

## HEALTH SEEKING BEHAVIOUR AND TRADITIONAL MANAGEMENT PRACTICES FOR SYMPTOMS OF ONCHOCERCIASIS BY RESIDENTS OF THE HAWAL RIVER VALLEY, NIGERIA

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### ABSTRACT

*The health-care seeking behaviour of onchocerciasis infected residents of the Hawal River Valley; North Eastern Nigeria was investigated among 423 infected subjects using structured questionnaires, Focus Group Discussions and In-depth studies. The objectives of the investigations were to determine the preferred forms of treatment and management practices for different symptoms of onchocerciasis. Result obtained showed that overall; self-medication (27.2%) was the most preferred form of treatment, followed by traditional healing or herbal treatment (25.1%) while visits to hospitals/clinics (12.8%) were the least preferred. The differences between the number of people seeking the various types of treatment was found statistically significant ( $p > 0.05$ ). Generally, the form of treatment sought depended on the particular symptoms. For example, while 65.0% of those having musculoskeletal pains; 40.2% of those having pruritis and 34.8% of the visually impaired sought treatment from the drug hawkers/drug stores; none of those with LS, nodules, hydrocoele/elephantiasis and blindness patronised them. The symptoms for which treatment was sought most were musculoskeletal pains (46.7%) and pruritis (38.0%) and those for which least treatment were sought were leopard skin (1.3%) and blindness (1.3%). The result of the Focus Group Discussion (FGD) showed that screening of doors and windows was the most popular method (45.3%) of vector (*Simulium*) control. Personal hygiene (43.0%) and steam-bath (31.3%) were the most popular ways of prevention and management of pruritis (craw-craw) respectively while no traditional medication was found potent for the treatment or reversal of severe visual lesion and blindness.*

**Keywords:** Health-care, Onchocerciasis, Treatment, Management, Blindness

### INTRODUCTION

Onchocerciasis or River blindness is a disease caused by infection of a parasitic nematode - *Onchocerca volvulus*. According to the World Health Organisation (WHO), Nigeria is known to have the largest number of cases spread across its vast geographical area (WHO, 1995). Hawal River valley is known to be one of the earliest and most endemic onchocerciasis settings in Nigeria (Bradley, 1972; Okoye and Onwuliri, 1997).

Onchocerciasis is a debilitating and dreadful disease of considerable public health importance and constitutes a socio-economic obstacle to human welfare, development and progress of endemic communities. It commonly affects rural farmers, fishermen, hunters, animal rearers, firewood fetchers, etc, who are usually exposed to bites of the blackflies (*Simulium*) vectors. It is estimated that worldwide, there are more than 100 million people at risk of infection. About 18 million of these are infected while 800,000 are visually impaired and over 270,000 totally blind (WHO, 1995, Forgiione, 2002).

The vast spread of the disease constitutes a serious impediment to effective control. The disease could be controlled by larviciding, use of repellents, screening households with nets and chemotherapeutic strategies (Forgiione, 2002). These strategies are also constrained by lack of community support resulting from the inability of control experts to understand local conceptions, priorities and

preferences especially their beliefs on the causes and effects of the disease and their attitude to health-care seeking behaviours. This paper outlines the findings in an investigation of this problem in a well established endemic setting. It is hoped that the present findings would contribute significantly to future intervention programmes in Nigeria and elsewhere.

### MATERIALS AND METHODS

**Study Area:** The study was conducted in communities on the Hawal River valley located in the southern and northern borders of Borno and Adamawa states respectively. *Simulium* vectors are known to breed in river Hawal, a tributary of river Gongola, which is a part of the Benue river system. The area lies in the transition zone between the Guinea and Sudan savannah consisting of scrubby vegetation interspersed by tall trees and woodlands. The community inhabitants are culturally heterogeneous consisting of different ethnic and dialect groups. Their occupations include subsistent farming, animal husbandry, fishing and trading. Health services are highly inadequate as the village dispensaries lack basic supply of the relevant drugs and trained health workers. However, the Church of the Brethren in Nigeria (EYN) operates a leprosarium in Garkida.

**The Subjects:** A total of 423 subjects were enlisted for the study. To be enlisted, a person tested positive

to at least one of the rapid assessment symptoms, examination of skin biopsies and/or visual acuity testing. The screening was conducted in 55 community clusters as part of an overall survey on the epidemiology and socio-economic consequences of onchocerciasis in the area.

**Research Instruments:** Each subject was administered a simple health questionnaire structured to obtain information including name, age, gender, occupation and the most preferred health-care option for the particular onchocercal symptom for which the subject was enlisted into the study.

Focus Group Discussions (FGDs) were conducted in four centres using guidelines of Khan *et al.*, (1990) to obtain more information to complement the findings of the questionnaire survey. The FGDs explored the traditional treatment and management practices for symptomatic onchocerciasis patients. In addition, six in-depth interviews were held with two traditional healers (herbalists), two orthodox health workers and two community and opinion leaders. The interviews yielded detailed information on some issues that emerged during the FGDs.

**Statistical Analysis:** Differences in the number of people seeking different types of treatment were performed with chi-square value from the contingency tables. All quantitative data were analysed using EPI INFO 6.0 software (CDC, Atlanta, GA, USA) and the qualitative data from the FGDs and In-depth interviews were analysed using the Text Base Beta software.

## RESULTS

**Health Care Options:** A summary of the health care options for onchocercal symptoms are presented in Table 1. The most preferred health care option is self medication (27.2 %); followed by those who patronised traditional healers or herbalists (25.1 %), while the least option is hospitals/ health clinics (12.8 %). The differences between the number of people seeking the various types of treatment was found statistically significant ( $p > 0.05$ ). Generally, willingness to seek treatment as well as preferences varied according to symptoms. While only few subjects with blindness (21.7 %) and leopard skin (22.9 %) sought treatment, all subjects with pruritis, musculoskeletal pains and visual impairment sought treatment for their conditions. Also, while 30.7 % of those having musculoskeletal pains; 21.7 % of the visually impaired and 21.2 % of those with pruritis sought treatment from the drug hawkers/stores, none of those with LS, nodules, hydrocoele/elephantiasis and blindness patronised that option.

The symptoms for which most treatments were sought (100.0% respectively), were musculoskeletal pains, pruritis and visual impairment. Those for which least treatment were sought were leopard skin (1.3 %) and blindness (1.3 %).

**Focus Group Discussion:** The result of the FGDs is summarised in Table 2. A total of 45.3 % mentioned

the screening of house doors and windows as the most efficient method of avoiding the bite of black flies (*Simulium*), followed by 28.9 % who mentioned the use of smoke from burning leaves and wood of medicinal plants. Pruritis was said to be preventable by good personal hygiene or *saptenci* in the local language (43.0%) and by avoiding contamination by infected persons (25.9 %).

For the management of the cases of pruritis, 31.3 % mentioned steam-bath with *Maganin shawara*, followed by bathing with 'black soap' (28.9 %) while only 7.0% mentioned the 'others' (use of traditional clay/chalk and no action). Greater than half (51.6 %) of the discussants said there was no traditional medication for nodules whereas 29.7 % favoured extirpation by traditional excisors ('surgeons'). While majority of the discussants (33.6%) said there was no traditional medication for visual impairment, only 7.8 % mentioned 'other' measures (use of 'eye-pencil'; salty-water wash).

**In-Depth Interviews:** During an in-depth interview, a 54-year-old male herbalist gave the composition of the herbal medicine known locally as *Maganin shawara* as lemon grass; lime (citrus spp); bitter leaf (*Vernania anygdalira*); leaves, bark and ripe seeds of neem plant or *dogon yaro* (*Azadirachta indica*); Paw-paw leaves (*Carica papaya*), potash and another undisclosed herb. According to him:

*The bitter mixture is boiled morning and evening to keep it effective and taken for 2 - 4 days in substitution for water. This is enough to cure itching or crawl-crawl; enteric and yellow fever; malaria; kill lice; expel abdominal worms and relief pains of 'dhen viri' (visual impairment).*

According to a 50-year-old female community health extension worker who collaborated with the submissions of the Focus Group Discussants on the popular practice of steam bath with *maganin shawara*:

*The mixture is boiled in a clay-pot ('tukunya') with a narrow outlet. The patient strips to the barest minimum (often naked or in short pants). He/she encircles the pot that has just been put down from the fire and himself with a white wrapper. The cover of the pot is lifted intermittently and the patient is expected to bear the steam within the tent until the steam from the pot is exhausted. The ailments or poisons of the disease were believed to be washed away in the sweat generated.*

The in-depth interviews further revealed that nodules, especially in children were often extirpated using local surgical equipment, which the local 'surgeons' claimed were sterilised by boiling in local herb sterilants. Another treatment for nodules amongst the Bura tribe was the use of *tumbul*, a hollow wooden structure used to draw out materials from the lesion after slight incisions with razor blade. The *tumbul* therapy is also used in early stages of fluid accumulation in scrotal elephantiasis and hanging groin.

**Table 1: Preferred health-care options for onchocercal symptoms by affected residents in Hawal river valley**

Variables	No of Respondents (% of Total Respondents)							Total
	Pruritis	L/S	Nodule	MSP	Hyd/Eleph	Vis.Imp.	Blindness	
	<u>n=132</u>	<u>n=35</u>	<u>n=68</u>	<u>n=140</u>	<u>n=10</u>	<u>n=23</u>	<u>n=15</u>	<u>n=423</u>
Hospital/Clinic	23(17.4)	0(0.0)	0(0.0)	21(15.0)	0(0.0)	8(34.8)	2(13.3)	54(12.8)
Drug Store/Hawkers	28(21.2)	0(0.0)	0(0.0)	43(30.7)	0(0.0)	5(21.7)	0(0.0)	76(18.0)
Herbalists/Healers	36(27.3)	8(22.9)	15(22.1)	39(27.9)	3(30.0)	4(17.4)	1(6.7)	106(25.1)
Self Medication	45(34.1)	0(0.0)	25(36.8)	37(26.4)	2(20.0)	6(26.1)	0(0.0)	115(27.2)
No Medication	0(0.0)	27(77.1)	28(41.2)	0(0.0)	5(50.0)	0(0.0)	12(80.0)	72(17.0)
<b>Total Patronage</b>	<b>132(100.0)</b>	<b>8(22.9)</b>	<b>40(58.8)</b>	<b>140(100.0)</b>	<b>5(50.0)</b>	<b>23(100)</b>	<b>5(21.7)</b>	<b>423(100.0)</b>

L/S =Leopard skin; MSP=Musculo-skeletal Pains; Hydr/Eleph=Hydrocele/Elephantiasis; vis. imp. =Visual impairment

**Table 2: Traditional management of symptoms of onchocerciasis**

Parameters	Responses (%) n = 128
<b>Control of <i>Simulium</i> fly</b>	
Screening of doors and windows	58(45.3)
Smoke from burning leaves/wood of medicinal plants	37(28.9)
Repellent balm/ointment	22(17.2)
Others (manual destruction, use of long dresses)	11(8.6)
<b>Prevention of pruritis (<i>craw-craw</i>)</b>	
Avoiding <i>Simulium</i> bites	30(23.4)
Personal hygiene ( <i>'saptanci'</i> )	55(43.0)
Avoiding infected persons	33(25.9)
Others (Not possible, local herbs)	10(7.8)
<b># Management of pruritis (<i>craw-craw</i>)</b>	
Bathing with 'black-soap'	37(28.9)
Applying herbal cream/'black pomade'	34(26.6)
Scratching with stones	19(14.8)
Steam-bath with <i>maganin-shawara</i>	40(31.3)
Use of amulets (charms)	13(10.2)
Others (use of traditional clay/chalk; no action)	9(7.0)
<b>Nodules</b>	
Extirpation with <i>tumbul</i>	38(29.7)
Applying shear-butter cream	13(10.2)
Applying herbal ointment	11(8.6)
No traditional medication	66(51.6)
<b>Severe Visual Lesion/Blindness</b>	
Applying Herbal ointment	39(30.5)
Steam-bath with <i>maganin-shawara</i>	36(28.1)
No traditional medication	43(33.6)
Others (eye-lashes chalk/pencil, salty-water wash)	10(7.8)

# Respondents to tick as many as applied.

## DISCUSSION

The practice of self medication or self-administration of drugs without the prescription of health personnel which is the most popular health care option in the study area, results from the near absence of affordable government health facilities such as public health care clinics and general hospitals. This haphazard drug administration leads to drug resistance, poisoning (toxicity) and other lethal consequences. The patronage of traditional healers (or herbalists) which ranks second among the health care preferences presented similar consequences since these herbal drugs are usually of unknown formulations and dosages.

African traditional societies often view ill health as both organic and spiritual (supernatural) malfunctions of the body.

The local conceptions, priorities and preferences of a people in turn translate into their traditional belief and ultimately become the underlying factor in their ill-health behaviour. It is therefore important to gain an understanding of such non-biomedical views and the myths that informed them in order to formulate locally acceptable, sustainable and result-oriented disease control strategies.

According to Goldman and Heuveline (2000), failure of many health interview surveys to obtain complete reports of non-biomedical sources of care necessarily leads to biased estimates of the frequency and determinants of health-seeking behaviour.

While the Bura and Kilba, natives of the study area may accept an organic cause of a particular disease, they are often quick to explore the remote spiritual origin of such

an organic lesion. Thus, terminologies are available concerning virtually every disease condition. The fact that in a society or family, only few members may be afflicted by particular lesions despite the apparent equal exposure of all members to the same conditions and diet seemed to lend credence to such beliefs on the supernatural implications of diseases. The effects of such beliefs on attitudes of the people towards control programmes should be the main worry of biomedical scientists. It is even more worrying to observe that among the supposedly educated and spiritual leaders (all religions in the study area - Christianity, Islam and idol worship), such beliefs in two-dimensional origin of every ill-health condition is very widespread.

Health education packages should focus on this trend on the basis of which the people often sought the intervention of traditional health workers (herbalists) even after treatment with orthodox drugs. In extreme cases, those who had been cured and were well still consulted herbalists ostensibly to avoid recurrence of such conditions. There is also the need

for the herbalists (and Traditional Birth Attendants) to be trained on the scientific basis of ill health and incorporated into disease control programmes since they have earned the confidence of the people in the study area over the years.

Interestingly, some traditional management practices seemed to have underlying scientific basis although not acknowledged as such. This study therefore reveals a marriage of biomedical concepts and local beliefs in the search for health care for the various symptoms of onchocerciasis. For instance, the FGD participants recommended good personal hygiene and avoiding *Simulium* bites to prevent pruritis. Also, majority of them believed there was no potent traditional medication for both nodules and visual impairments. Therefore, the traditional medications and management practices outlined need to be subjected to biomedical analysis and the active ingredients and positive aspects incorporated into the current drive for the control of onchocerciasis. The practice of steam bath with *Maganin shawara* should particularly be investigated further since it is practiced by some health workers who attested to the efficacy of the medication.

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