SEASONAL DEPICTION OF MALARIOMETRIC INDICES IN CHILDREN UNDER FIVE YEARS OLD IN A SUDANESE SEMI-URBAN AREA OF BURKINA FASO (WEST AFRICA)

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Background: Malariometric parameters are indispensable for the assessment of both new therapies and control strategies. This study, in the framework of the characterization of a new malaria research site, aimed to compare malariometric indices between high transmission season (rainy season) and low transmission season (dry season) and to provide useful data for future intervention studies.

Methods: Two community-based cross sectional malariometric surveys (in rainy season of September 2009 and dry season of March 2010) were conducted in a semi-urban Sudanese area of Banfora (Burkina Faso) in children aged ≤ 59 months. The participants were selected from households located in the future clinical trial site based on their nearness to the local health facility. After the consent obtained from each participant representative, each participant underwent a brief clinical examination and demographic data collection. A finger prick blood sample was collected to perform malaria blood films for malaria parasite checkup and to measure the hemoglobin level. Anemia was considered as hemoglobin < 8g/dl.

Results: Malaria parasite prevalence was 55.24% (N = 677) in rainy season with a geometric mean of parasite density (GMPD) of 3439 trophozoites/µl against 23.33% (N=720) in dry season with a GMPD of 1368 trophozoites/µl. Plasmodium falciparum mono-infection was found in about 99% of the positive films. Gametocytemia rate was 21.71% and 6.53% respectively in rainy and dry season while spleen rate was 11.18% (N=689) in rainy season against 4.21% (N=752) in dry season. The prevalence of anemia was 19.74% in rainy season and 8.11% in dry season. All the indices in rainy season were statistically higher than those in dry season (p-value < 0.0001).

Conclusion: Malaria in this site is seasonal and hyper-endemic and the gap in indices between rainy and dry season is considerable.

Biography

San Maurice Ouattara a Medical Doctor, junior scientist in early career. He have obtained his MD degree in 2012 at the University of Ouagadougou (Burkina Faso). He have been involved in a Clinical Research team as Sub-investigator. During these five years' experience, He was specifically in charge of trial patients selection, enrolment, follow up, safety reporting and patient's health care. He currently a fellow of the EDCTP-WHO/TDR Clinical Research and Development Fellowships and placed at the Luxembourg Institute of Health. His Main topics of interest are Biostatistics, Epidemiology, Malaria and Infectious diseases.

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