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Home management of malaria in Aliero local government area, Kebbi State, Nigeria

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ABSTRACT

Home management of malaria is promoting interventions within the overall Roll Back Malaria strategy outside the formal health services, to ensures prompt and appropriate treatment to malaria within the home or the community. This cross-sectional study was therefore undertaken to explore the various home management practices for malaria treatment in Aliero, Sabiel, Kashim-zama and Jiga villages of Aliero local government area, Kebbi State. Out of 200 households', 175 (85.5%) household caregivers were admitted of practicing home management of malaria. The most preferred (61.7%) mode of home treatment of malaria was allopathic medicine with paracetamol (51.7%) and chloroquine (37.8%). The source of allopathic medicine was left over unused medicine (53.1%), followed by patent medicine vendor (39.9%). The dosage was according to peoples experience (70.6%) and medicine dealer prescription (29.4%). Homemade herbal preparation was the most preferred (86.6%) source of herbal medicine. They got better after home treatment was reported by 151 (86.3%) caregivers. The most common action at home was giving plenty of fluids (40.6%). Disease uncomplicated was the reason given by most of the caregivers (123, 70.3%) for the home management of malaria. Home management of malaria is very common in the study area, but the knowledge of malaria symptom and practice of home management of malaria was poor. Therefore, to make home management of malaria effective, there is urgent requirement of a guideline on home management malaria, to improve the ongoing practice.

INTRODUCTION

Prompt and effective treatment of malaria is a critical element of malaria control..Treatment starting within 24 hours of the onset of malaria symptoms prevents progression to severe malaria or death, [1] but poor access to health facilities in rural communities is a hindrance to prompt and effective treatment of malaria. [2] Hence, home management of malaria (HMM) is promoting interventions within the overall Roll Back Malaria (RBM) strategy outside the formal health services. [3] HMM, was designed to ensures early recognition of and prompt and appropriate treatment to malaria in children under five years of age within the home or the community.[4]

HMM includes the use of antimalarial drugs, [5] leftover medications from previous hospital visit, herbal preparations, tepid sponging, [6] exposing the child's body to air, consulting a herbalist, taking spiritual/ritual waters for cure and as well as going for prayers if disease persist. [7, 8]

HMM has become very important, and is now being scaled up in sub-Saharan Africa, [9,10,11] with more than 70% of malaria episodes in rural areas and more than 50% in urban areas. [12] Studies in Africa [13, 14, 15] have shown that as many as 80- 90% of children with malaria are treated at home. There is evidence that HMM results in more timely treatment [16] and have reduced 40% reduction in overall under-five childhood mortality in Tigray, Ethiopia, [17] and morbidity. [4,18]

This study is therefore undertaken to explore the various home management practices for malaria treatment among Aliero local government area, Kebbi State.

MATERIALS AND METHOD

Study area

The study was carried out in Aliero, Sabiel, Jiga, and Kashin Zama villages of Aliero local government Area. Aliero is approximately located at latitudes 4°23'S and 12°26'40"N and longitudes 3°6'W and 4°27'35"E. It was created in 1996, with a total land mass of 412.25 sq. km [19] and has a total population of 67,078. [20]

Study design and data collection

The study was a community based cross-sectional study. A total of 200 households were randomly selected, from the study sites: Aliero, Sabiel, Kashim-zama and Jiga villages of Aliero local government area. Out of 200 households, 175 households were admitted of home management of malaria. A structured questionnaire was used for face-to-face interview to the primary caregiver of 175 households. The questionnaire was prepared in English language but communicated in local languages when necessary.

Ethical clearance

The objectives of the study were explained to community leaders. Informed written consents were obtained from the local government before data collection. Full verbal explanation of the study was given to primary caregiver of the households before inclusion as participants. Respondents were given the right to refuse to take part in the study as well as to withdraw any time during the interview. Privacy and confidentiality were maintained throughout the study.

Table 1. : Baseline characteristics of the caregivers

Variables		Frequency (%)
Religion	Christian	14 (8.0)
	Muslim	161 (92.0)
Sex	female	132 (75.4)
	male	43 (24.6)
Age	18-28	32 (18.3)
	29-49	140 (80.0)
	>50	03 (1.7)
Ethnicity	Fulani	6 (3.4)
	Hausa	154 (88.0)
	Igbo	4 (2.3)
	Yoruba	11 (6.3)
Education level	non	74 (42.3)
	primary	3 (1.7)
	secondary	45 (25.7)
	tertiary	53 (30.3)
Family type	monogamy	75 (42.9)
	polygamy	100 (57.1)
P caregiver	Father	43 (24.6%)
	mother	132 (75.4%)

Table 2. : Knowledge of malaria and its preventive measures

Variables	Frequency (%)
Main cause of malaria	
Mosquito	175 (100)
Symptoms of Malaria	
Vomiting	140 (80.0)
Headache	128 (73.1)
Weakness	10 (5.7)
Diarrhea	80 (45.7)
Body pain	3 (1.7)
High temp	23 (13.1)
Nausea	48 (27.4)
Yellow eyes	10 (5.7)
Sweating	26 (14.9)
Chills	12 (6.9)

Data analysis

Questionnaire survey data were entered in Microsoft Excel data sheets and analyzed using Epi Info, version 3.5.3. Descriptive statistics were carried out to measure relative frequencies, percentages, averages, and relative frequencies of the variables.

RESULTS

Baseline characteristics of the households

Out of 200 households', 175 household caregivers were admitted of practicing HMM, including 45 respondents from Danwarai, 46 from Gehuru, 39 from Jiga, and 45 respondents from Aliero. Muslims were the predominant religion with 161 (92.0%) respondents. There were 132 (75.4%) females and 43 (24.6%) males.. Almost half 74 (42.3%) of the respondents were illiterate. Mother was the primary caregiver 132 (75.4%) of the family (Table 1).

Knowledge of malaria and its symptoms

All of them, 175 (100%) reported mosquito as cause of malaria. The most commonly mentioned symptom was vomiting 140 (80%) followed by headache 128 (73.1%) and diarrhea 80 (45.7**%**) (Table 2).

Home management of malaria by caregivers

Out of 200 households', 175 (85.5%) household caregivers were admitted of practicing HMM. The most preferred (108, 61.7%) mode of home treatment of malaria was allopathic medicine with paracetamol (74, 51.7%) and chloroquine (54, 37.8%). The source of allopathic medicine was left over unused medicine (76, 53.1%), followed by patent medicine vendor (57, 39.9%). The dosage was according to peoples experience (101,70.6%), followed by medicine dealer prescription (42, 29.4%). Homemade herbal preparation was the most preferred (58, 86.6%) source of herbal medicine. They got better after home treatment was reported by 151 (86.3%) caregivers. The most common action at home was giving plenty of fluids (71, 40.6%).

Table 3. : Home treatment of malaria by caregivers

Variables		Frequency (%)
Home treatment of malaria	Yes	175 (87.5)
	No	25 (12.5)
Preferred mode of home treatment of malaria		
Allopathic medicine		108 (61.7)
Herbal preparation		32 (18.3)
Allopathic medicine + Herbal preparation		35 (20.0)
Source of herbal medicine		
Homemade herbal preparation		58 (86.6)
Traditional healer		24 (35.8)
Medicinal plant sold by market vendors		44 (65.7)
Got better after home treatment:	Yes	151 (86.3)
	No	28 (13.7)
Action at home		
Tepid sponging		50 (28.6)
Cold bath shower		46 (26.3)
Giving plenty of fluids		71 (40.6)
Exposing the child's body to air		17 (9.7)
No action		27 (15.4)
Reasons given for the home management of malaria		
Disease uncomplicated		123 (70.3)
Home treatments sufficient		29 (16.6)
High cost of treatment		62 (35.4)

Disease uncomplicated was the reason given by most of the caregivers (123, 70.3%) for the HMM (Table 3, 4).

DISCUSSION

Home management for malaria was very common (85.5%) in the study area, as previously reported in Nigeria [21, 22, 23, 24, 25] and other parts of Africa. [26, 27, 28, 2] In the present study, cause of malaria was defined correctly by all respondents, concordant with Chukwuocha, [24] but knowledge of malaria symptom was not satisfactory, which is in disagreement with a previous study. [29] They identified vomiting (80 %) and headache (73.1%), but only 13.1 % reported high temperature as symptom of malaria. This lack of knowledge of malaria symptom must be because of 42.3% illiteracy recorded in the study population.

Allopathic medication was the most preferred mode of malaria treatment in the study area. This is in agreement with similar work reported in Nigeria [30, 24, 25, 6] and other African country. [4, 28, 2] Preference of allopathic medicine on herbal preparation is encouraging, that they are aware of its effectiveness and safety. The use of combination of both allopathic and herbal preparations, as observed in the present studies agrees with previous similar report. [31. 32] This type of combination justifies that they are not confident about their treatment and are just trying whatever available at home. The use of herbal preparations for the treatment of malaria in this community is consistent with what previously reported from the same area [33] and in other parts in Nigeria [30, 34] and other countries. [35, 36, 2] The cause of herbal preparations for the treatment of malaria is its availability around house and lack of money. [33, 36]

Table 4 : Home treatment with allopathic medicine

Variables	Frequency (%)
Home treatment with allopathic medicine	
Sulphadoxine+Pyrimethamine	15 (10.5)
Chloroquine	54 (37.8)
Mefloquine	3 (2.1)
Primaquine	6 (4.2)
Quinine	16 (11.2)
Paracetamol	74 (51.7)
Source of Allopathic Medicine	
Left over unused medicine	76 (53.1)
Brought from patent medicine vendor	57 (39.9)
From friends/neighbors	19 (13.3)
Dosage	
Peoples experience	101 (70.6)
Medicine dealer prescription	42 (29.4)

Most caregivers started malaria treatment at home with paracetamol and chloroquine as previously reported. [30, 28] Chloroquine was the most commonly used antimalarial, even though the national drug policy has been changed from chloroquine to artemisinin-based combination therapy (ACTs) in 2005 because of widespread chloroquine resistance malaria parasite. None of them reported the use of ACTs. This might be because of its high cost.

This study shows that the source of allopathic medicine was use of leftover unused medicine, similar to previous studies [35, 28, 25] and patent medicine vendor drug as reported earlier. [30, 2, 25] Purchasing of medicine from patent medicine vendor is common because of their proximity. Presence of leftover unused medicine in home reflects their inappropriate administration of medicine dosage, based on their own experience or prescription of untrained medicine dealer. Such type of practices often results to under or over dosing of medicine and could lead to antimalarial drug resistance.

For HMM to be effective, the population must be aware of the correct dose of antimalarial medicine and complete treatment of malaria. Therefore, access to quality pre-packaged artemisinin-based antimalarial is important as pre-packaging helps ensure adequate dosage. In addition, other home management to bring down fever episodes in malaria like tepid sponging, cold bath shower, giving plenty of fluids, and exposing the child's body to air were satisfactory. Disease uncomplicated was the reason given by most of the caregivers (70.3%) for the HMM. This is because of their reported poor knowledge of malaria symptom.

Although HMM is common in the study area, but the knowledge and practice of home management of malaria was poor. Therefore, in order to improve home management, caregivers should be well-informed and provided with guidelines on home management of malaria. Since the caregivers are using patent medicine vendors, the training of both caregivers and the patent medicine vendors is necessary in order to meet the objectives of early and appropriate treatment of malaria. This will help caregiver to recognize malarial signs and symptoms at early stage, prompt and accurate diagnosis, administration of appropriate doses of antimalarial drugs, skills to reduce malarial fever at home, and when to consult health facilities if home treatments fail.

CONCLUSION

Home management of malaria is very common in the study area, but the knowledge of malaria symptom and practice of home management of malaria was poor. Therefore, to make home management of malaria effective, there is urgent requirement of a guideline on home management malaria, to improve the ongoing practice.

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