Perception of Malaria and Utilization of Malaria Prophylaxis Among Pregnant Nigerian Women at Booking

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Abstract

Context: Despite widespread available preventive measures, malaria continues to cause significant morbidity and mortality among pregnant women. There is therefore a need to determine the level of public awareness and utilization of these preventive measures.

Objective: To assess the level of awareness and determine the uptake of malaria prophylactic methods at booking.

Study Design, Setting and Subjects: This is a cross-sectional study of all pregnant Women who registered for antenatal care at Wesley Guild Hospital Ilesa, Nigeria between January 2005 and April 2006.

Methods: All eligible women were interviewed on the first day of clinic attendance using a semistructured questionnaire, to obtain information on the sociodemograhic details, parity, gestational age at booking, knowledge of the aetiology of malaria and use of malaria prophylactic method in the index pregnancy.

Results: Of the 270 eligible women 87(32.22%) were primigravidae while 10(3.70%) were grand multipara. Majority (52.22%) booked after 20weeks of pregnancy. As many as 19.63% of the women did not associate malaria with mosquito bite. Malaria chemoprophylaxis was used before booking by only 23(8.52%) compared to 159(58.89%) women who were already using haematinics. Age parity and educational level did not influence use of malaria prophylaxis.

Conclusion: Majority of women book late for antenatal care and have a very low uptake of malaria chemoprophylaxis. There is therefore a great need for public enlightenment programme on the mode of transmission of malaria and the importance of the use of appropriate chemoprophylaxis in pregnancy.

Key Words: Malaria, Pregnancy, Chemoprophylaxis [Trop J Obstet Gynaecol, 2006, 23:126-128]

Introduction

Malaria remains a major health problem in the world. It is estimated to kill between 1.1 to 2.7million people world wide each year[1]. More than 90 percent of these casualties are from Africa, South of Sahara. In areas of stable malaria infection like Nigeria most of the adult population have considerable immunity against malaria and the disease is usually mild in the adult. In these countries the major impact of malaria are on pregnant women and infants. It is responsible for a high incidence of maternal anaemia and low birth weight babies[2,3]. It is therefore an important determinant of maternal and perinatal mortality[4,5]. Pregnant women are particularly vulnerable to malaria because of reduced immunity occasioned by the pregnancy and infection with a new strain of malaria parasite that has predilection for the placenta[6].

Over the last 40 years several malaria controlled programmes have been undertaken to reduce the burden of the disease particularly among the vulnerable groups[2,7]. Unfortunately increased prevalence among pregnant women persists with as many as 60% of the women habouring malaria parasite at booking[1,7,8]. This is partly responsible for the high incidence of anaemia among patients at booking, in the developing world[9,10].

It is unclear if the high prevalence of the disease is due to inadequate public awareness or poor utilization of the available methods of prevention. The objective of this study is to assess the level of awareness of the cause and effect of malaria and to determine the use of prophylactic measures by pregnant women at booking.

Materials and Methods

All pregnant women that register for antenatal care at Wesley Guild Hospital Ilesa between January 2005 and April 2006 were the subjects of this study. The hospital is a teaching hospital unit of Obafemi Awolowo University located in a semi urban town of Ilesa South-Western Nigeria. Attendance in the hospital is unrestricted and patients are therefore of mixed socio-economic background. Ethical approval for the study was obtained from the Hospital ethical committee.

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Table 1
Reported Aetiology of Malaria Among Pregnant Women at Booking at Wesley Guild Hospital Ilesa

Reported Aetiology	No	Percent of Total
Mosquitoes	217	80.37
Stress	9	3.33
Sun	4	1.48
Too much work	2	0.74
Poor diet	1	0.37
Bad water	1	0.37
Don't know	36	13.33

Table 2
Use of Malaria Prophylaxis among Pregnant Women at Booking at Wesley Guild Hospital, Ilesa, Nigeria

Prophylaxis	No	Percent of Total
Nil	184	68.15
Mosquito Net	36	13.33
Insecticide Spray	27	10.00
Pyrimethamine	22	8.15
Proguanil (Paludrine)	1	0.37

Only women who neither speak English or the local dialect of Yoruba were excluded from the study. All eligible mothers were interviewed on the first day of attendance after obtaining an informed consent. Interview was carried out using a semi-structured questionnaire which have been validated by pre-testing among twenty pregnant women in the antenatal clinic for two weeks prior to the commencement of the study. The interview was conducted by two trained junior Doctors who are also proficient in the local dialect of Yoruba. Information requested include the socio-demographic details, parity, gestational age at booking, and knowledge of the aetiology of malaria. Information was also obtained on the use of malaria prophylaxis during the index pregnancy.

Information obtained was analysed using the statistical package for social sciences (SPSS) software version 11. Statistical tests of significance was by chi-square test or student at test. Level of significance was set at $P < 0.05$.

Table 3
Influence of Age, Parity and Educational Level on the Use of Malaria Prophylaxis among Pregnant Women at Wesley Guild Hosital, Ilesa Nigeria.

Maternal Characteristics	Use of Prophylaxis		Total	P_2-value
	Yes	No		
A. Age (in years)				
< 25	6	35	41	
25-29	31	61	92	$\chi^2 = 7.55$
30-34	30	59	89	df = 4
35-39	16	26	42	P=0.1096
>39	3	3	6	
B. Parity				
Nulliparous	22	65	87	$\chi^2 = 3.65$
1 4	59	114	173	df = 2
>4	5	5	10	P = 0.1613
C. Education Level				
Nil & Primary	9	12	21	$\chi^2 = 2.82$
Secondary	31	84	115	df = 2
Tertiary	46	88	134	P = 0.2441

Results

Of the 275 women that booked for antenatal care during the study period 5(1.82%) neither spoke English nor Yoruba and were excluded from the study. Among the 270 eligible women 87(32.22%) were primigravidae while 10(3.70%) were grand multipara. Most (92.22%) of the women had at least secondary school education. The mean age of the women was 29.57(SD = 5.15) and the mean gestational age at booking was 21.71(SD = 7.41). Majority of the women (52.22%) booked other 20 weeks of pregnancy.

As many as 19.63% of the respondents did not associate malaria with mosquito bite. Table 1 shows the reported aetiology of malaria among respondents. Of the 53 women who did not associate malaria with mosquito bite five had primary school education and the remaining 48 were educated up to secondary school level.

Malaria chemoprophylaxis was used before booking by only 23(8.52%) of the women. Compared to 159(58.89%) who were already using haematinics. Table 2 shows the use of malaria prophylaxis among the respondents. Age, parity and educational level did not influence the use of malarial prophylaxis as shown in Table 3.

Many (56.7%) of the women rated malaria a serious disease but only 15.2% considered it a very serious disease that can be fatal. Age, parity and education level of the mothers did not significantly influence their perception of the seriousness of malaria as a disease.

Discussion

Although majority (71.37%) of the women correctly associated malaria with mosquito bites and many (71.88%) considered it a serious disease only 31.85% used any prophylaxic method before booking.

We recognize the limitation of a hospital based study in the correct assessment of the magnitude of a problem in the general population. We are however unable to perform a community wide survey for economic and logistic reasons. However the data obtained here is still a good reflection of what obtains in the general population as the women registered for antenatal care in our centre are unselected and accessibility to the hospital is good. Hence women that report for antenatal care are of mixed socio-economic class and a good reflection of the community.

Many of the mothers in this study booked late for antenatal care which is the trend in other centres in developing countries[11,12]. This is probably due to ignorance of the importance of early registration for antenatal care.

We were surprised to find that almost a third of the respondents were unable to associate malaria with mosquito bite. This is similar to the 21.8% reported by Okwa from Lagos[8]. Giving the endemicity of malaria in Nigeria one would have thought that the aetiology and mode of transmission will be common knowledge.

The low uptake of malaria chemoprophylaxis found in the study was similar to the findings of other authors[8,11]. On the contrary many of the women were already on haematinics before booking. This is probably because haematinics are widely advertised in Nigeria and their usefulness for pregnant women are usually emphasized. There is therefore a need for such public enlightenment on the great benefit of malaria chemoprophylaxis in pregnancy.

Although majority of the respondents perceive malaria as a serious disease only 15 percent considered it fatal. This is also similar to the findings of Okwa in Lagos. This is not surprising as malaria runs a benign course in most cases due to significant level of immunity in adults in endemic regions like Nigeria.

This study showed that a considerable proportion of our women book late for antenatal care and that they have a very low uptake of malaria chemoprophylaxis before booking.

In order to reduce the currently high prevalence rate of malaria, there is a great need for public enlightenment programme on the transmission of malaria, and the importance of the use of appropriate prophylactic measures in pregnancy.

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