Research Article

A clinical profile of malaria

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Abstract

Introduction: To examine the changing trends in the clinical spectrum of Malaria and to compare with other available representative studies in various parts of the country. **Material and Methods:** All the patients admitted with febrile illness were evaluated. Another group of patients having systemic illness and were positive for malarial parasite were included in study. **Results:** Out of 120 cases, P. Falciparum infection was seen in 81 (67.5%) and 39 (23.5%) were P. Vivex cases. Most common age group affected was between 20 to 30 years 41 (34.17%), 77 (64.00%) cases were below 40 years. Males (64.00%) dominated females (36.00%). Most of the cases were observed in the month of June to September. Fever was observed in 109 (90.00%) but 11 (10.00%) cases had no fever. Respiratory symptoms were observed in 27 (22%), Gastrointestinal symptoms in 77(64%) cases, Multiorgan involvement was seen in almost 91 (75%) cases. Cerebral 51 (42%), Haematological (60%), Hepatic 36 (45%) and Renal 13 (10%) involvement was seen. **Conclusion:** Malarial fever is associated with atypical presentation (multiogran involvement). It affects almost all systemn of the body like blood, kidneys, liver, spleen, lungs, brain, heart and dermatological system. Pregnancy is also affected by malarial fever in the form of abortions, preterm labour and still births. P. Falciparum malaria has aggressive picture as compared to P. Vivex maleria.

Keywords: A clinical profile of malaria.

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INTRODUCTION

Malaria has been known since the day of Hippocrates. Previously it was described as a fever, quotidian, tertian, quartan or subtertian (Bruce, Chawtt, 1985) Clinical presentation of malaria depends on species of parasite, intensity of infection, patient's immune status and presence of concomitant disease. Malaria involves almost all vital organs of body like liver, spleen, kidneys, lungs, brain, heart etc. Studies carried out in various parts of the country show that it can present without fever (Mehta *et al* 1989), with seizures (Kochar *et al* 1997), malarial hepatopathy (Dash *et al* 1994), Bronchitis (Uppal *et al* 1995), severe anaemia (White, 1998), extrapyramidal syndrome, Guillain Barre Syndrome (Arya and Prasad 1986), hypoglycemia (Walker 1992), Acute Renal failure (Cainfield *et al* 1968) Myocarditis (Sharma 1987) and Urticaria (Upadhay and Bhalla 1987). This study was undertaken to study atypical presentations of malaria and consequent multiorgan failure

MATERIAL AND METHODS

All the patients admitted with febrile illness were evaluated and peripheral smears were taken for the analysis. Another group of patients who presented for systemic illness and were positive for malarial pararisites were included in the study. Through clinical examination was carried out under the supervision of heads of the concerned units. The suspected involved organ system was evaluated in details and the findings were recorded in the proforma. Details of the fever were recorded in terms of grade, type and duration. Thick and thin blood smears were taken to demonstrate the strains of malarial parasites (Dacie 1991).Complete blood count, liver function, kidney function test, chest x-ray, CSF examination, CT scan, sonography were done whenever required. The treatment received by the patient was recorded in the proforma. The outcome of the treatment was recorded as per the response to treatment. Patients were followed till the outcome.

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RESULTS

In the present study, 120 patients of malaria were studied and the observations made during the study were analysed and are tabulated as below:

Table 1: Showing the age and sex distribution

Sr. No.	Age in yrs.	Male	Female	Total	Pecentage
1	12-20	13	07	20	16.67
2	>20-30	21	20	41	34.17
3	>30-40	11	05	16	13.33
4	>40-50	16	09	25	20.83
5	>50-60	06	01	07	5.83
6	>60-70	07	01	08	6.67
7	>71	02	01	03	2.50
	Total	**76**	**44**	**120**	**100.00**

Table 2: Showing Incidence of plasmodium species

Species	No. of cases	Percentage
P. Falciparum	81	67.50
P. Vivax	39	32.50
Total	**120**	**100.00**

Table 3: Showing type of fever in cases of Malaria

Types of fever	Falciparam (81)	Vivax (39)	Total (120)
Intermittant	50 (61.73%)	27 (69.23%)	77 (64.17%)
Contineous	19 (23.46%)	01 (02.56%)	20 (16.66%)
Tertian	03 (03.70%)	09 (23.08%)	12 (10.00%)
No fever	09(11.11%)	02 (5.13%)	11 (09.17%)

Table 4: Showing symptoms associated with fever in cases of malaria

Symptoms	Falciparum (72)	Vivax (37)	Total (109)
Headache	21 (29.17%)	26 (70.27%)	47 (43.12%)
Malaise	56 (77.78%)	33 (89.19%)	89 (81.65%)
Sweating	10 (13.89%)	17 (45.95%)	27 (24.77%)

Table 5: Showing Gastrointestinal symptoms

Symptoms	Falciparum (52)	Vivax (25)	Total (77)
Vomitting	20 (38.46%)	14 (56.00%)	34 (44.16%)
Pain in Adbomen	21 (40.38%)	09 (36.00%)	30 (38.96%)
Loose motions	11 (21.15%)	02 (08.00%)	13 (16.88%)

Table 6: Showing respiratory symptoms in 27cases of malaria

Resp. Symptoms	Falciparum (23)	Vivax (4)	Total (27)
Cough	14 (60.87%)	04 (100%)	18 (66.67%)
Breathlessness	09 (39.13%)	NIL	09 (33.33%)

Table 7: Showing multiorgan involvement in case of Malaria

Organ System	Falciparum (81)	Vivax (39)	Total (120)
Haemopoitic	65 (80.25%)	20 (51.28%)	85 (70.38%)
Gastro intestinal	52 (64.20%)	25 (64.10%)	77 (64.17%)
Central Nervous	42 (51.85%)	09 (23.08%)	51 (42.50%)
Hepatobiliary	40 (49.38%)	05 (12.82%)	45 (39.50%)
Respiratory	23 (28.40%)	04 (10.26%)	27 (22.50%)
Urinary / Renal	13 (19.75%)	Nil	13 (10.83%)
Outcome of pregnancy	08 (09.81%)	Nil	08 (06.67%)
Dermatological	01 (01.23%)	05 (12.82%)	06 (05.00%)
Locomotor	01 (01.23%)	01 (02.56%)	02 (01.67%)
Multiorgan system	71 (87.65%)	20 (51.28%)	91 (75.83%)

Table 8: Showing details of central nervous system involvement

Signs	Falciparum (42)	Vivax (9)	Total (51)
Drowsy	14 (33.33%)	05 (55.56%)	19 (37.25%)
Semiconcious	08 (19.14%)	02 (22.22%)	10 (19.61%)
Comatose	13 (30.95%)	02 (22.22%)	15 (29.41%)
Paraplegia	03 (07.14%)	Nil	03 (05.88%)
Cerebellar ataxia	02 (04.76%)	Nil	02 (03.92%)
Hemiplegia	01 (02.38%)	Nil	01 (01.96%)
Guillain Barre Syndrome	01 (02.38%)	Nil	01 (01.96%)
Convulsions	08 (19.04%)	Nil	08 (15.69%)
Neck rigidity	10 (23.81%)	01 (11.11%)	11 (21.57%)

Table 9: Showing outcome of pregnancy in Malaria

	Falciparum	Vivax	Total
Abortions	03 (03.70%)	Nil	03 (02.50%)
Still birth	02 (02.67%)	Nil	02 (01.67%)
Low birth weight baby	02 (02.67%)	Nil	02 (01.67%)
Pre-term labour	01 (01.23%)	Nil	01 (00.83%)
Uneventful	03 (27.27%)	3 (100%)	06 (42.86%)

DISCUSSION

One hundred and twenty patients of Malaria admitted in wards were studied with the aim to study atypical presentations.

Out of 120 patients studied there were 76 (64%) male and 44 (36%) were females. Talib *et al* (1982) noted male prepoderance in his study with ratio of 2:1, Potkar *et al* (1995), also observed ratio as 1.5:1 Adult male population was found to be more affected due perhaps to high mobility and easy access to medical aid at the place of work, social behaviour and migration. In present study, P-Falciparum Malaria was observed in majority i.e. 81 (67.5%) cases followed by 39 (32.5%) Vivax. Akhtar (1981) observed P-Flaciparum in 126 (64%) and 41 (21%) vivax cases. As per Table No. 3 fever was the most common symptom in 109 (90.8%) cases. It was also observed by Akhtar (1981) and Patil (1994) in 162 (83%) and 81 (96%) cases respectively. In the present study 11(9.2%) Patients had no history of fever while Mehta *et al* (1989) and Patil (1994) found 23 (5.40%) and 3 (3.50%) similar cases in their studies. In the present studies other associated symptoms with fever like the headache and maliase were observed in 47(43.12%) and 89 (81.65%) cases out of 109 cases of fever. Out of 120 cases studies 77 (64%) presented with gastro intestinal symptoms Table No.5. out of these, vomitings were observed in 34 (44%), loose motions in 13(16.88 %) and pain in abdomen in 30 (38.96%). The patients with loose motions were more with falciparum 11 (21%) than in Vivax 2 (5%). Deb *et al* (1992) found 4 (11%) cases with diarrhea and 2 (6%) cases presented with abdominal pain. Table No.6 shows respiratory symptoms in 27 (22.50%) cases in the present study of 120 cases. Dry cough was a presenting symptoms in 18 (66.67%) and 9 (33.33%) had breathlessness. Patil (1994) noted dry cough in 33 (39.3%) cases of 84 cases he studied. Mehta *et al* came across 19 (4.50%) and 5 (1.7%) cases of cough and breathlessness in his study. Table No.7 shows organ system involvement in malaria. Multiple organ system involvement in our study was noted in 91 (77.83%) cases, Falciparum infection contributing by almost 71 (78%) cases and 20(22%) cases had Vivax infection. Patil (1994) observed multi organ involvement in 27 (32%) cases. Hepatobiliary involvement was observed in 45 (37%) cases in our study. Mehta (1986) observed it in 5 (2.88%) out of 210 cases studied. Deb *et al* (1992) noted Hepatobiliary involvement 2 (5.7%) cases. Pulmonary edema was seen only in one case of Falciparum malaria. Renal system involved in 13 cases out of 120 cases, none of them had history of renal failure in past and all these were P-Falciparum cases. Only one case presented with Black Water Fever. Table No.8 use an idea abour the cerebral involvement in Malaria. Total 51 cases (42.50%) cases were diagnosed as cerebral involvement after exclusion of research definition of Cerebral malaria as stated by Kubhchandani *et al*. (1992) was fulfilled. Out of 51 cases, a (17.65%) were from P-vivax malaria. Gopinathan *et al* (1981) also came across 2 (4.4%) cases of P-vivax infection causing cerebral malaria. Arora *et al* (1998), had found 18 cases of cerebal malaria caused by P-vivax infection. We came across a 25 year old male who presented with quadriparesis of lower motor neuron type. Clinical diagnosis was kept as Guillain Barre Syndrome. Nerve conduction studies done outside were suggestive of sensory neuropathy. He responded to antimalarial treatment. The outcome pregnancy was grevious in our study. We studied 14 (11.67%) pregnant patients out these, 6 delivered uneventfully but remaining 8 had complications like third trimester abortions, still birth, low birth weight baby and one patient had preterm

labour cosistent with finding of Gilles (1981). All these 8 cases were Falciparum positive and were severly anaemic. Other obstretic causes of such outcome were excluded in these cases.

CONCLUSION

The malarial fever has different atypical presentations in the form of afebrile nature of illness. It affects almost all systems of the body. Males are affected more than females. Majority of the cases were observed during month of June to September. Though fever with chills is the cardinal sign in Malaria, 45% cases presented without chills and rigors. Pallor was seen in 90 (75%) cases. Haemopoitic system was involved in 85 (71%) cases followed by gastrointestinal, respiratory, central nervous system, hepatobiliary system, dermatological, and locomotor system. Such atypical symptoms and signs are more common and can be confused with any other illness. So without the knowledge of atypical presentation of malaria, the diagnosis may not be suspected which delays the treatment resulting in high morbidity and mortality

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