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Malaria in Pregnancy: Intermittent Preventive Treatment Coverage Among Women of the Bamenda Health District, Cameroon

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Abstract

Malaria is endemic throughout most of the tropics. WHO (2013) states that more than 207 million people developed symptomatic malaria in 2012. Each year approximately fifty million women living in malaria endemic countries throughout the world become pregnant, of whom over half live in tropical areas of Africa with intense transmission of *P falciparum*. We aimed at finding the IPTp coverage in the peri urban and urban areas of Bamenda Health District. We found that out of the 400 women, 381 reported to have taken SP while 19 women did not receive IPT.

Introduction

Malaria infection in a pregnant woman is associated with poor pregnancy outcome and an increased risk of complications which necessitates early diagnosis and proper management of malaria cases. The success of malaria case management depends, in part, on adherence to the official recommendations [1].

Strategies for controlling malaria during pregnancy in Sub-saharan Africa (SSA) often include treatment of the disease and resulting anaemia with chemoprophylaxis[2].The combination of Quinine and Clindamycine was recommended by Hay SI, et al. [3]. for the treatment of malaria in the first trimester of pregnancy. This combination has proven highly efficacious against multi drug resistant strains of *P falciparum* with a 42 day cure rates of 100% in one study [3]. In 2006, WHO published guidelines recommending artemisinin combination therapies (ACTs) for the treatment of malaria in the second and third trimester of pregnancy.

Study Designed

A cross sectional study among 400 women in the Bamenda Health District, Mezam Division, North West Region. Questionnaires were given and analyzed almost immediately and the results presented in frequency distribution tables.

Result

Demographic characteristics

Table 1: Socio-demographic characteristic of the women.

Variable N=400		Urban 65.5% (N=262)	Periurban 34.5% (N=138)	Chi Square (P-Value)
Age group		11.5% (30)	18.8% (26)	4.21
	21-25	36.3%(95)	34.8% (48)	(0.122)
	≥25	52.3%(137)	46.4%(64)	
	≤20			
Material Status	Single/widowed/divorced	21.4% (56)	18.8% (26)	0.356
	Married/ cohabiting	78.6%(206)	81.2%(112)	(0.323)

Occupation	Student	21.4 % (56)	25.4 % (35)	
	House wife	24.4%(64)	23.2 % (32)	
	Farmer	1.9%(5)	13.0%(18)	*25.767
	Trader	34.7%(91)	29.7%(41)	(0.001)
	Civil servant	17.6%(46)	8.7% (12)	
Educational Level	≤ Primary education	23.3 % (61)	36.2%(50)	
	Secondary education	52.3% (137)	49.3%(68)	* 9.871
	Higher education	24.4 % (64)	14.5 % (20)	(0.007)
Trimester at 1st ANC	First trimester (0-13)	40.8% (107)	26.8% (37)	
	Second trimester (14-25)	54.6%(143)	71.0%(98)	5.49
	Third trimester (26-37)	4.6%(12)	2.2% (3)	(0.064)
Parity	Nulliparous	34.0 % (89)	31.9%(44)	
	Primiparous	28.6%(75)	26.8%(37)	0.579
	Multiparous	37.4%(98)	41.3%(57)	(0.749)
ITN use	Yes	85.5%(224)	86.2% (119)	3.734
	No	14.5 % (38)	13.8%(19)	(0.443)
Religion	Christian	96.6%(253)	92.8%(128)	2.902
	Non-Christian	3.4%(9)	7.2 % (10)	(0.075)

* = significant

A total of 400 women enrolled for the study participated by filling the questionnaires giving a response rate of 100%, 262 from urban areas and 138 from the peri urban areas. The age range of the respondents was between 15-43 years with a mean age of 26.149±4.868 years for urban areas and 25.522±5.352 for the peri urban areas(Table 1).

IPTp coverage for urban and peri urban areas

Out of the 400 women, 381 reported to have taken SP while 19 women did not receive IPT. Of the 19 who did not receive IPTp, 3 women were allergic to sulphonamides while 2 were on cotrimoxazle. Of the total population, 65.5% of the women were from the urban areas and 34.5% from the peri urban areas. The urban areas had a coverage of 95.8 % for at least one dose and the peri urban a coverage of 94.2%. The IPTp coverage is shown below for the Urban and peri urban areas of BHD(Table 2).

Table 2: IPTp coverage for urban and peri urban areas.

IPT	Urban% (n)	Peri urban%(n)	Total %(n)	Chisquare (P-Value)
Yes	95.8(251)	94.2(130)	95.3%(381)	
No	4.2(11)	5.8(8)	4.8%(19)	0.511 (0.314)
Total	262	138	100%(400)	

Discussion

The study showed that IPTp coverage for at least one dose was 95.3% which was similar to studies by Anchang-Kimbi JK, et al.[4]that showed coverage of 90% in Mutegene. Among those who took IPTp, 54.9% received all three doses. This coverage rate of all three doses is similar to what was observed in the Bamenda Health District report for 2013 (54.33%). The coverage of 95.3% for at least one dose seen in this study is slightly above 84.60% that was reported in the Bamenda health district (Bamenda Health District report for malaria, 2013). The actual coverage obtained from women with gestational age above 36 weeks for at least one dose was 95.9% (95.5% for urban areas and 97.0 % for peri urban areas). These rates are almost similar to what was observed in Malawi [5]. For these same women, the uptake rate for both groups was highest for those who took all three doses ie 60.1% for urban and 62.5% for peri urban. These uptake rates in Bamenda can be attributed to the fact that most of the health facilities practice the policy of direct observed therapy. This is because from our findings, 162 women (61.8%) and 92 women (67.6%) from urban and peri urban areas respectively reported to have taken the drug in front of the health provider. This policy was applied equally in both the peri urban and urban areas (P=0.472). There was no difference in the uptake rates recorded in the urban and peri urban areas (p=0.314) of Bamenda.

Conclusion

We can conclude therefore that most pregnant women in the Bamenda Health DistrictCoverage of IPTp for at least one dose is high (95.9%).

Authors' contributions

NHD, VZV and NCN conceived and designed the study. NHD implemented the study. NHD, VZV and NCN conducted data analysis. NHD, VZV and NCN interpreted study results: NHD and NCN wrote the first draft of the manuscript. NCN reviewed and corrected the draft manuscript. All authors read and approved the final manuscript.

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