

A comparison of two rapid field immunochromatographic tests to expert microscopy in the diagnosis of malaria

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Abstract

In Myanmar, we tested two rapid malaria immunochromatographic kits: the OptiMAL assay for the detection of parasite lactate dehydrogenase (pLDH), and the ICT Malaria P.f./P.v. test for histidine-rich protein 2 (PfHRP2) and panmalarial antigens. A total of 229 patients were examined, of whom 133 were found to be malaria positive by Giemsa microscopy. Both OptiMAL and ICT gave lower sensitivities than previously reported. ICT sensitivity for *Plasmodium falciparum* and non-falciparum parasites were 86.2 and 2.9%, respectively; specificity was 76.9 and 100%, respectively. OptiMAL sensitivity for *P. falciparum* and non-falciparum parasites were 42.6 and 47.1%, respectively; specificity was 97.0 and 96.9%, respectively. The sensitivity of both tests for the detection of both *P. falciparum* and non-falciparum parasites increased with parasite density. Several explanations for these results are explored. Our results raise particular concern over batch quality variations of malaria rapid diagnostic devices (MRDDs).