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Epidemiology and Prevalence of Malaria among Patients Attending the Yobe State Specialist Hospital, Damaturu, Nigeria

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Abstract

One of the major cause of mortality in Nigeria is malaria. The purpose of the present study was to investigate the prevalence of malaria in general population of Damaturu, Yobe State, Nigeria. In this study a total of fifteen thousand and four eighty four patients were questioned from January to June. Out of fifteen thousand and four eighty four (15484) patients, twelve thousand six hundred and ninety three (12693) were malaria positive. The highest prevalence of malaria were found in the month of June (87.1%) and lowest were found in the month of January (78.5%).

Keywords: malaria, prevalence, month.

Introduction

Malaria is one of the major cause of death in children and pregnant women because malaria is major health problem in Africa. According to World Health Organization (WHO) Africa has the greatest number of malaria cases in the world which accounts for sixty percent of the world's. In 2000 World Health Organization (WHO) estimates around 350-500 million malaria cases. Malaria is the leading cause of mortality and morbidity throughout the world especially in tropical and subtropical areas (Elden et al., 2010; Okorosobo et al., 2011; Oluyole et al., 2011; Kyle and Harris, 2008). In Nigeria a small area in the middle belt is at 3% risk of epidemic. According to some available records which shows that around 50% of the population suffer once from malaria and children under 5 years of age attacks by malaria 2 to 4 times. In the past two decades global incidence of malaria decreases in countries like Thailand and China. Plasmodium vivax is the most common causative agent of malaria out of the four malaria causing species (Cui et al., 2012a,b; Zhou et al., 2014a; Gething et al., 2012; Guerra et al., 2010).

The aim of the present study was to investigate the number of malaria cases and prevalence rate monthly in the general population attending Yobe State Specialist Hospital, Damaturu, Yoben Nigeria.

Material and Method**Study design**

A cross sectional study was conducted. A total of fifteen thousand four hundred and eighty four patients were examined for six months from January to June.

Study Area

The study was conducted in Yobe State Specialist Hospital, Damaturu, Yobe, Nigeria. Damaturu is the capital of Yobe State with a population of about 87,706 according to 2006 census.

Study Population

Residents of Damaturu and other nearby villages were selected for the current study.

Ethical Considerations

Ethical approval was taken by the management of Yobe State Specialist Hospital, Damaturu, Yobe, Nigeria. Verbal consent was taken by the visiting patients.

Data Analysis

Data were analyzed with SPSS to find association of malaria with tested variables and P-value of less than 0.05 was considered as statistically significant.

Results and Discussion

A total of fifteen thousand four hundred and eighty four (15484) patients were examined for six months from January to June. Out of 15484 patients 12693 were malaria positive (81.9%).

The highest prevalence of malaria was found in June i.e., 87.1% in which 3204 patients were tested and 2792 were found malaria positive. The lowest prevalence rate was found in January i.e., 78.5% in which 1946 patients were tested and 1529 were found malaria positive. In February 2037 patients were tested and 1709 (83.8%) were found positive, in March out of 2692 patients 2228 (82.7%) were found malaria positive, in April out of 2402 patients 1906 (79.3%) were found positive, in May out of 3203 patients 2529 (78.9%) were found malaria positive (Table 1).

Month	No. of Patients Examined	No. Positive	Prevalence (%)
January	1946	1529	78.5
February	2037	1709	83.8
March	2692	2228	82.7
April	2402	1906	79.3
May	3203	2529	78.9
June	3204	2792	87.1
Total	15484	12693	81.9

Table 1: Month-wise Prevalence of Malaria in Sani Abacha General Hospital, Damaturu, Nigeria during January to June.

In this study the prevalence of malaria was found highest in the month of June (87.1%) and lowest in January (78.5%). The total prevalence rate of malaria was recorded in this study was 81.9%. Contrary to our result some researchers in Pakistan found 10.29% ,18% and 29% prevalence rate of malaria in the population of Pakistan (Hussain et al.,2015 ; Yaseen and Ali,2015 ; Hussain et al., 2014).

Month	<5 Years	≥5 Years	Mean±SD (<5 Years)	Mean±SD (≥5 Years)	p Value
Jan	328	1529	328±0	1619±127.27	0.004*
Feb	328	1709			
Mar	464	2228	480±22.62	2067±227.68	0.010*
Apr	496	1906			
May	674	2529	543±185.26	2660.5±185.96	0.007*
June	412	2792			

Mean ± SD. Those marked with asterisks are significant values *P<0.05

Table 2: Values of Mean±SD of less than five and more than five years of age in the year 2017 Values are

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