

Original Article

Awareness about Mass Drug Administration in one of the Filariasis Endemic Districts of North Karnataka.

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Abstract

Background: Lymphatic Filariasis (LF) is the world's second leading cause of long-term disability with many serious economic and social consequences affecting many young working adults of both sexes. An estimated 49 million individuals in India are infected with LF of these, over 23 million people suffer from chronic forms of filariasis. The present study was conducted to assess the program effectiveness of the 2-drug strategy in terms of awareness of MDA, source of information of MDA and the adverse effects due to DEC.

Objectives: To evaluate the MDA Programme with respect to its awareness, source of information of MDA and the adverse effects due to DEC.

Materials and Methods: A Community based Cross-Sectional Study was conducted in Bijapur District. One urban and three rural clusters were selected randomly out of four clusters. All the sampled eligible population who belong to the MDA campaign area were included. Data was collected using pretested proforma, entered in Microsoft Excel 2013 and analysed using free version of OPENepi software.

Results: In the present study out of 713 study population, 67.6% of the population were in the age group of 14-60 years. Male to female ratio was equal. 66.48% of the study population were from rural area and 33.52% were from urban area. 98.39% of them did not experience any side effects. 84% of the study subjects were not aware about MDA.

Conclusions: The awareness of MDA was very minimum. Side effects of DEC was also less.

Key words: Mass drug administration, Lymphatic Filariasis, DEC.

Introduction

Lymphatic Filariasis (LF) is the world's second leading cause of long-term disability with many serious economic and social consequences affecting many young working adults of both sexes.^{1,2} The chronic manifestation in the form of lymphedema and elephantiasis, could inflict grave social wounds upon the persons affected. Slum dwellers with no basic sanitation and inadequate housing are at the highest risk of infection with *W.bancrofti* transmitted by *C.quinquefasciatus*, and the rural poor are those affect-

ed by filariasis transmitted by other species.³

In spite of the National Filariasis Control Program since 1955, filariasis is still a major public health problem in India. Currently indigenous cases have been reported from about 250 districts in 20 states/ Union Territories. (Government of India, 2007).⁴ Over 600 million people live in filariasis endemic areas in India. Three fourth of those are at risk live in rural areas. An estimated 49 million individuals in India are infected with LF of these, over 23 million people suffer from chronic forms of filariasis.⁵

The 'National Goal' is to eliminate Lymphatic Filariasis by 2015 under National Vector Borne Disease Control Programme (NVBDCP). Annual mass drug administration (MDA) is one of the cheapest and the most beneficial disease control strategy for control or elimination of Lymphatic Filariasis in the annals of public health history.⁶ The main control measures are mass Diethylcarbamazine (DEC) administration, antilarval measures in urban areas and indoor residual spray in rural areas. The recommended approach is annual supervised MDA through a door to

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door visit by co administration of a single dose of Diethyl carbamazine (DEC) and Albendazole preferably on a single day with two day mopping up operations.⁷

People's knowledge about mode of spread and prevention is very important for the effective control of this disease. For the proper implementation of the Mass Drug Administration (MDA) programme, public awareness is needed. With this background, this study was conducted to assess the Awareness of MDA, source of information of MDA along with the adverse effects of DEC. This evaluation survey was conducted 3 months after the MDA campaign over a period of 3 days by the author for the GOI through Chief Medical Officer, Regional Office for Health and Family Welfare, Bengaluru after taking permission from concerned authorities.

Materials and Methods

A Cross Sectional Study was conducted in August 2nd week 2014 in Bijapur District in Karnataka state which is one of the filaria endemic district. MDA Was carried out among three clusters (three primary health centre's) (PHC) from rural areas and one cluster (ward) from urban area were selected randomly from the list of urban wards and PHC's. From the PHC's, one subcenter was selected for the study. From that subcenter one village was selected randomly from the list of subcenters and villages in the PHC's. One urban area which was selected was Muddebihal taluk proper. Three PHC'S were Kolhar, Ronihal of Basavanbagewadi taluk and Dhavalagi PHC of Muddebihal taluk. Four clusters, each cluster having 30 households were selected comprising one urban and 3 rural areas. 3 clusters selected on the basis of three PHC's and one urban cluster from Taluka hospital. All the sampled eligible population who belong to the MDA campaign area were included. Locked Houses, recently migrated population and people who didn't give consent were excluded. The interviewer was trained informally in the regional office for health and family welfare, Bengaluru in all aspects of coverage survey. A total of 120 households were visited in four areas selected which covered a total population of around 713. House to house field survey was conducted and proforma was filled using personal interview method after obtaining Informal consent. Health workers, anganwadi workers, Accredited Social Health Activist (ASHA) and student volunteers were the Drug distributors. A formal training programme was organized in the district headquarters to all the staff involved in MDA campaign. This survey assessed only the coverage aspect and not the entire MDA implementation programme. Data was collected using pretested proforma, entered in Microsoft Excel 2013 and analysed using free version of OPENEpi software.

Results

The total population was 713 out of four clusters (one urban ward and three rural villages). The basic characteristics regarding age group, sex and education of the population was studied. Majority of the respondents were in the age group of 14-60 years (67.6%). 50.21% of the study population were males. Majority (66.48%) of the study population were from rural area and 33.52% were from urban area. Most (98.39%) of them did not experience any side effects. Majority (88.10%) of the population got the information from ASHA and Anganwadi worker. 84% of the subjects did not know about MDA and only 16% of the respondents were aware about MDA.

Table-1: Distribution of Respondents According to Age, Sex and Place of residence (N = 713)

Age Group (Years)		
Age	No.	%
<2	12	1.68%
2 - 5	50	7.01%
5 - 14	126	17.67%
14 - 60	482	67.60%
>60	43	6.03%
Total	713	100.00%
Sex		
Sex	No.	%
Male	358	50.21%
Female	355	49.79%
Total	713	100.00%
Place of Residence		
Place	No.	%
Urban	239	33.52%
Rural	474	66.48%
Total	713	100.00%

Table-2: Distribution of respondents according to adverse effects, awareness of MDA and source of information

Adverse effects		
Adverse effects	No.	%
Yes	8	1.61%
No	489	98.39%
Total	497	100.00%
Awareness of MDA		
Awareness	No.	%
Yes	84	16.00%
No	441	84.00%
Total	525	100.00%
Source of information		
Source	No.	%
Asha /AWW	74	88.10%
Health worker	5	5.95%
Doctor	0	0.00%
Media	2	2.38%
Poster	3	3.57%
Meeting	0	0.00%
Total	84	100.00%

Discussion

The present study is a cross sectional study, covering a target population of 713 from four clusters. In the current study among those who consumed DEC 1.61% of them developed adverse reactions. Similar observations were noted in the studies done by DM Koradhanyamath et al,⁵ Ranganath TS et al,⁸ Kumar A et al,⁹ Kulkarni MM et al,¹⁰ Hussain M et al,¹¹ and Kumar P et al,¹² where the adverse reactions are seen in 0.2%, 0.43%, 0.72%, 1.1%, 1.12% and 2.15% respectively. In contrast to current study higher rate of adverse reactions are seen in studies conducted by Dorle AS et al¹³ having 7.25% and in study conducted by Patel PK et al¹⁴ having adverse reaction rates being 8% in Bagalkot and 2.3% in Gulbarga Districts.

Awareness of MDA was observed in 16% in the present study. Similar findings were observed in the following study by Karmakar PR et al,¹⁵ Shetty A et al¹⁶ and DM Koradhanyamath et al⁵ having awareness rates of 21.08%, 21.63% and 29.5% respectively. Patel PK et al¹⁴ conducted a study where MDA awareness was observed in 33.8% in Bagalkot and 24.3% in Gulbarga districts. In contrast to the present study higher rates of MDA awareness was observed in studies done by Ranganath TS et al,¹⁷ Ravish KS et al,¹⁸ Kulkarni MM et al,¹⁰ Mukhopadhyay AK et al,¹⁹ Ranganath TS et al,⁸ Hussain M et al¹¹ and Dorle AS et al²⁰ having 40%, 41.4%, 50.1%, 53.66%, 55%, 64% and 70.83% of awareness respectively.

In the current study 88.10% of the population got the information from ASHA and Anganwadi worker. Similarly in a study conducted by Mukhopadhyay AK et al¹⁹ 77.8% of the respondents came to know about MDA from health personnel and 20.8% through media. Similarly according to Kumar A et al⁹, 31.7% respondents came to know about MDA from health personnel, 55.6% through media (TV, radio and miking) and 18.2% from NGOs. While according to Dorle AS et al²⁰ the most common sources of information about the MDA activity were government workers like ANMs (40.24%) and Anganwadi workers (30.19%), Teachers were the source for only 23.16% of the population. Contrast to the present study, in a study done by DM Koradhanyamath et al⁵ most common source of information was miking 51% in urban areas and ASHA/Anganwadi workers 63.2% in rural areas. While in a study done by Hussain M et al¹¹ 62.16% got aware from media and posters and 37.84% from Anganwadi, ASHA and other health workers.

Limitation

The following study is accounted for Recall Bias as a limitation.

Conclusions and recommendations

1. As such, side-effects were very few and minor in our study which also need to be addressed as they may constitute cause of future non-compliance.
2. Health education through various modes at school level should be taken into consideration to address awareness of Filariasis control.
3. To improve the situation there is a need for strengthening of awareness programme involving both government health workers and community volunteers. Awareness programmes will make the community more receptive and that will make the elimination goal a reality.
4. Various modes of pre-MDA IEC can be utilized such as radio, TV, cable, newspapers, recorded messages or SMS (mobile or landline phones) and should be done just few days before the campaign.
5. There is a need to strengthen the programme in terms of creating awareness through appropriate media in the community with efficient microplan, improved supervision, intersectoral co-ordination, teaching and training of health work force to make filariasis to enter the oblivion like many other diseases in the past.

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