Commentary

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Prevention of Malaria during Pregnancy by Intermittent Preventive Treatment

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Introduction

Malaria infection in pregnant women is a serious public health issue. Pregnancy weakens a woman's immune system, leaving her more vulnerable to malaria infection and raising the risk of sickness, anaemia, severe disease, and even death. Maternal malaria increases the chance of spontaneous abortion, stillbirth, early delivery, and low birth weight in the unborn child, all of which are primary causes of infant mortality [1].

Effect of Malaria during Pregnancy

Malaria is linked to maternal anaemia – which can lead to maternal death if it is severe – and low birth weight (LBW) due to preterm and intrauterine growth retardation in high-transmission areas. LBW is a significant risk factor for prenatal death, as well as illness and mortality during childhood. Malaria during pregnancy may have an impact on the establishment of antimalarial immunity in children during their early years of life. Infants born to placenta-infected moms were shown to be more likely than those born to non-infected mothers to develop malaria between the ages of four and six months. Similar results were recently achieved in another malaria-endemic location [2]. When compared to children of primigravid and/or placental non-infected mothers, it was suggested that offspring of placental-infected multi gravid women had the highest risk of parasitaemia during the early years of life.

Malaria Prevention Strategies for Pregnant Women

In West African countries, chemoprophylaxis with chloroquine (CQ) was used weekly or bimonthly, while in East African countries, dapsone-pyrimethamine (DP) or sulphadoxine-pyrimethamine (SP) was used. A vast number of studies have shown that such chemoprophylaxis is effective in preventing LBW, maternal anaemia, and placental malaria infection. Unfortunately, due to the parasites' increasing resistance to these treatments and the women's poor compliance with treatment, the techniques ended up being ineffective. Chemoprophylaxis should no longer be suggested for all pregnant women living in locations where malaria transmission is stable, and should instead be replaced by intermittent preventative treatment, which was proposed in 1998 and finally implemented in 2004.

IPTp (intermittent preventive treatment) consists in the administrating a single curative dosage of an effective anti-malarial treatment at least twice during the pregnancy, regardless of whether the person is infected or not. During prenatal care (ANC) visits, the medication is given under supervision. Because of its safety and efficacy in pregnancy, the WHO currently recommends sulphadoxine-pyrimethamine. Several studies have indicated that IPTp with SP has a high efficacy on placental infection, LBW, and/or severe maternal anaemia when compared to placebo or CQ prophylaxis [3].

During pregnancy, the WHO recommends taking at least two doses of SP. The average number of ANC visits women had in African countries, as well as the findings of the first IPTp investigations, led to this suggestion. While two doses were proven to be more effective than one, few research have looked into the effectiveness of a higher number of intakes. Three or more SP doses were found to be more effective than two in HIV-positive women, but no benefit was identified in HIV-negative women in these investigations. However, the results of all but one of these studies may have been skewed because the amount of dosages given to the women was not randomised and instead dependent on how frequently they attended ANC visits.

As a result, the efficacy of a higher number of IPTp dosages in HIV-negative and HIV-positive women has yet to be determined. These assessments should be carried out in the context of ITN usage. ITN is the only malaria prevention approach that can be utilised throughout the first trimester of pregnancy, when malaria can be harmful to both the mother and the child. Because most antimalarial medications are contraindicated (due

to suspected foetal toxicity), and most women do not attend ANC checkups, IPTp is not appropriate at that time. The ITN and IPTp techniques have been suggested to be synergistic, in addition to their additive effect [4].

When should iptp be given to Women?

The first dose, according to the WHO, should be given during the first ANC visit after quickening, ensuring that the lady is in her second trimester of pregnancy. IPTp dosages should be separated by at least one month. There is currently no certainty about the ideal time to provide them because it is entirely dependent on the woman's ANC visits and frequency. When possible, women should be safeguarded during late pregnancy, when both foetal growth and malaria's harmful effects are most significant. Even if there are no ANC visits throughout the first two trimesters, it may be useful to provide IPTp in the last month of pregnancy. There is no substantial contraindication to using SP near to birth because the infant is still growing and has to be protected. A single study found that newborns given sulphonamides had a higher incidence of kernicterus, however this has not been verified [5].

When assessing IPTp effectiveness, the timing of drug delivery should be considered. Women could be aggressively urged to attend ANC visits at specific times if crucial moments are identified. More basic research is needed to identify the best dose interval by elucidating how IPTp operates (i.e., prophylactic or therapeutic effect) and giving pharmacokinetic data in pregnant women for SP.

References

1. Steketee R, Nahlen B, Parise M, Menendez C (2001) The burden of malaria in pregnancy in malaria-endemic areas. Am J Trop Med Hyg 64: 28-35.
2. McCormick M (1985) The contribution of low birth weight to infant mortality and childhood morbidity. N Engl J Med 312: 82-90.
3. Bloland P, Slutsker L, Steketee R, Wirima J, Heymann D, et al. (1996) Rates and risk factors for mortality during the first two years of life in rural Malawi. Am J Trop Med Hyg 55: 82-6.
4. Cot M, Deloron P (2003) Malaria prevention strategies. Br Med Bull 67: 137-148.
5. Filler S, Kazembe P, Thigpen M, Macheso A, Parise M, et al. (2006) Randomized Trial of 2-Dose versus Monthly Sulfadoxine-Pyrimethamine Intermittent Preventive Treatment for Malaria in HIV-Positive and HIV-Negative Pregnant Women in Malawi. J Infect Dis 194: 286-93.