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Research Article

**INCIDENCE OF MALARIA AND COMPARISON OF
MICROSCOPY AND RAPID DIAGNOSTIC TEST IN AREA
OF LAHORE, PAKISTAN**¹Saim Shahid, ²Dr Anam Tahir, ³Syeda Aiman Zahra Naqvi¹RHC Satiana, Faisalabad²Medical Officer Shalamar Hospital³Services Hospital Lahore**Article Received:** June 2020**Accepted:** July 2020**Published:** August 2020**Abstract:**

Malaria is one of those diseases which spread in the whole world. If we estimated that it takes lives of about 7 lac 80 thousand people. It is very harmful disease which takes a lot of lives. To treat malaria some circumstances and important treatments should be must as it should be treated in the hospital with different instruments as with microscope, drips, injections, test machines etc. If we see starting symptoms of malaria we should go to hospital because if there will be little bit late in going to hospital, chances of death will be increase instead of life. So we should go to hospital as soon as possible when we see starting symptoms. To take test of malaria we use different test kits to check it out. We take samples of blood for testing if patient is suffering from headache of feeling temperature for some days. We also take blood samples from finger to test on slide. And also check it out that either blood is thicker than before or thinner than before. This test is taken in a hospital of Lahore between then duration of April to July. We take test of about 510 patients who was feeling symptoms of malaria and it is concluded that there was different ratios of test. We concluded that RDT test is very effective for these circumstances when availability of trained and specialized doctor is less.

Key Words: Treatment, malaria, test kits, headache, RDT.

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INTRODUCTION:

This disease to which we called as malaria is the oldest known disease which harm human beings and also causes death [1]. If we check that in which stage of life it affects most, so we have seen that if effect to those children who are newly birth or who are under the age of 4-5 years [2]. It also affects most to those women who are pregnant because during pregnancy different changes occur, so pregnant women also get harm with malaria as compared to other population [3]. This disease is also present in different countries as about 105 countries, including Pakistan [4]. With malaria about 250 million people affected with this and in Pakistan about 5 lac people got infected and if we give them treatment late or if they does not reach to hospital at the start of this disease, they will lost their lives [5]. Causes of malaria include carelessness [6]. It is estimated that malaria is the second most dangerous disease in Pakistan which take a lot of lives every year. People did not pay proper attention at the start of disease and lost their lives [7]. With this study we see that about 4.5-5 million people go infected with this disease every year in Pakistan. As we know that malaria is most

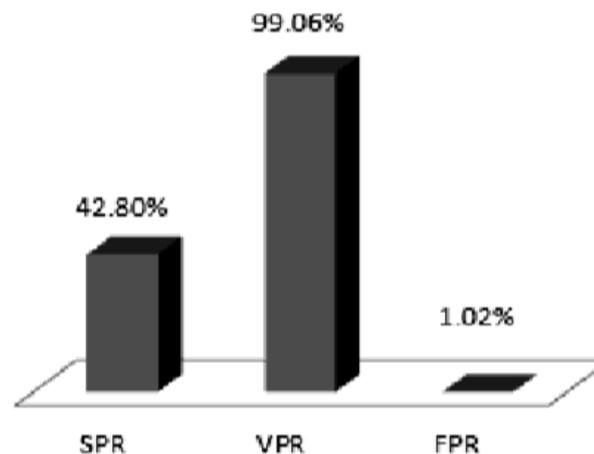
deadly disease, if there will be little bit delay in reaching to hospital or to treat patient, death will occur [8]. Another reason of spreading of malaria or takes a lot of life is lack of instruments to take tests or unavailability of test kits [9]. Proper medication, microscopic tests and proper test kits are needed to treat patients suffering from malaria or to test disease who are showing it symptoms [10].

METHODOLOGY:

People who was showing symptoms of malaria as fever, headache and other symptoms of malaria. We take test of these patients as blood sampling. We take blood samples from patients who were suffering from these types of symptoms. After taking blood symptoms we check the consistency of blood either it is thick or thin. We use different test kits or slides to check the blood and check either patient is suffering from malaria or not. We took slide and put 3-4 drops of blood on it and moved it to all sides of the slide. We spread that blood to all sides of that slide and keep it safe from dirty particles. Then we also take blood on other slide to check the thin and thick smear of blood.

Study period	Slides examined	PV	PF	Total positive	SPR	VPR	FPR
April-July	510	214	2	216	0.428	0.9906	0.0093

After taking these blood samples on slides and by putting blood left it out for dry. When blood will be dry out RDT method will be used. By doing different steps of test, this test will be done in 30 minutes and after 30 minutes result will be concluded that either person is suffering from malaria or not.

Results:**Table: 2**

Year	Month	Slides Examine	PV	PF	Total positive	SPR	VPR	FPR
2013	March	30	11	0	11	36%	36%	0.00
	April	90	48	0	48	53.33%	53.33%	0.00
	May	140	64	0	64	45.71%	45.71%	0.00
	June	195	84	2	86	44.10%	43.07%	1.02%
	July	45	5	0	5	11.11%	11.11%	0.00
Total		500	212	2	214	42.8%	42.4%	1.02%

Table: 3

Disease	Total positive	Male		Female	
		N	%	N	%
PV	214	133	99.25	79	98.75
PF	2	1	0.75	1	1.25
Total	216	134	62.61	80	37.38

Table: 4 It shows the age-wise incidence of Plasmodium Infection in different age groups.

Gender	Total patients	Age (years)		
		<5	5-15	>15
Male	134	12	38	84
Female	80	3	20	57
Total	214	15	58	141

Table: 5

Disease	Total of patients	Age (years)					
		<5		5-15		>15	
		N	%	N	%	N	%
PV	214	15	7.00	58	27.10	139	64.95
PF	2	0	0.00	0	0.00	2	0.93
Total	216	15	7.00	58	27.10	141	

Table: 6 It shows the comparison of microscopy and RDT's

No. of cases	Positive slides		Sensitivity of RDT's	Specificity of RDT's
	Microscopy	RDT's		
510	214	213	99%	100%

DISCUSSION:

In this report we see that malaria is a very dangerous disease which is spread in whole world and every year a lot of people are dying due to this harmful disease [11]. In developing countries, it is spreading continuously with increasing rate every year and making a lot of trouble to their economic levels [12]. As if we discuss about our country Pakistan, we see a lot of people getting infected with this disease every year. We estimated that in Pakistan ratio of people who get affected with this disease is about 5 million [13]. We use different test kits to treat malaria and save lives of many people of Pakistan every year. We take test and conclude the ratios of FPR, PVR etc to check that people who are showing symptoms are suffering from malaria or not [14]. If results will be positive then we will start out their treatment because little bit of delay in treatment occur death [15]. To treat malaria different methods should be used as microscope, test kits, slides and different test machine to treat malaria [16]. So with this report we see that treatment of malaria should be on proper time otherwise more deaths will occur [17].

CONCLUSION:

With this report we concluded that malaria is deadly diseases which spread all over in world including Pakistan and it affect babies with age if less than 5 years and also affect people with any

age. So we concluded that with RDT if doctors are not available than we can treat malaria with kits and with this way we can treat a lot of people and saves a lot of lives.

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