

4th International Conference on

Clinical Microbiology and Microbial Genomics

October 05-07, 2015 Philadelphia, USA

Comparative diagnosis of *Plasmodium falciparum* using microscopy and rapid diagnostic test (RDT) in North Western Nigeria

M H Ruqayyah¹, I H Nock², I S Ndams² and B D J George²

¹Federal University Dutse, Nigeria

²Ahmadu Bello University, Nigeria

Plasmodium falciparum is the species responsible for 85% of all malaria cases, as results of its ability to induce severe malaria and in some cases multiple organ dysfunctions. Accurate diagnosis is important in the epidemiological screening and surveillance of malaria infection for research purposes and in testing drugs efficacy and vaccine and blood bank screening to provide informed indices for control strategies. The study was undertaken to estimate the prevalence of *Plasmodium falciparum* malaria in randomly selected areas of North Western Nigeria and to evaluate the efficiency of microscopy and rapid diagnostic test (RDT) in the diagnosis of *P. falciparum* infections. A total of one thousand four hundred and seventy (1470) samples were collected. About 2-5ml of blood was drawn (venepuncture) into EDTA sample bottles. Rapid one step malaria HRP2 Rapid Test (CareStart™) was carried out according to the manufacturer's instructions to determine presence of *Plasmodium falciparum* and also examined by the Giemsa-stained thick and thin blood smears using a light microscope. A total of eight hundred and thirty four 834(56.73%) cases were positive microscopically while two hundred and eighty seven 287(19.52%) were positive with the RDT which showed high significance ($p<0.001$) in the efficiency of the diagnostic methods. The RDT showed high specificity of 68.21% while a higher sensitivity of 47.68% was observed from the microscopy results with high statistical difference ($p<0.001$). The study area was found to be malaria endemic; microscopy remains the preferred method for malaria diagnosis. However discordance between microscopy and RDT requires further investigations.

Biography

M H Ruqayyah is currently a PhD student with Ahmadu Bello, University and lecturing with Federal University, Dutse. She has published 11 papers from reputable journal, three of which including a book are on malaria.

ruqayyahmohd@gmail.com

Notes: