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Effectiveness of Monthly Versus Two-Dose Regimen of Sulphadoxine-Pyrimethamine for Intermittent Preventive Treatment of Malaria in Pregnancy in Southeastern Nigeria: A Randomised Controlled Trial

Efficacité d'un Régime Mensuel versus Deux Doses de Sulfadoxine-Pyriméthamine pour le Traitement Préventif Intermittent du Paludisme Pendant la Grossesse dans le Sud-Est du Nigéria: Essai Contrôlé Randomisé

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ABSTRACT

BACKGROUND: There are reports of a high prevalence of maternal peripheral and placental malarial parasitaemia (MP) in southeastern Nigeria following the two-dose regimen of sulphadoxine-pyrimethamine (SP) for intermittent preventive treatment (IPT) of malaria in pregnancy.

OBJECTIVE: To compare the effectiveness of monthly versus two-dose regimens of SP for IPT of malaria in pregnancy in Enugu, south-eastern Nigeria.

METHODS: A randomized controlled trial involving antenatal clinic attendees at the University of Nigeria Teaching Hospital (UNTH), Ituku-Ozalla, Enugu, Nigeria. Pregnant women at gestational ages between 13 – 24 weeks were randomized into two groups; intervention group and control group to receive monthly dosing and a two-dose regimen of IPT-SP respectively. Peripheral and placental malaria parasitaemia (MP) and other outcome measures were compared between the two groups.

RESULTS: Prevalence of placental parasitaemia (18% vs. 40.6%; RR: 0.44; 95% CI: 0.27 – 0.72; $P < 0.001$) and maternal peripheral parasitaemia (10.0% vs. 31.7%; RR: 0.32; 95% CI: 0.16 – 0.61; $P < 0.001$) were significantly lower in the intervention compared to the control group. Similarly, maternal anaemia (39.0% versus 57.4%, $p < 0.05$), neonatal malaria parasitaemia (5.0% versus 16.8%, $p < 0.05$) and neonatal anaemia (10.0% versus 23.8%, $p < 0.05$) were all significantly lower in the intervention than the control group. However, the incidence of low birth weight (LBW) did not differ between the two groups ($P = 1.0$).

CONCLUSION: Monthly IPT-SP is more effective in preventing malaria in pregnancy than the standard two-dose regimen. We recommend the universal adoption of this regimen in all obstetric care units. **WAJM 2024; 41 (8): 860 - 867**

KEYWORDS: Monthly IPT-SP, Two-dose IPT-SP, Maternal parasitaemia, Maternal Anaemia, Placental parasitaemia and Neonatal Anaemia.

RÉSUMÉ

CONTEXTE: Des études montrent une forte prévalence de parasitémie périphérique maternelle et placentaire (PP) dans le sud-est du Nigéria avec le schéma de deux doses de sulfadoxine-pyriméthamine (SP) pour le traitement préventif intermittent (TPI) du paludisme pendant la grossesse.

OBJECTIF: Comparer l'efficacité du TPI mensuel par rapport au schéma à deux doses de SP pour la prévention du paludisme pendant la grossesse à Enugu, dans le sud-est du Nigéria.

MÉTHODES: Essai contrôlé randomisé auprès de patientes suivies en consultation prénatale au Centre Hospitalier Universitaire de l'Université du Nigéria (UNTH), Ituku-Ozalla, Enugu, Nigéria. Des femmes enceintes entre 13 et 24 semaines de gestation ont été randomisées en deux groupes : un groupe d'intervention recevant une dose mensuelle et un groupe témoin suivant le schéma de deux doses de TPI-SP. La parasitémie périphérique maternelle et placentaire (PP) ainsi que d'autres mesures de résultat ont été comparées entre les deux groupes.

RÉSULTATS: La prévalence de la parasitémie placentaire (18 % vs. 40,6 % ; RR : 0,44 ; IC à 95 % : 0,27 – 0,72 ; $P < 0,001$) et de la parasitémie périphérique maternelle (10,0 % vs. 31,7 % ; RR : 0,32 ; IC à 95 % : 0,16 – 0,61 ; $P < 0,001$) étaient significativement plus faibles dans le groupe d'intervention par rapport au groupe témoin. De même, l'anémie maternelle (39,0 % contre 57,4 %, $p < 0,05$), la parasitémie néonatale (5,0 % contre 16,8 %, $p < 0,05$) et l'anémie néonatale (10,0 % contre 23,8 %, $p < 0,05$) étaient significativement plus faibles dans le groupe d'intervention. Cependant, l'incidence de faible poids de naissance (FPN) ne différait pas entre les deux groupes ($P = 1,0$).

CONCLUSION: Le TPI mensuel avec SP est plus efficace que le schéma de deux doses standard pour prévenir le paludisme pendant la grossesse. Nous recommandons l'adoption universelle de ce régime dans tous les services de soins obstétricaux.

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MOTS CLÉS: TPI-SP mensuel, TPI-SP deux doses, Parasitémie maternelle, Anémie maternelle, Parasitémie placentaire et anémie néonatale.

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