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Clinical Profile of Patients of Malaria in Western Up:Emerging Trends

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I. Introduction

Malaria is one of the most common disease which is responsible for a major public health problem in Indian Scenario. The National Vector borne disease control programme of India reported 1.6 million cases and 1100 malaria deaths in the year 2009. But according to many reports this number is grossly under-reported.

Symptoms of malaria are generally non-specific and usually consists of fever, malaria, weakness, headache, backpain, nausea, vomiting and other GI symptoms.Also if left untreated it can also lead to several complications like Cerebral Malaria, Hypoglycaemia, Hepatic impairement and renal impairement.

This study was designed to assess clinical features and laboratory parameters in hospitalized patients of malaria in Western U.P.

II. Material And Methods

This was a observational study taken in I.C.U. and medical wards of 950 bedded hospital of Subharti Medical College, Meerut. A total of 100 patients admitted to the hospital from July 2016- September 2016 were included in the study. All patients who tested positive for Malaria Parasite(either peripheral smear positive or rapid diagnostic card test positive) were included in the study.

Detailed clinical examination with duration of illness, fever, chills and rigors, sweating, myalgia, spleenomegaly, hepatomegaly, jaundice, decreased urination and altered sensorium were noted. In Laboratory investigations CBC, Blood Urea, Serum Creatinine, Blood Glucose and LFT was done of all patients. Optional investigations like widal, dengue, typhidot, NCCT, USG W/A, Blood C/S, Urine C/S, Lumbar Puncture, Leptospira were done on case to case basis.

Table 1:- Age and Sex Distribution

Age	P.Vivax	P. Falciparum	Mixed	Total
20-29	27	7	1	35
30-39	20	4	1	25
40-49	21	2	0	23
50-59	7	4	0	11
>60	4	2	0	6
	79	19	2	100

Table 2 :- Clinical features and Laboratory Features

	P.Vivax	**P. Falciparum**	**Mixed**
	n= 79	**n = 19**	**n = 2**
Distribution of illness	5.32	6.61	9.5
(Hospitalisation)			
Fever	98%	100%	100%
Chills and Rigors	72%	79%	100%
Sweating	60%	68%	50%
Myalgia abd Headache	90%	76%	100%
Spleenomegaly	12%	18%	50%
Hepatomegaly	16%	29%	50%
Hypoglycaemia	10%	25%	50%
Jaundice	43%	35%	100%

(S.Bil > 1.0)			
Renal Impairement	26%	20%	100%
(S.Creat >1.2)			
Altered Sensorium	7%	20%	50%
Thrombocytopenia	72%	75%	100%
(<1,50,000)			
Anaemia	16%	10%	50%
GI Symptoms	20%	34%	100%

III. Results

A total of 100 patients were enrolled during the study. Of these 79 patients had P.Vivax, 19 Had P. Falciparum and 2 had both P.Vivax and P.falciparum malaria as diagnosed by Peripheral Blood Smear or Rapid Diagnostic kit.

The maximum number of patients was in the age group of 20-29 years. The mean duration of illness was 5.32 days in Vivax and 6.61 in Falciparum.

Fever was observed in 98% of cases of P.Vivax and 2% patients presented with abdominal pain, chills without any history of fever;Sweating was present in 60% cases of Vivax and 68% cases of Falciparum; Myalgia and Headache was also observed commonly, 90% and 76% in Vivax and falciparum respectively.

A total of 10 patients were admitted to ICU care in state of altered sensorium, of them 5 were vivax positive, 4 were falciparum positive and 1 case was of mixed malaria.These cases were diagnosed as cerebral malaria after ruling out other possible etiologies.

Jaundice, as evidenced by increased Serum Bilirubin and deranged SGOT and SGPT was observed in 43% cases of vivax and 35% cases of Falciparum.

Renal Impairement was also observed 26% of vivax cases and 20% of falciparum cases.The predominant cause was deduced to be dehydration as there were no changes in CMD on USG and patient profile improved on rehydration.

Minimum Blood Glucose level recorded was 31 mg/dl in vivax and 39 mg/dl in falciparum malaria.

The mortality rate was 2.5% in vivax, 5% in falciparum. All those who expired were diagnosed to have cerebral malaria with Thrombocytopaenia with either renal or hepatic impairement. Also the duration of Illness was more prolonged to admission to hospital.

Radical cure with Primaquine was given to all vivax malaria patients after G6PD testing.

IV. Discussion

The classical triad of fever, chills and rigors and sweating was found in 54% of cases which is less compared to other studies conducted previously.

Headache and myalgia was noted in 89% of cases this is much higher as compared to other studies conducted previously by Abdul rasheed et al.

GI symptoms were noted more commonly in patients of Falciparum Malaria(26%) than in Vivax(20%0. This is in accordance with other studies.

Spleenomegaly was recorded in 12% cases of vivax and 18% cases of falciparum. Many international studies have shown the percentage to be between 6-13%.

Hepatomegaly was noticed in 16% and 29% cases of vivax and falciparum respectively. This data is in divergence with som studies.5,7,new and in concordabce with studies from Colombia and Thialand.

Thrombocytopaenia was most important finding observed in 72% cases of Vivax and in 75% cases of falciparum, while another 20% had platelet counts between 1,50,000- 1,75,000.A recent study from Mumbai had shown 89% for vivax and 80% in falciparum.10. Another study from South Asia showed it to be 80%.

None of the patient had any bleed from any site due to thrombocytopaenia.Anaemia was observed in 16% of the cases of vivax and 10% of the cases of falciparum. Almost all were either females or males of elderly age group.

Hypoglycaemia(BGS <60) was observed in 14% of cases out of which 10% had symptoms of hypoglycaemia. This is lower as compared to other study done previously in Colombia and South Asia.

V. Conclusion

The clinical an biochemical profile of Malaria is changing in the current scenario. Many cases are bound to be missed or misdiagnosed if only classical symptoms are being looked for. Clinicians should actively suspect malaria even in absence of chills and rigors or classical pattern of fever.An early diagnosis and treatment is vital for adequate management of patients and avoiding death due to malaria.