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Evaluation of the performance of SD Bioline FK80 (RDT) in diagnosis of malaria and trends of malaria in previous year at Adama Malaria Center, Southeast Oromia, Ethiopia

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Background: Malaria is a major cause of morbidity and mortality worldwide. In Ethiopia, malaria transmission is generally unstable caused by *P. falciparum* and *P. vivax*. Early diagnosis and treatment is the best way to manage malaria transmission. Even though different diagnostic methods are available, still microscopy is a gold standard but in place where microscopy is not accessible and affordable, RDT is only used for easy diagnostic application which helps in accurate use of antimalarial drugs. In Ethiopia, over the last five years (2001–2005) the proportion of malaria in outpatient department, admission and in-patient deaths has been increasing with the highest being recorded in 2003 and 2004 while a slight reduction was observed in 2005. In 2005, malaria was still the first leading cause of health problem.

Objective & Method: A cross sectional study was conducted to evaluate the performance of SD FK80 kit for malaria (*P. falciparum*/*P. vivax*) diagnosis and the retrospective study was conducted to assess the trends of malaria transmission in Adama district from November to December, 2011 at Adama Malaria Center, Southeastern Oromia. 384 blood samples were collected and analyzed with microscopy and RDT (SD Bioline *P. falciparum*/*P. vivax*) for the detection and identification of *Plasmodium* parasites.

Result: The sensitivity, specificity, positive predictive value and negative predictive values of the SD Bioline were 90.7%, 96%, 91.7%, and 96.4%, respectively taking microscopy as a gold standard. Prevalence of malaria cases were 12.9% (6156 /47, 848) reported in the seven year period considered by this study.

Conclusion: SD Bioline FK80 *P. falciparum*/*P. vivax* was performed satisfactorily for the diagnosis of *P. falciparum* and *P. vivax* infections. The case *P. vivax* was more dominant than *P. falciparum* in the area. Generally the trends of malaria from 2007 was increasing and become peak in 2011.

Biography

Sena Bayissa Disassa has completed her BSc in Applied Biology at Ambo University and MSc in Medical Parasitology at Black Lion College of Health Science, Addis Ababa University, Ethiopia. She has worked as Lecturer and Researcher at Mekelle University since 2012. She has published one paper in reputed journals and has been serving as an Institutional Review Board Member of Biomedical department at Mekelle University, Ethiopia.

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