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The study was carried out in the Department of Pediatrics, M.L.B. Medical College, Jhansi on patients upto 12 years suspected to have malaria.

160 cases were included in the study. Out of 160 cases, 70 cases were positive for malaria in peripheral blood smear (PBS). Out of remaining 90 cases, 62 cases turned out to be having non-malarial diseases, remaining 28 cases, who had typical history of concurrent fever with or without chills, rigors, splenomegaly or hepatosplenomegaly were also subjected to ICT malaria pf / pv along with 70 cases, who were positive in peripheral blood smear.

The prime objective of the study was to evaluate the sensitivity and specificity of ICT malaria pf / pv, for plasmodium vivax and plasmodium falciparum in respect to thick and thin blood smear examination.

Majority of the patients (34.28%), were in the age group of 3 – 6 years with boys : girls ratio of 3:2 i.e., male preponderance.

About 96% cases were in the second half of the year and about half the cases (45.71%) were in the months of September and October.

The incidence of plasmodium falciparum was more than the plasmodium vivax, the ratio being 6:5.

Majority of the patients (84 – 93%), presented with fever. Fever was more frequently present in cases with plasmodium vivax infection than cases of plasmodium falciparum infection.
Convulsion was the second most common symptom for plasmodium falciparum malaria, and was present in nearly 34% cases of plasmodium falciparum malaria, and around 10% cases of plasmodium vivax malaria.

Headache was the second most common symptom for plasmodium vivax malaria, it was present in around 13% cases.

Change in the level of consciousness was also common in cases of plasmodium falciparum (26%) than the plasmodium vivax cases (2%).

Bleeding manifestations (around 9%) and renal symptoms (5%) were present only in cases of plasmodium falciparum malaria.

Refusal to feed (around 3%) and respiratory symptoms (around 3%), were less common symptoms in the study.

Loose stools, abdominal pain and vomiting were present in 7 – 11% cases.

Splenomegaly was the most common clinical sign present in 84.21% - 93.75% cases. It was more common in cases of plasmodium vivax malaria (around 90%) than of plasmodium falciparum malaria (around 85%).

Clinical pallor was more common (around 76%) in plasmodium falciparum malaria than plasmodium vivax malaria (around 69%).

Hepatomegaly was slightly more common in plasmodium falciparum than in plasmodium vivax malaria (28 - 30%).

Icterus (3 – 6%), oedema (5 – 8%), chest signs (3 – 5%) and abdominal tenderness (3 – 8%) were present in very less number of cases.
Hypertonia and focal neurological deficit were observed in only few cases (around 7%) of plasmodium falciparum malaria.

ICT malaria pf / pv is an antigen capture test detecting histidine rich protein II (HRP II) found only in plasmodium falciparum and panmalaria antigen found in both plasmodium vivax and plasmodium falciparum.

Out of 70 cases, 32 cases were positive for plasmodium vivax and 38 cases were positive for plasmodium falciparum in PBS.

Out of 32 plasmodium vivax cases, 30 were positive in ICT also, i.e., true positive and 2 were negative i.e., false negative. So, the sensitivity of ICT malaria pf / pv for plasmodium vivax was 93.75%.

Out of 66 cases who were negative for plasmodium vivax in PBS, 6 cases were positive for plasmodium vivax in ICT i.e., false positive and 60 were negative in ICT also i.e., true negative. So, the specificity of ICT malaria pf / pv for plasmodium vivax was 90.90%.

For plasmodium falciparum, out of 38 cases who were positive in PBS, ICT was positive in 37 cases i.e., true positive and 1 case was negative i.e., false negative. So, the sensitivity of ICT malaria pf / pv for plasmodium falciparum was 97.36%.

Out of 60 cases who were negative in PBS for plasmodium falciparum, 8 were positive for plasmodium falciparum in ICT i.e., false positive and 52 were negative in ICT also i.e., true negative. So, the specificity of ICT malaria pf / pv for plasmodium falciparum was 86.66%.
To evaluate, the post treatment sensitivity of ICT malaria pf / pv, test was done on day 4 and day 10 of antimalarial treatment, in only those cases who were positive in previous ICT test.

Post treatment sensitivity of ICT malaria pf / pv for plasmodium vivax on day 4 and day 10 were 77.77% and 28.57% respectively.

Post treatment sensitivity of ICT malaria pf / pv for plasmodium falciparum on day 4 and day 10 were 80.95% and 29.41% respectively.