Maternal and child health

PO - (8502) - DETERMINANTS AND PREVALENCE OF PARASITE RESISTANCE AMONG PREGNANT WOMEN RECEIVING IPTP WITH SULPHADOXINE-PYRIMETHAMINE IN NIGERIA

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Background: Malaria in pregnancy carries a risk of significant adverse maternal and infant outcomes. Intermittent preventive treatment in pregnancy (IPTp) is advocated to reduce its occurrence, but resistance to Sulphadoxine-Pyrimethamine (SP) is being reported. This study aims to describe the burden of SP resistance and determinants of its occurrence among pregnant women receiving IPTp in Nigeria.

Methods: A prospective observational study to be conducted over 24 months in Ogun state. Pregnant women 16-28 weeks gestation meeting the eligibility criteria are being enrolled and blood samples taken pre- and post-IPTp-SP administration at scheduled intervals for analysis. Microscopically confirmed parasitemic samples will be analyzed using PCR to detect drug resistance markers (pfdhfr and pfdhps). Participants will be followed up till 28 days post-delivery and assessed for maternal and fetal outcomes (anemia, low birth weight, preterm delivery, placental parasitemia, stillbirth, neonatal death). The primary endpoint is the prevalence of the SP resistant gene markers. Secondary endpoints include the prevalence of peripheral and placental parasitemia at delivery; incidence of maternal and newborn morbidity; parasitemia pre-IPTp and day 28 post-IPTp; risk factors for SP resistance and Hemoglobin changes at delivery.

Results: Following statistical analysis with STATA 14, results will be displayed in appropriate formats. Geometric mean parasite densities with 95 % confidence intervals will be calculated, and proportions compared using the t-test, Chi-square or Fisher’s exact tests as appropriate. Multivariate analysis including logistic regression models will be used to test for associations between maternal characteristics and SP resistance. Level of significance will be set at p <0.05.

Conclusion: In a malaria-endemic country like Nigeria with a large at-risk population, information on the effectiveness of chemoprevention is essential. Determining the proportion and extent of relevant molecular markers within the population offers an invaluable tool for epidemiological surveillance of SP resistance within this endemic setting.