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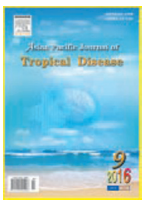

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Lymphatic filariasis: knowledge, attitude and practices among inhabitants of an irrigation project community, North Central Nigeria

Ebube Charles Amaechi[1,2*], Camelita Chima Ohaeri[1], Onyinye Mkpola Ukpai[1], Prosper Chidi Nwachukwu[1], UkohaKalu Ukoha[1,3]

[1]*Department of Zoology and Environmental Biology, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria*

[2]*Department of Zoology, University of Ilorin, Ilorin, Kwara State, Nigeria*

[3]*Department of Zoology and Environmental Biology, University of Calabar, Calabar, Cross River State, Nigeria*

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ABSTRACT

Objective: To ascertain the knowledge of lymphatic filariasis among inhabitants of an irrigation project community in north central Nigeria.
Methods: A descriptive cross sectional study which involved 285 participants ⩾ 18 years who live in Omi and its surrounding communities was done. Data on socio-demographic characteristics and the knowledge, attitude and practices of the participants were obtained using pre-tested questionnaires. Data were analyzed using SPSS software version 16.0.
Results: A greater proportion (82%) of the participants were not aware of lymphatic filariasis and the exact cause of the infection. Quite a good number (85%) reported pain and swelling as symptoms. The respondents generally had a fair understanding of prevention and management strategies of the disease. The results from this study showed that the association between awareness of lymphatic filariasis and gender, age, educational level and occupation of the participants was not significant ($P > 0.05$).
Conclusions: Many of the participants had a poor knowledge of lymphatic filariasis, the mode of transmission and symptoms of the disease. For proper understanding of lymphatic filariasis in the community, there is need for effective and realistic health education campaigns targeted at the grassroots.

1. Introduction

Lymphatic filariasis due to infection with *Wuchereria bancrofti* is a chronic parasitic disease of huge public health concern and socio-economic significance in many tropical and sub-tropical countries of the world, where it currently affects an estimated 1.34 billion in 81 countries[1]. About 40 million people suffer from clinical manifestations of the disease which usually results into serious disfiguration and incapacitation of the body, where approximately 1.4 billion people are at risk of the infection[2]. Lymphatic filariasis, a neglected tropical disease presently affects the poorest of the poor in most sub-Saharan African countries, Nigeria exclusive having a negative significant impact on the psychological, economic and social life of the affected populace. The concerted control efforts by the government and international bodies not withstanding, lymphatic filariasis is still a disease of public health concern in Nigeria, with an estimated 106 million cases, placing the country as one with the highest prevalence in Africa[3].

In most rural areas undergoing ecological transformations, particularly as a result of dam construction and irrigation schemes, new breeding sites suitable for the proliferation of the mosquito vector are created. As a result of this, the transmission of lymphatic filariasis in such areas is expected to increase[4]. Other contributory factors to the increase in lymphatic filariasis disease transmission include unplanned urbanization, overcrowding and deteriorating sanitary conditions[5].

For a sound recommendation to be suggested for a given community, it is of the utmost importance to know how the inhabitants of that community perceive the disease and their responses as a result of the impression formed on those already

*Corresponding author: Ebube Charles Amaechi, Department of Zoology and Environmental Biology, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria.
Tel: +2348039667283
E-mail: ebubeamechi@yahoo.com

The study protocol was performed according to the Helsinki declaration and approved by Kogi State Ministry of Health and the local government health authority. Informed written consent was obtained from Lower Niger River Basin Authority.

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affected. Ignorance and wrong beliefs can lead to negligence in preventive and control measures, therefore affecting the much needed appropriate treatment. Community awareness and involvement are considered vital tools for the success and sustainability of any disease control programme[5,6]. Evidence have shown that peoples' perception about disease risks such as transmission and health consequences do influence their attitudes and health seeking behaviors towards the disease concerned[6,7].

Data on the knowledge, attitudes and practices (KAP) of inhabitants of Omi dam irrigation project community towards lymphatic filariasis is not available hence the need for this study. This paper presented the results of detailed investigation into people's KAP regarding lymphatic filariasis in Omi irrigation community, North Central Nigeria. It is hoped that the results of this work will provide a guide towards the prevention and control of this devastating and disfiguring disease in Nigeria.

2. Materials and methods

2.1. Study area and population

This investigation was carried out in five communities of Omi dam irrigation project and surrounding communities namely, Ogga, Iddo, Ogbo and Ejiba located in Yagba West Local Government Area of Kogi State, Nigeria. The Local Government Area covers an area of 1 276 km^2 with a population of 149 023[8]. It is about 146 km from Ilorin, the capital of Kwara State. It lies between longitudes 6°37' and 6°42' E of Greenwich and latitudes 8°34' and 8°38' N of the equator[9]. The project is located in Omi village, a farming community of about 10 000 people[10]. The primary aim of establishing this dam is to promote agriculture through irrigation activities involving more than 5 000 farming households both within and outside Yagba West Local Government Area. Many persons especially fishermen have settled along the lake. This shows the huge fisheries potential of the lake. The dam is capable of irrigating about 4 100 hectares of land. The dam allows for agricultural production of maize, vegetables, sorghum and rice all the year round.

The study area has a high humidity with an annual mean temperature ranging between 28 ℃ and 35 ℃. There are two main seasons in the area. The dry season starts from November to March while the rainy season starts from April and ends in October, though there could be fluctuations due to climate change. The vegetation is Guinea savannah while the soil is hydromorphic which contains a mixture of coarse alluvial and colluvial deposits. The annual rainfall is between 1 100 mm and 1 300 mm. Most of the inhabitants in the study area depend on the water body for drinking and for domestic activities within their rural dwellings since pipe borne water is lacking. The communities have schools, hospitals and dispensaries where the inhabitants seek treatment. Many of the houses have unscreened windows, holes in the walls, and large open eaves that provide easy entry for mosquitoes. The houses are separated from one another either by agricultural land or small patches of natural vegetation.

This investigation was done between the months of March and November 2014. The study population consisted of all caregivers who attended the participating health centers within the study area during the survey period and gave their consent to be part of the study. In order to be eligible to be part of the study, respondents had to have stayed in the area for at least one year and had to be 18 years or older. A total of 285 respondents aged $\geqslant$ 18 years who gave their consents participated in the survey.

2.2. Study questionnaire

A semi-structured questionnaire developed by the researchers was validated and pre-tested to ensure consistency, reliability and appropriateness of language before commencement of the field work. During the field work, questionnaires were administered with the help of medical doctors, nurses and health technicians who were indigenous to the research area to allow for proper translation and clear understanding by the respondents. For those who could neither read nor write, they were interviewed using "Okun" the local language of the people of the area to determine the extent of each participants knowledge of lymphatic filariasis, including causes, signs and symptoms, mode of transmission, preventive measures and management of the ailment. The questionnaire used in the survey was written in English language.

2.3. Ethical consideration

Permission to conduct the study was obtained from Lower Niger River Basin Authority, Ilorin. Approval was granted by the Kogi State Ministry of Health and the local government health authority. Meetings were held in the villages to explain the purpose of the study to the inhabitants. It was made clear that participation in the study was voluntary and that it was possible to withdraw from the study at will. The post-graduate committee board of the Department of Zoology and Environmental Biology, Michael Okpara University of Agriculture, Umudike, gave approval to the study. The community leaders gave their full support and coooperation.

2.4. Data management

The results of this work were analyzed with SPSS version 16.0 (Chicago, USA). The results were double checked to be sure of correctness of the imputed figures before the analysis. The demographic characteristics of the respondents were presented in percentages and frequencies. Association of the knowledge of filariasis with demographic factors of the respondents was assessed using *Chi*-square test. A *P*-value of less than 0.05 was considered to be significant in the determination of association between the variables.