A Bedside Dipstick Method to Detect *Plasmodium falciparum* | Ira Shah and C.T. Deshmukh  
*Indian Paediatrics* vol 41-November 17, 2004

<table>
<thead>
<tr>
<th>RDT product</th>
<th>Parasight-F (no manufacturers name or address supplied)</th>
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<tbody>
<tr>
<td>Target antigens</td>
<td>HRP-2</td>
</tr>
<tr>
<td>Comparative standard (s)</td>
<td>Microscopy of thin blood films</td>
</tr>
<tr>
<td>Trial type: Accuracy / Cost-benefits/public health impact/ease of use/behavioural</td>
<td>Hospital based prospective study/No cost implications discussed/ease of use and effectiveness for paediatric use considered</td>
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</tbody>
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**Major findings/Implications**
- Parasitic index had a negative effect on Parasight F test.
- Parasight-F cannot be used to detect HRP-2 in children under 6 months or in cases of mixed Pf/Pv infection.

**Country:** India

**Trial type:**

No indication of where this trial was conducted is given but the assumption is that it was an in-house trial at the Department of Paediatrics, Seth G.S. Medical College India. This is a trial of the efficacy of Parasight-F to detect *P falciparum* as a mono-infection and as a mixed infection of *Pf* and *P vivax* in children from 2 months to 2 years. Parasitaemia (parasite index) of the infected blood was calculated from thin blood films but no indication of prior training for use of the RDT or blinding of the microscopist results were given. No information on storage or expiry date of the RDT was given.

**Results and analysis:**

Analytical methods are limited by the absence of negative controls and the small sample size between age groups.

30 children aged 2 months to 12 years with fever, splenomegaly and a positive blood smear with asexual forms of *P falciparum* parasites were entered into the trial and prospectively evaluated for HRP-2 antigen with the Parasight F dipstick using EDTA or finger-prick blood samples.

25 of 30 patients with microscopic *P falciparum* gave positive HRP-2 detection with parasite index ranging from 1.2 to 20%. 2 patients negative for HRP-2 had mixed Pf/Pv infections but also fell within the parasite index stated.

All positive tests were from age group 6 months to 12 years, 11 of these had taken Chloroquine prior to testing but still had patent parasitaemia with *Pf*. HRP-2 was detected in nine of eleven patients with severe or cerebral malaria.

HRP-2 was not detected in three patients between 2-6 months with a parasite index of 1-8%, 2 of whom had a mixed *Pf/Pv* infection.
Parasight-F was stated to be a sensitive, rapid, easy to use bedside test for the detection of HRP-2 from *Plasmodium falciparum* infection in children. The effectiveness of Parasight-F for the detection of HRP-2 in children under 6 months needs further evaluation.

High parasitic index samples testing negative for HRP-2 antigen were considered the result of misdiagnosis, age related or mixed infections.

**Usefulness of paper (rated by reviewers): 2**

* 1. No direct relevance.  2. Very unlikely to influence current practice.  3. Likely to influence current practice in some settings.  4. Likely to influence current practice in many areas.  5. Highly likely to influence current practice in many areas.

**Disclaimer:**

The views expressed in this report are those of the independent reviewers and do not necessarily reflect the views or policies of the World Health Organization.