

UDC 616.936(669)

ELIMINATION OF MALARIA IN NIGERIA: PROBLEMS AND SOLUTIONS

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Relevance

Malaria is an Infectious disease caused by protozoan organism of the Genus Plasmodium. There are four different Protozoa species: Plasmodium vivax, Plasmodium ovale, Plasmodium malaria and Plasmodium falciparum. P. falciparum is the most dangerous of the four. The Anopheles gambiae mosquito is the vector responsible for the transmission of malaria. In 2010 deaths from malaria in Nigeria were the highest recorded worldwide. It was estimated 100 million malaria cases with over 300,000 deaths per year in Nigeria [1]. Data published by WHO in 2016 about percent of children aged 6–59 months who tested positive for malaria by microscopy showed that the highest prevalence of malaria in Nigeria is in the North-West region (37 %), and the lowest is in the South-East region (14 %) [2]. The most prevalent malaria parasite species in Nigeria is Plasmodium falciparum (> 95 %) and it is responsible for most forms of the severe disease. The other types found are Plasmodium malariae and Plasmodium ovale [3]. In Nigeria, the highest level of infection is observed in the month of September, while the lowest level of infection is observed at the peak of the dry season, especially during the months of March and April [4].

Purpose of the study

To determine the actual problems hindering the elimination of malaria in Nigeria and suggest possible ways to resolve them.

Materials and research methods

Reviews, analysis of scientific literature on malaria and its eradications.

Result and discussion

Malaria drugs are meant to clear malaria parasites from the blood of an infected person and in the process diminish sources of infection in the community. In antimalarial chemotherapy, drug resistance is defined as the ability of a parasite strain to survive and/or multiply despite the administration and absorption of drug given in doses equal to or higher than those usually recommended but within the tolerance of the subject, is a major challenge in the fight against malaria. Drug resistance has developed to monotherapeutic agent previously used in Nigeria. Chloroquine and sulphadoxine-pyrimethamine used to be the drug of choice against malaria but chloroquine resistance that swept across endemic countries in the 1980s was the reason for treatment policy change that gave rise to the use of Artemisinin-based combination therapy (ACT) as the current drugs of choice. ACT has played a major part in reducing the number of deaths due to malaria over the past decade. In Nigeria there is combination of artemether with lumefantrine as first line of treatment and artesunate amodiaquine as alternate medicine for the treatment of malaria [5, 6]. Conflicts, terrorism, insurgency, internally displaced persons and migration Civil wars have many negative consequences which include the destruction of civil infrastructures and the loss of human lives. There are many other important consequences related with the health status of the surviving victims of the civil war which can have very long lasting effects on the productivity of the economy and the health conditions of the country. The infection with the malaria parasite is one of these circumstances. The massive movement of non-immune people across areas infested with the malaria vector is one of the consequences of civil wars. The malaria control situation is threatened by the impact of refugees, returnees, internally displaced populations, and natural disasters, i.e. flooding, that put added strain on an already weakened system from years of conflict and that may destabilize whatever gains that have been made. The situation is aggravated by an increase in population due to refugees, returnees and internally displaced persons. Accordingly, the country experiences exceedingly high malaria transmission intensities with inherent high morbidity and mortality rates. Nigeria today is plagued

by conflicts, terrorism, insurgency, migration and internally displaced persons. Virtually all regions of the country are affected with the northeast bearing the highest burden. Every effort is needed to understand the dynamics of this issue in the effort to control and eliminate malaria [7].

In addition, lack of knowledge about the cause and control of malaria, misconceptions about the cause of malaria are reported in researches from the globe. A report by the federal ministry of health showed that residents of both urban and rural areas still have misconceptions about the cause of malaria. These are the major socio-cultural setbacks in malaria treatment and control. All these contribute to the discrepancies in health seeking behavior and may cause delay in seeking appropriate treatment [8].

Insecticide treated nets and their use, prevalence of mosquito net ownership varies greatly by residence and region. According to 2003 Nigeria demographic and health surveys (NDHS), only 12 % of households reported owning at least a net while 2 % of household report they own an Insecticide treated net (ITN). Similarly, in the 2008 (NDHS) data collected on measures to prevent malaria, it was shown that 17 % of household nationwide own at least a net of any type, while 8 % own at least an ITN. This shows that the ownership of mosquito nets is not wide spread in Nigeria [9]. Financial status also contributes to the less effective control and prevention of malaria in Nigeria. At the household level, poor housing exposes people to the contact with infective mosquitoes, as insecticide treated nets are unaffordable to the poorest if they must pay for them, and lack of resources prevent people from seeking timely health care. Studies have revealed that higher prevalence of malaria infections occurs among the poorest populations group and the poorest were the most susceptible to contracting malaria [10].

Conclusions

Much work still needs to be done to reduce malaria incidence to a minimum level in Nigeria. Presently, evidence base strategies and action are on its prevention, diagnosis, treatment, surveillance, research, and social mobilization. The advance in fight against malaria is largely due to the mass distribution of treated mosquito nets, especially the long lasting insecticide nets. The way out is making accessibility to affordable standard equipment and drugs. Epidemiological surveillance is an essential guide in control strategy. Vector control using barrier method like bed sheets, wearing protective clothes, using mosquito coils, insecticide, and improving general sanitation should be encouraged. Health workers should be trained on how to spray the various site and the surrounding environments, and more awareness and campaigns on fighting against malaria should be carried out. In addition, mass drug distribution should be encouraged especially in places like internal displaced people camp (IDP) and refugee camps. A major drug policy that will alter the treatment of malaria is one which was made by the Federal Government of Nigeria, which placed a ban on Chloroquine and Sulfadoxine — Pyrimethamine as first line drugs in the treatment of the malaria, replacing them with artemisinin-based combination therapy (ACT), and this has reduced the drug resistance to *P.falciparum* malaria. At the moment there is no record of mass drug administration.

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UDC 616.928.8+616.36-002.4(6)

YELLOW FEVER IN AFRICA: EPIDEMIOLOGY AND PREVENTING STRATEGIES

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Relevance

Yellow fever is an acute, viral infectious disease. It is caused by the yellow fever virus, a single-stranded RNA virus of the genus *Flavivirus*. It is mainly transmitted by the bite of an infected