ABSTRACT

Prevalence and Risk Factors Associated with Asymptomatic *Plasmodium Falciparum* Infection and Anemia Among Pregnant Women at the first Antenatal Care Visit: A Hospital Based Cross-Sectional Study in Kwale County, Kenya

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Background: Prevalence of Prevalence of malaria in pregnancy (MiP) in Kenya ranges from 9% to 18%. We estimated the prevalence and factors associated with MiP and anemia in pregnancy (AiP) among asymptomatic women attending antenatal care (ANC) visits.

Methods: We performed a cross-sectional study among pregnant women attending ANC at Msambweni Hospital, between September 2018 and February 2019. Data was collected and analyzed in Epi Info 7. Descriptive statistics were calculated and we compared MiP and AiP in asymptomatic cases to those without either condition. Adjusted prevalence Odds odds ratios (aPOR) and 95% confidence intervals (CI) were calculated to identify factors associated with asymptomatic MiP and AiP.

Results: We interviewed 308 study participants; their mean age was 26.6 years (± 5.8 years), mean gestational age was 21.8 weeks (± 6.0 weeks), 173 (56.2%) were in the second trimester of pregnancy, 12.9% (40/308) had MiP and 62.7% had AiP. Women who were aged ≤ 20 years had three times likelihood of developing MiP (aPOR = 3.1 Cl: 1.3–7.35) compared to those aged >20 years old. The likelihood of AiP was higher among women with gestational age ≥ 16 weeks (aPOR = 3.9, CI: 1.96–7.75), those with parasitemia (aPOR = 3.3, 95% CI: 1.31–8.18), those in third trimester of pregnancy (aPOR = 2.6, 95% CI:1.40–4.96) and those who reported eating soil as a craving during pregnancy (aPOR = 1.9, 95%CI:1.15–3.29).

Conclusions: Majority of the women had asymptomatic MiP and AiP. MiP was observed in one tenth of all study participants. Asymptomatic MiP was associated with younger age while AiP was associated with gestational age parasitemia, and soil consumption as a craving during pregnancy.

Keywords: **Pregnancy, Malaria, Anemia, Malarial parasites, Antenatal care, Plasmodium, Plasmodium falciparum, Parasitemia**