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EDITORIAL

In many African countries, pharmacotherapeutic decisions are made on the basis of clinical impression and case history. Tentative diagnosis may be confirmed or negated by laboratory tests but often after commencement of therapy. Much depends on the availability of laboratory facilities and the patient's ability to pay for the services. Diagnostic tests add to the cost of treatment. Even simple tests such as examination of stool for ova or blood smear for malaria parasites can be a burden on poor patients many of whom can barely afford to pay private medical practitioners. In public health facilities, particularly those in the rural areas, laboratory facilities are lacking or totally inadequate and samples have to be sent to a central laboratory far away. In such cases, it is not unusual for the clinician to receive results long after the patient has died or been discharged.

For some disease conditions, such as malaria, and worm infestations, case history and clinical findings are so consistent that experienced clinicians can achieve 80% success rate in diagnosis without resort to laboratory tests. Even patients readily recognise the symptoms and resort to self-medication. For example, a person living in a malaria endemic area will readily recognise the typical symptoms of malaria characterised by high fever, profuse sweating, intermittent episodes of shivering, poor appetite, malaise, joint pains, nausea, vomiting and diarrhoea. Admittedly, typhoid in the early stages can be misdiagnosed as malaria but this is rare. It is reasonable to conclude that a common source of pharmacotherapeutic failure is misdiagnosis and much more so in case of self-medication. Other factors that contribute to the therapeutic failure can be grouped into two broad categories, namely drug-related and patient-related factors.

Let us focus on the drug-related factors. Firstly, the dosage may be inadequate, due to ingestion of drug products of poor quality. In this issue of the journal, there are two articles on the quality of sulphadoxine/ pyrimethamine (SP) products currently being used in Kenya and Tanzania. The SP products were analysed for the active ingredients and their dissolution profiles. For poorly soluble drugs such as sulphadoxine and pyrimethamine, the dissolution is the rate limiting step and an important determinant in their bioavailability. If, as indicated in both articles, the generic products have such poor dissolution profiles, then a patient taking the recommended dose will inadvertently be taking a sub-therapeutic dose. Ironically, because of economic constraints, patients are more likely to buy the generic products. Even the governments of the two countries are likely to buy the cheaper generics rather than the more expensive brand products such as Fansidar and Metakelfin. In any case the World Health Organisation (WHO) advocates the use of cheap generic but assumes such products are of acceptable quality in all respects.

Pharmaceutical companies that respond to government advertisement of drug tenders, usually submit samples of high quality. However, once the tender has been awarded, it is no longer possible to attest for the quality of products delivered. The need for constant surveillance of drug products in the marked can not be over-emphasised as clearly shown by the two articles referred to above.

Patient-related factors that contribute to therapeutic failure are many and cannot be dealt with adequately in this brief editorial. They include poor patient compliance and varying degree of immunity for people moving in and out of malarial endemic areas. The malaria transmitting vector, the anopheles mosquito, thrive under warm, humid conditions, usually at low altitudes along the coastal region and Lake Regions. People living permanently in these endemic areas have acquired immunity and often recover from malaria bouts regardless of the effectiveness of treatment. If the same people move out of these areas, they quickly lose the immunity and the same dose of antimalarial drugs which 'cured' them earlier is no longer adequate. Those living in high altitudes where the malaria vector can not survive have little or no immunity. Occasionally, seasonal changes may favour the breeding of the vector mosquito thus leading to the outbreak of Highland malaria. For those living in the highlands and with no immunity to the plasmodium parasite, use of sub-standard generic products will invariably prove fatal. Expectant mothers are particularly vulnerable to malaria for a variety of reasons. It is claimed that they exhale greater volume of air with all sorts of chemicals that attract mosquitoes and that they also sweat more easily. Due to hormonal changes during pregnancy, there is diminished immunity and they tend to have more severe bouts of malaria necessitating vigorous treatment. Ironically, many clinicians discourage use of antimalarials, especially during the first trimester due to possible teratogenic effect.

Children under 5 years are also vulnerable to malaria because they have not had time to build up immunity to the disease. The fate of those infected with malaria is usually decided within the first 48 hours. In Kenya, like many African countries, mothers give symptomatic treatment initially, usually paracetamol for fever, and it is only when the condition deteriorates that the child is rushed to hospital. By that time it may be too late.

There should be no compromise on the quality of drugs in general and antimalarials in particular and the 2 articles on SP antimalarials above should be a course of worry for all of us. Unfortunately, the authors have not identified the standard generic, no doubt because of the legal implication. So what is the next course of action?

Editor-in-Chief