

## Knowledge on lymphatic filariasis and mass drug administration (MDA) programme in filaria endemic districts of Andhra Pradesh, India

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**Key words** Andhra Pradesh – filariasis – knowledge – MDA programme

Lymphatic filariasis (LF) is a serious socioeconomic and public health problem in the world. As on December 2006, the total population at risk for LF was estimated to be 1254 million in 83 endemic countries, of which 64% contributed by Southeast Asia region alone. In India, it is estimated that 554.2 million population are at risk of LF infection in 243 implementation units (districts)<sup>1</sup>. National Health Policy 2002 aims at elimination of transmission and the prevention of disability due to LF by the year 2015<sup>2</sup>. In Andhra Pradesh (A.P.), sixteen districts are under mass drug administration (MDA) programme covering 54 million population with annual single dose of diethyl carbamazine citrate (DEC) tablets orally<sup>2</sup>. Recently, it was estimated that microfilaria (mf) rate in endemic area of East Godavari district of A.P. as 4.43% and 3.48% after VI and VII rounds of MDA programme respectively<sup>3,4</sup>. There is a growing recognition that community involvement and effective health education will play a critical role in the success of elimination of lymphatic filariasis (ELF) from India by 2015. A survey was therefore initiated between September 2006 and May 2007, in five filarial endemic districts of A.P. to know about the knowledge of LF and the ongoing MDA programme in the community.

Out of sixteen districts endemic for LF, five districts, namely East Godavari, Krishna, Visakhapatnam, West Godavari and Chittoor were selected for the cross sectional study. Except Chittoor district, all

other four districts are costal districts bordering Bay of Bengal. In each district, based on the data available with Department of Health, Government of A.P. and with district NFCCP units, two towns and three villages highly endemic for LF and under MDA programme were selected for the study. In each town, two wards reporting maximum LF cases were selected.

Structured, pre-tested, objective type of questionnaires was prepared with fifteen simple questions. The questions were prepared in English related to the disease, knowledge on personal protection and ongoing MDA programme in the area. The questionnaires were communicated with responders in local language Telugu, or in Hindi by trained technical staff of this office and with the help of State Government health functionaries. The respondents included were students (Std. X onwards), teachers, service holders, businessmen, home makers, farmers and labourers uniformly selected for the study. After obtaining clearance from the Directorate of National Institute of Communicable Diseases, Government of India, Delhi the study was conducted between September 2006 and May 2007 involving ten towns and fifteen villages in the five districts.

Detailed district-wise results on knowledge of disease, protection from transmission and ongoing MDA programme are shown in Table 1. Out of 7168 respondents, 1216 were from East Godavari district, 1108 from West Godavari district, 1596 from

**Table 1. District-wise knowledge on filariasis and MDA programme in Andhra Pradesh**

S. No.	Questions/Items	District-wise % responses (Whole No.)					Total (n = 7168)
		East Godavari (n = 1216)	West Godavari (n = 1108)	Visakhapatnam (n = 1596)	Krishna (n = 1316)	Chittoor (n = 1932)	
1.	Filaria is a diseases	68.09 (828)	66.06 (732)	66.41 (1060)	56.23 (740)	66.04 (1276)	64.67 (4636)
	Filaria is black magic	–	–	0.75 (12)	–	–	0.16 (12)
2.	Filaria caused by helminths	8.55 (104)	6.85 (76)	11.77 (188)	21.88 (288)	24.84 (480)	15.84 (1136)
3.	LF transmitted by mosquitoes	72.36 (880)	72.56 (804)	66.91 (1068)	55.31 (728)	61.28 (1184)	65.06 (4664)
4.	Life cycle of LF	3.28 (40)	2.16 (24)	8.77 (140)	12.46 (164)	6.00 (116)	6.75 (484)
5.	Life cycle of mosquitoes	17.43 (212)	11.91 (132)	28.82 (460)	37.38 (492)	14.90 (288)	22.09 (1584)
6.	Persons have mosquito net	10.52 (128)	8.66 (96)	29.32 (468)	19.45 (256)	13.25 (256)	16.79 (1204)
7.	Persons using mosquito net (n = 1204)	46.87 (60)	45.83 (44)	35.02 (164)	62.10 (159)	85.93 (220)	53.73 (647)
8.	Using repellents/coils	33.55 (408)	21.66 (240)	37.34 (596)	21.58 (284)	20.91 (404)	26.95 (1932)
9.	Knowledge on mosquito control	53.94 (656)	63.89 (708)	62.90 (1004)	44.98 (592)	42.23 (816)	52.67 (3776)
10.	Heard the name of MDA	57.23 (696)	50.18 (556)	69.17 (1104)	28.57 (376)	57.71 (1115)	53.66 (3847)
11.	Agency for Item 10						
	Health persons	79.02 (550)	89.92 (500)	70.19 (775)	58.51 (220)	85.20 (950)	77.85 (2995)
	Media	18.10 (126)	10.07 (56)	27.17 (300)	41.48 (156)	14.79 (165)	20.87 (803)
	NGO/Others	2.87 (20)	–	2.62 (29)	–	–	1.27 (49)
12.	Symptoms of LF	76.97 (936)	76.17 (844)	71.17 (1136)	80.54 (1060)	64.80 (1252)	72.93 (5228)
13.	Seeking treatment from Govt.	62.82 (764)	2.16 (24)	3.07 (49)	1.82 (24)	49.68 (960)	25.40 (1821)
14.	Persons received DEC at the time of MDA	94.57 (1150)	66.33 (735)	53.63 (856)	58.13 (765)	78.10 (1509)	69.96 (5015)
15.	Drug compliance	76.06 (925)	64.89 (477)	59.57 (510)	41.96 (321)	66.86 (1009)	64.64 (3242)

Visakhapatnam district, 1316 from Krishna district, and 1932 from Chittoor district. Out of 7168 respondents, 4636 (64.67%) of which 3006 (41.93%) respondents were from urban and 1630 (22.73%) from rural areas knew that filaria is a disease. Causative agent of LF, helminths is known to only 1136 (15.84%) persons, of which 904 (12.61%) were from urban and 232 (3.23%) were from rural areas. Kumar<sup>5</sup> reported 68.6% participants don't know the cause of filaria in Orissa which roughly agree with our findings. Twelve (0.16%) respondents belonged to tribal community still believes that LF is a black magic. Very little information is available on knowledge, attitude and practices of LF in A.P. Life cycle of filarial parasite and mosquitoes were known to only 6.75 and 22.09% respondents respectively. Respondents from urban areas showed maximum awareness which may be probably due to quality of education. The finding corroborates with finding of

Patnaik *et al*<sup>6</sup> who noted 66% respondents know that LF is caused by mosquito bite in East Godavari district of A.P.

About 52.67% in the study area knew mosquito control methods by regular cleaning of water, using insecticides, and by regular use of mosquito nets. It was also noted that 1204 (16.79%) had mosquito net in their home but only 647 (53.73%) of them were using mosquito nets regularly while sleeping. Overall only 9.02% of the populations mainly from urban areas under survey were using mosquito nets during night which corroborates with finding of Patnaik *et al*<sup>6</sup>. Apart from mosquito nets, 26.95% respondents were using mosquito repellents.

On an average only 25.4% population in five districts of A.P was seeking treatment for LF from Government sector. Unlike Patnaik *et al*<sup>6</sup> comparatively

high, i.e. 62.8% people were seeking treatment from Government sector in East Godavari district. practitioners, community and religion leaders.

### Acknowledgement

As per WHO<sup>1</sup>, DEC coverage in India was recorded as 54.5% during MDA programme in 2006. Babu *et al*<sup>7</sup> noted that in East Godavari district of A.P. 77% population received DEC in MDA programme of which 64% consumed the medicine. Out of 7168 responders from five districts, 5015 (69.96%) persons received DEC during MDA programme. Out of 5015 who received DEC tablets only, 3242 (64.64%) actually consumed the tablets. Maximum coverage and consumption of DEC tablets during MDA programme was noted from East Godavari district as 94.57 and 76.06% respectively. A pilot project on MDA was first introduced in East Godavari district of A.P. during December 1999<sup>7</sup>. Moreover, nine NFCP units and two Regional Filaria Training and Research Centres (one RFT & RC run by Government of Andhra Pradesh and one by NICD, Government of India) are situated in the district. Therefore, surveillance and supervisory mechanism in the district was noted better than other districts which caused better coverage and consumption rate in East Godavari district.

The authors are grateful to the Director, NICD, Delhi for his encouragement and help in this study. Authors are also thankful to Dr. A.C. Dhariwal, Joint Director & Head, Division of Epidemiology & Parasitic Diseases, NICD, Delhi for his constant encouragement. Thanks are also due to Mr Jawahar Lal, Mr V. Gangadharam, Mr D. Visweswara Rao and Mr N. Kesavan for technical and secretarial assistance.

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For ELF and MDA programme inter-personnel communication was found to be the best method. A high 77.87% respondents came to know about MDA from health personnel and 20.87% through media (T.V., Radio and miking), whereas NGO has very little involvement (1.24%). In order to eliminate LF from India by 2015, active community participation is highly essential. This is possible only if community has adequate knowledge about LF and ongoing MDA programme. Therefore, an overall effort is essential to enlighten the community regarding the programme involving NGO, teachers, students, private medical

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*Received:* 10 December 2007

*Accepted in revised form:* 8 January 2008