Schistosoma haematobium INFECTION AND COMMUNITY DIAGNOSIS IN ENUGU STATE SOUTHEASTERN NIGERIA.

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ABSTRACT

The community diagnosis of urinary schistosomiasis in an endemic area of Enugu State was investigated. The objective of the study was to determine the status of urinary schistosomiasis infection among pupils in Enugu State, to carry out rapid assessment studies using questionnaires and to investigate the relevance of local names in the rapid assessment of urinary schistosomiasis. Out of a total of 1064 pupils examined for ova of *Schistosoma haematobium,* 38.4% were infected while 6.4% had visible haematuria. Community diagnosis of schistosomiasis and blood in urine amongst 658 pupils were 7.8%and 12% respectively. The reporting of schistosomiasis and blood in urine by pupils was improved by use of local name in Amagunze with high values of 47.1% and 37.1% respectively as against lower values recorded in the other communities. The results show that local names can improve community diagnosis. The understanding of existence of such names can be important in disease control programmes.

Keywords: Schistosoma haematobium, community diagnosis, prevalence, local names.

INTRODUCTION

Urinary schistosomiasis is a water-based parasitic disease caused by *Schistosoma haematobium*. About 101million Nigerians are at risk of Schistosomiasis while 25million are infected (Chitsulo *et al*. 2000). Rapid assessment of community health problems for setting priorities for disease control often involves participation of community members with requisite knowledge of diseases (Nnoruka, 2000). However, as a result of ignorance or low awareness of scientific or English common names some community members often experience difficulties in disease diagnosis.

Tanner *et al*. (1987) reported non-recognition of schistosomiasis as a disease in spite of high prevalence and substantial morbidity in Tanzania. However, following sensitization through health education, community members were taught to recognize haematuria as a sign of infection with schistosomiasis, which subsequently improved community diagnosis in Tanzania. The rapid assessment of community prevalence of urinary schistosomiasis (WHO, 1995) involves the use of haematuria as a sign of infection.

It is common knowledge, however, that the use of local names improves community diagnosis. This paper reports the assessment of the validity of

visible haematuria as a rapid assessment tool in relation to parasitological examination in communities of Enugu State eastern Nigeria.

MATERIALS AND METHODS

Study Area

The study was carried out in Awgu and Nkanu Local government Areas of Enugu State Southeastern Nigeria. The study area lies within latitude 6°00 and 6°15'N, longitude7°25'and 7°40'E. The vegetation of the area falls within the rainforest savanna mosaic, a transitional zone of rainforest and grassland savanna. Geological evidence shows that the area belongs to two main formations, the Awgu shale and the Ezeaku shale of the Abakaliki anticlinorum (Kogbe, 1976). The streams, which pass through, the shaly terrains cut deep valleys and are perennial in nature. These streams are muddy in colour except in Awgu town. The water bearing formations in the study areas are the Ngeleigbo sandstone, the Maku Shale and the Owelli sandstone.

The rich soil of the area encourages large-scale agriculture with agricultural products as rice, yam, maize, okro, cassava, cocoyam and groundnuts. There are many primary schools in the area and a few secondary schools. Primary school enrolment is as high as 90%.

Subjects and sample collection/processing

About 12 schools were randomly selected from a list of schools in the LGAs. Permission was obtained from relevant authorities before schools were visited for distribution of questionnaires. The questionnaires were pretested and adapted to the understanding of pupils. Although the questionnaire had a multipurpose design the rapid assessment questions were based on Lengeler *et al. (1991)* and followed the guidelines of the manual on rapid assessment (WHO, 1995). The questions were presented in English and the local dialect of Igbo; pupils ticked or underlined their responses on the questionnaire. The questions solicited responses on diseases suffered in the last one year and signs experienced in the last one month. The name *Oria mmamiri* refers to schistosomiasis in Amagunze Nkanu LGA whereas no name existed for the disease in Awgu Local Government Area. Teachers were more familiar with the name Bilharziasis than Schistosomiasis.

The pupils later submitted urine specimens, which were transported to the laboratory and examined for the ova of *S.haematobium* using the centrifugation technique. The urine specimens were also observed for visible haematuria (WHO, 1985). The relationship between parasitological infection, visible haematuria and pupil's responses as well as the utilization of local name was assessed.

RESULTS

The prevalence and haematuria rates in the various communities are shown in Table 1.

TABLE 1: COMMUNITY PREVALENCE AND HAEMATURIA RATE

Community	No. Examined	No. infected	Haematuria
		%	%
Amagunze	70	78.6	50
Awgu	296	43.6	9.9
Mpu	80	37.5	0
Ndeaboh	87	28.7	5.7
Nenwe	354	41	0.3
Oduma	94	14.9	0
Okpanku	83	13.3	0
Total	1064	38.4	6.4

The table shows that out of 1064 urine samples of pupils examined for *S. haematobium* eggs 38.4% were infected. Visible haematuria was recorded in 6.4% of the specimens. There was significant correlation between school egg prevalence and visible haematuria, r=0.85. P> 0.05.

The number of responses to schistosomiasis and blood in urine reported by pupils is shown in Table 2. Out of a total of 658 respondents 7.8% and 12% reported schistosomiasis and blood in urine respectively. The highest responses to schistosomiasis and blood in urine were reported in Amagunze.

TABLE 2: COMMUNITY RECOGNITION OF SCHISTOSOMIASIS AND BLOOD IN URINE

Community	Number	Schistosomiasis	Blood in urine
		%	%
Amagunze	70	47.1	37.1
Awgu	164	1.2	6.1
Mpu	58	3.5	15.5
Ndeaboh	76	1.3	13.2
Nenwe	145	1.3	13.2
Oduma	83	6	7.2
Okpanku	62	4.8	14.5
Total	658	7.8	12

Focus group discussion with pupils revealed that they were familiar with the local Igbo name of schistosomiasis, *Oria mmamiri*. The pupils usually hide the disease from parents for fear of injections by doctors during treatment. However, the disease neither causes shame among the pupils nor fear. They expressed willingness to participate in a chemotherapy programme involving the administration of tablets.

DISCUSSION

The findings indicate moderate prevalence of urinary schistosomiasis with overall low morbidity in a few areas and very high morbidity in some areas as evidenced by the visible haematuria rate. The high prevalence of infection and haematuria in the study area is alarming. However, the present findings agree with Ozumba *et al* (1989) that schistosomiasis is endemic in Amagunze.

The existence of an Igbo name for schistosomiasis in Amagunze is indicative of a long- standing history of the disease within indigenous knowledge systems. Studies by Nnoruka (2000) have shown that *Oria mmamiri* is also a common term in some communities of Imo State eastern Nigeria. Given the fact that most pupils cannot easily recognize scientific (medical) or English common names the use of local names in community diagnosis improves the recognition and reporting of schistosomiasis. The

Igbo name, *Oria mmamiri* means disease of the urine. This local name can be utilized in health education programmes to enhance community diagnosis. Community diagnosis is very relevant in priority setting at the local level of primary health care (Tanner, 1989).

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