

Prevalence of Filariasis in The Temporary Camp of Construction Labors

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ABSTRACT

East coastal area of India is endemic for filariasis. This study is undertaken to identify the prevalence of filariasis in the people living in temporary houses. Clinical examination with past history and night blood smear examination was done from total of 345 persons living in temporary houses in construction labour camp. Out of the total 289 subjects tested 27 (9.5%) showed MF positive in the night blood smears. MF positivity was 14.50 % in males, 5.1% in females and 4.76% in children. This study reports high prevalence of filariasis. This may be because of lack of sanitation and lack of mosquito control measures in the temporary housing camp. It is advisable to take up necessary mosquito protection and control measures in these temporary housing structures.

KEY WORDS : Filariasis, Microfilaria, Night blood smear

Introduction

Lymphatic filariasis is widely prevalent in south Indian coastal areas. There are many hyper endemic areas in India. On the whole filariasis cases in India are about 20 to 30 million which is two thirds of the world burden. In South India, *W. bancrofti*, *B. malayi* are the predominant parasites causing filariasis. Among the mosquito vectors *Culex quinquefasciatus* is the main source and to

some extent *Anopheles*, and *Aedes* species are also play a role. Presently government of India is implementing mass medication of Diethyl calibamazine (DEC) program under national health program. It has been observed that some unskilled and semi skilled labor working in big construction projects are drawn from different areas and they live in temporary camps and periodically shift to different areas as per requirement of their construction company works. It may be a possibility that they are missing the DEC under mass medication scheme. This factor coupled with their temporary huts with surrounding mosquito breeding areas may be a predisposing factor for maintaining filariasis in this population[1-9]. With this back ground the study was taken up among 289 persons living in temporary camp of construction labour near Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry.

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Materials and Methods

In this construction labour camp total of 345 persons (Males 164, Females 153 and children 28) were residing. On the day of this study only 289 persons (Males 131, Females 137 and children 21) were available for the study. All the adults were in the age group of 19 - 55 years and children were in the age group of 3 - 6 years. After explaining the study and through active involvement of their supervisors and subcontractors all persons gave their consent and participated in the study. All the participants were clinically examined for any symptoms of filariasis with specific focus on present or past inguinal and genital swellings in the females, and scrotal pain and or swelling in the males. Further all of them were clinically examined for respiratory disease symptoms and related past history. Many subjects told about visits to various doctors for treatment of cough, fever, leg pain and back pain. They used some drugs for symptomatic relief. They were not maintaining any past records. From all these subjects peripheral blood was collected in the night and thin smear was examined after staining with Leishmans stain. This labor camp had temporary houses with iron sheets. All the surrounding areas had mosquito breeding places which could serve as potential source in spreading the filariasis.

Results

In this study most of the participants were asymptomatic and they did not give any relevant history. However all the subjects gave history of visiting doctors many times for treatment of many episodes of fever, cough, leg pains and back pain. They took treatment at many instances and stopped medication with symptomatic relief. Out of the total 289 subjects tested 27 (9.34%) showed Microfilaria (MF) positive in the nocturnal peripheral blood smears. Details of age and gender are presented in the Table - I

and MF positivity details are given in Table - II. The distribution of MF positivity among different age groups is shown in Figure 1

Table.No.1 : Details of age and gender of the study population

Subjects Age	Gender		Total
	Males	Females	
40 - 55 yrs	41	37	78
30 - 39 yrs	54	59	113
19 - 29 yrs	36	41	77
3 -6 yrs	13	8	21
Grand Total	144	145	289

Table - 2 : Results of MF positivity

Subjects Details	Number	MF Positivity	% of Positivity
Males	131	19	14.50 %
Females	137	7	5.10 %
Children	21	1	4.76 %
Grand Total	289	27	9.34 %

Discussion

Lymphatic filariasis is a serious socioeconomic and public health problem due to the morbidity, disability, social stigma and considerable economic loss caused by the disease. In this study, over all microfilaria positivity rate was 9.34%. While looking at details of microfilaria positivity, males had a significantly high prevalence. In males it was 14.50% and in females 5.10%. In the children it was 4.76%. Mishra et al[10] reported 6.9% MF positivity among males and 1.65% among females respectively. These rates are comparable to the rates reported earlier in Northern India by various investigators like Patel et al,[11] Singh et al,[12] Kumar et al,[13] Prasad et al[14]. and Das et al[15]. Males had higher microfilaria rate compared to females. One reason might be that females and children slept indoors and males preferred to sleep outside

their houses. It is customary that mothers take more care to cover the children to protect from mosquitoes. The high prevalence may be because of lack of sanitation and lack of mosquito control measures in and around the temporary housing camp. It is advisable to take up necessary mosquito protection and control measures to prevent filariasis and reduce the endemicity. The major challenge with filariasis is that with the currently available anti filarial drugs to achieve control of filariasis requires high level of interruption of transmission. Again this can be achieved only by very high treatment coverage (probably >85% of the total population) to achieve control of transmission and elimination of filariasis. But current approaches to drug delivery does not achieve this (only 68% get covered). Although some states are able to achieve high compliance with eradication programs others lag behind due to inability to tap all the available resources. In order to attain a high level of eradication, the health education system should be involved at all levels. This could be achieved by incorporating information about the disease and health education delivery by public health staff, conducting camps, health melas, continuously Children should be involved through school health programs about filariasis and prevention of mosquito breeding places.

Conclusion

Certain underlying factors like poor coordination in the district authority, non-involvement of middle-level health staff in planning about and poor training and micro planning, about areas to be covered, should be overcome. These problems require powerful advocacy tools and strategies. Some of these issues can be overcome by making effective micro plans, improved supervision, and emphasizing more on the training.

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