated with oxygen. As suggested, many of the complications associated to malarial mortality have the possibilities for low cost treatments available in many hospitals and even at health centers. Therefore, health facilities at different levels should develop realistic routine instructions and procedures for diagnosing and treating malaria and its complications.

Evaluation of children seeking treatment for malaria and describing the cases of severe malaria is important; not only does it add to our knowledge, but also just as important does it keep our focus on the main issue:

the sick child in risk of dying of a treatable infection. Hereby hopefully also prompting the health professionals and the political decisions-makers to continuously improve the possibilities of diagnosing malaria at all health care levels, to ensure that all children suffering from malaria can be treated with an efficient and affordable antimalarial drug and to diminish the morbidity and especially the mortality from malaria by improving the possibilities of diagnosing and treating its complications.

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