DRUG RESISTANT MALARIA: BEYOND ARTEMISININ A CHALLENGE TO MEDICAL SCIENCE

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ABSTRACT

Malaria is caused by four species of *Plasmodium* the fifth *P.knowlesi* is prevalent in Malaysia and Southeast Asia. Malaria due to *Plasmodium falciparum* has developed resistant to all first line antimalarial drugs .Chloroquine has been replaced by Sulfadoxine-pyrimethamine (SP) as the first- line treatment of uncomplicated malaria. Resistance tochloroquine SP combination is already reported in Africa, making this combination unsuitable for use in Africa. Chloroquine and SP are replaced by artemisinin combination therapies (ACTs) which are more effective. The emergence of resistance to artemisinin derivatives has increased recently with reports of treatment failures with artesunate-mefloquine and arthemether-lumefantrine in Thai Cambodian malaria control programs. The current generation of ACTs will not maintain the efficacy indefinitely. Malaria control programs and researchers must join efforts to apply in coordinated proactive monitoring programs to detect the emergence and prevent the spread of resistance to ACTs.

KEYWORDS: Malaria, Sulfadoxine, Pyrimethamine, Artesunate Combination Therapies