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Case Report

A Report on Incidence of Malarial Disease in Local Population of Barikot, Swat

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Authors' Contributions
MS was the principal investigater and SAM was Co-PI of the project. MA collected the dataand IA re-arranged it. SA, KS and KM reviewed the data.

Keywords
Malaria, Barikot, Shamozo, Kota, Swat.

Abstract | Present study was carried out in local population of Barikot, District Swat for incidence of malarial disease. For this purpose a total of 997 individuals were screened for malarial test in the study area and divided into four category of age *i.e.* (1-15), (16-30), (31-45), (46-onward), gender wise, union council (Kota, Barikot, Shamozo and Ghalegi) and month wise. It was concluded that out of 997 samples, 204 (20.46%) were found positive, in which mostly under positive, under 15 year of age (23.36%), whereas less cases were recorded in adult (46 and above) 22.64. Most of the positive cases were found in the month of November, 24 out of 67 (35.82%) and less cases were noted in the month of May which are 12 out of 106 (11.32%). Incidence of the cases were found in U.C Kota with 60 positive (26.08%) out of 230 blood samples and low prevalence in U.C Ghalaigai with 42 positive (13.12%) out of 320 samples. Gender wise prevalence of malaria disease shows male 106 (27.53%) out of 385 whereas female 98 (16.01%) out of 612.

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Introduction

Malaria is well known to anthropological organisms subsequently times. The situation is a syndrome of stifling as well as act-stifling kingdoms predominantly Africa as well as in Asia. In Pakistan plasmodium vivax is very common (Kathryn *et al.*, 2005). Malaria influence developed wonky to arrangement a prevalent sub-sequently, respectively insufficient existences (Lathia and Joshi, 2004). Malaria is a unique of the supreme shocking syndromes in the Ecosphere, social wide spread in surplus than unsocial 100 kingdoms (Nahlen *et al.*, 1999). It is concluded that *Plasmodium vivax* is the main parasite which cause malaria in Tehsil Barikot District Swat. The intensification in malaria gears in Pakistan possibly will reveal fluctuating decorations of malaria hazard in the nation which is very common in tropical and sub-tropical region (WHO, 2011). The chief jeopardy of how-ever totally geographical regions visit consistently long winded however individuals energetic in deputize Saharan Africa realizing malaria (Oladeinde *et al.*, 2012). Through-out the earlier period of time, big in subsidy need maintained the rule-awake of time tradable mediations for malaria switch, funding to size able less in malaria injury and death. WHO guesses that amid 2000 besides 2010, total malaria prevalence low through 17% and malaria death proportions in 26% (Askling *et al.*, 2012). Every day glassy encouragements accompanying through fully-grown malaria jeopardy existed truncated foliage flat in complex organized complex domiciliary expenditure of anticipatory procedures (Sahar *et al.*, 2012). Whereas, two malarial asymptomatic patients out of 1230 school children at Peshawar University (Shah *et al.*, 2013). Objective of the present study: To find out

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the incidence of malaria disease in Barikot, District Swat.

Materials and Methods

Study area

District Swat is located from 34" 34' to 35" 55' north latitudes and 72" 08' to 72" 50' east longitudes and surrounded by, North by Chitral and Ghizer District of northern areas, East by Kohistan and Shangla District whereas at the south by Buner and Malakand District.

Materials

Lancet, slides, ethanol, giemsa stain, oil emersion and microscope were used.

Methods

The present study was conducted in different areas of Barikot and DHQ Hospital, District Swat. Collections of the blood samples were grouped in to 1-15 to 45< age wise. Performa was designed containing information about patients with clinical symptoms *i.e.* head ache, vomiting, cough, fever, chills and pain.

Table I: Union Council (UC) wise prevalence of malaria in Tehsil Barikot, Swat.

UC	No of slides	Positive (%)	Negative (%)
Kota	230	60 (26.08)	170 (73.91)
Barikot	311	47 (15.11)	264 (84.88)
Ghalaigai	320	42 (13.12)	278 (86.87)
Shamozo	136	55 (40.44)	81 (59.55)
Total	997	204 (20.46)	793 (79.53)

Table II: Gender wise prevalence of malaria in Tehsil Barikot, Swat.

Gender	No of individuals	Positive (%)	Negative (%)
Male	385	106 (27.53)	279 (72.46)
Female	612	98 (16.01)	514 (83.98)
Total	997	204 (20.46)	793 (79.54)

Results

The present study was conducted on the incidence of malaria disease Barikot, District Swat. A total of 997 blood sample were collected. The results show that 204 were positive, whereas 793 were negative for malaria parasite. Four Union Councils (UC) *i.e.* Shamozo, Ghalagai, Kota and Barikot were screened. The higher incident rate was found in UC Shamozo 55 (40.45%) and lowest rate was found in UC Ghalagai 42 (13.13%) (Table I). Gender wise prevalence of malaria parasite were more in male 106 (27.54%) and lower prevalence were reported in female 98 (16.02%) (Table II). In age wise prevalence of malaria were found in children 111 (23.37%) category 1-15 age and less cases were found in adult 55 (15.6%) category 16-30 age (Table III). In month wise prevalence of malaria, high in November 24 (35.82%) and low in May 12 (1132%) (Table IV).

Table III: Age wise prevalence of malaria percentage in Tehsil Barikot, Swat.

Category	No. of individuals	Positive (%)	Negative (%)
1-15	475	111 (23.36)	364 (76.63)
16-30	359	56 (15.59)	303 (84.40)
31-45	110	25 (22.72)	85 (77.27)
46-<	53	12 (22.64)	41 (77.35)
Total	997	204 20.46)	793 (79.53)

Table IV: Month wise prevalence of malaria percentage in Tehsil Barikot, Swat.

Months	No of slides	Positive (%)	Negative (%)
May	106	12 (11.32)	94 (88.67)
June	162	14 (8.64)	148 (91.35)
July	96	16 (16.66)	80 (83.33)
August	149	16 (9.39)	133 (89.26)
September	229	69 (30.13)	160 (69.86)
October	188	53 (28.19)	135 (71.80)
November	67	24 (35.82)	43 (64.17)
Total	997	204 (20.46)	793 (79.53)

Discussion

The present study was conducted on malarial disease in Barikot, District Swat from May to November in 2013. The results show that *P. vivax* was more common. In this study children were more affected due to low socio-economic conditions, which may be due to different geographical climatic factors. The malaria disease was the second biological problem of the world (WHO, 2011). *Plasmodium falciparum* were found more dangerous and deadly in rural areas of Punjab and Muzaffargarh District (Sahar *et al.*, 2012). In the current study, most of the positive cases were found in the month of November which are 24 out of 67 (35.82%) and less cases were noted in the month of May which are 12 out of 106 (11.32%). Most of the cases were found in UC Kota with 60 positive (26.08%) out of 230 blood samples and low prevalence in UC Ghalaigai with 42 positive (13.12%) out of 320 samples. Gender wise prevalence of malaria disease shows male 106 (27.53%) out of 385 whereas female 98 (16.01%) out of 612. The studied area is generally considered to be free of malaria therefore high incidence is not expected. The study was limited by several factors and the major one for the diagnosis of asymptomatic malaria was the microscopic diagnosis. For the low parasetemia more refined technique like PCR is more appropriate and the result will be certainly different from the present result. Whereas, two malarial asymptomatic patients out of 1230 school children at Peshawar University were reported by Shah *et al.* (2013).

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Conflicts of interest

The authors declare no conflicts of interest.

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