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ORIGINAL ARTICLE

EVALUATION OF MASS DRUG ADMINISTRATION FOR ELIMINATION OF LYMPHATIC FILARIASIS IN GUNTUR DISTRICT, ANDHRA PRADESH

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ABSTRACT: BACKGROUND: Lymphatic Filariasis (LF) is a serious Socio Economic and Public Health problem in the world. In India, it is estimated that 554.2 million populations are at risk of Lymphatic Filariasis infection, in 243 implementation units (Districts). National Health Policy, 2002 aims at elimination of transmission and prevention of disability due to Lymphatic Filariasis (LF) by the year 2015.mass drug administration (MDA) against filariasis with Diethylcarbamazine (DEC) combined with Albendazole (ABZ)to all people excluding children <2yrs, pregnant women and seriously ill persons in endemic areas once in a year. **OBJECTIVE:** To assess: (i) The filariasis knowledge in the community, (ii) To assess the coverage and compliance of MDA from the community perspective in the Guntur District. **MATERIALS AND METHODS:** Cross-sectional population based house to house visit. Setting: Both rural and urban areas of Guntur district outcome –Actual coverage, compliance and side effects. **RESULTS:** Twelve clusters, Total eligible population of 1820 were interviewed. The coverage rate was 94.6% with variation across different areas. **CONCLUSION:** The compliance of drug ingestion was 94.6% the side effects of DEC were minimum. The overall coverage was better in rural areas compared to urban areas.

KEYWORDS: Lymphatic filariasis, Mass drug administration. Guntur District.

INTRODUCTION: Lymphatic Filariasis is a public health problem in India. An estimated 600 million people are at risk of lymphatic filariasis infection in 250 endemic districts in 20 states/UTs in India. Several decades of research and the availability of new diagnostic and effective control tools.[1, 2] have led to the development of a global strategy to eliminate LF in 1998 by formulating Global programme on Elimination of Lymphatic Filariasis (GPELF) by WHO. The informal target date for interrupting the transmission is 2016.

MDA is being implemented in India since year 2004. The principal tool of this programme is the annual administration of single-dose Diethylcarbamazine (DEC) in combination with Albendazole, to the entire endemic population.[3,4] It aims at cessation of transmission of filariasis in the community. MDA in combination with other techniques has already eliminated lymphatic filariasis from Japan and South Korea and markedly reduced in transmission in China.

According to National Vector Borne Disease Control Programme, 10 districts in Andhra Pradesh were endemic for the disease, of which Guntur district was selected for this study.

The present study was conducted to assess the programme in terms of actual coverage, compliance rates of mass drug administration against filariasis in the district and to report the side effects on DEC if any.

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MATERIALS AND METHODS: MDA activity was carried out in the month of November 2013. The survey was done within 3 weeks after the MDA. It was observed from previous assessments that actual drug consumption was less than the reported coverage and supervised administration was not seen. Hence a mid-term assessment was planned after MDA to be carried out by independent team members for 6 days.

TOPOGRAPHY OF THE STUDY AREA: Evaluation of mass drug administration survey was carried out in four habitations and Guntur (city) of the filaria endemic. Piduguralla (semi urban) Sattenapally (town) Guntur (urban) and Tenali (town) Appikatla (rural) area of Guntur district, Andhra Pradesh. From each habitation two PHC areas were selected for evaluation purpose randomly. In each selected habitations one PHC selected, in each selected PHC two clusters, total of eight rural and four urban clusters selected randomly based on population size.30 families comprising at least 5members in each family in each cluster were selected by adopting systematic random sampling technique. A total of 1800 households are included in the study. In these households study conducted by means of verification of records by field staff, verification of MDA distribution, identification of drug users and defaulters and observations of clinical and occults filarial cases. This exercise was repeated in all 12 clusters. The target population of 1820 from 12 clusters was interviewed in 6 days Evaluation was carried out with a pre -tested questionnaire by interview method. And the data were compared as follows.

OBSERVATIONS:

Sex	Frequency	Percent
FEMALES	952	52.3
MALES	868	47.7
TOTAL	**1820**	**100**

Table 1: Distribution of study population sex wise

The coverage survey showed that majority were Females {52.3%}

Sl. No.	Symptom	No. of study population
1	A	260
2	A & C	311
3	A, C & D	358
4	A & D	221
5	A, B& D	58
6	C	97
7	C & D	125
8	D	287
9	E	103
	TOTAL	**1820**

Table 2: Distribution of study population awareness Regarding symptoms of Filaria

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A. Fever with chills.
B. Headache.
C. Swelling of affected area.
D. Elephant leg.
E. Don't know.

Table 2: shows that majority of population well known about symptoms of Filaria i.e. 94.3% are answered aptly. 5.7% do not know about the symptoms of filaria.

Sl. No.	Mode of spread of Filaria	No. of Population
1	Mosquitoes bite	1614
2	Sins	2
3	From affected person	91
4	Don't know	113
	TOTAL	**1820**

Table 3: Distribution of study population awareness about the spread of the disease

Table 4: shows that awareness among the community about the spread of the disease reveals that 1614 respondents (88.7%) by mosquito bites.

Awareness about pre MDA	Frequency	Percent
YES	1165	64
NO	665	36
TOTAL	**1820**	**100**

Table 4: Distribution of study population regarding knowledge about MDA

In this study population 64% were aware and 36% were not aware of MDA activity.

Tablet consumed	Frequency	Percent
YES	1674	92
NO	146	8
TOTAL	**1820**	**100**

Table 5: Distribution of study population based on consumption of DEC tablets

In this study 92% is compliance rate (consuming the DEC tablets) the required target of elimination is fulfilled.

Reason for non-consumption	Frequency	Percent
Not at home	79	54
Forgotten	18	12
Fear of reaction	29	20
Not worth	20	14
TOTAL	**146**	**100**

Table 6: Distribution of study population according to reasons for not taking DEC tablets n=146)

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In the population 79 people did not consume the tablet as they were not at home & did not receive tablets, and about 18 people said I forgot to swallow and 20 people said it is not for me & I am healthy.

Adverse reaction	Frequency	Percent
YES	4	0.2
NO	1816	99.8
TOTAL	**1820**	**100**

Table 7: Distribution of study population who developed adverse reactions to DEC tablets

The adverse reactions due to tablets are four cases, mild symptoms like vomiting, gastric irritation and giddiness.

DISCUSSION: The present study is qualitative cross sectional, covering a target population of 1820 in 12 clusters. According to our survey compliance rate is 92% and remaining 8% of study population was non-compliance rate. Majority of the non-compliance rate said that we were not at home during MDA activity; others said that they did not consume DEC due to fear of reaction in last round of MDA or not worth taking and I am healthy. Through the non-compliance percentage is less it can be made lesser by re-orienting the drug distributors and proper supervision. In other study of Kumar et al the coverage was 85.2% in Gujarat and in the study of BV Babu in Orissa was 67% coverage and 42% compliance rate. Tablet DEC available as 100 mg strength it should be swallowed as one, two, and three tablets for age <14yrs,15-45 yrs, >46 yrs respectively. All the three or two tablets to be swallowed together as per guidelines. Majority of population swallows one in morning two in night, because the drug distributor did not specify. In countries like India annual MDA is an economic option and the existing government health care system is capable of conducting programme, although more in puts are required to achieve desired levels of compliance.

As a whole, the situation in terms of coverage and compliance was marginally better in rural areas, which can be attributed to the availability of infra-structure in these areas for separate strategies should be developed as urban population differs from rural population in several ways. In addition, the structure of health system, population migration, high literacy, private sector etc. are to be considered during developing strategies for urban areas. The side effects were very few and they were also minor, transient and drug-specific. However, they also need to be addressed as they constitute the cause of noncompliance.

CONCLUSIONS & RECOMMENDATIONS: The present study reveals the coverage and compliance in the district as 94.6% & 92% respectively which is above the minimum target level and better in rural areas. There was hardly any resistance in the community for the program efforts are needed to increase the coverage by motivating and sensitizing the community through IEC.

In spite of shortage of manpower and other constraints the compliance is above the target coverage. Among the ten endemic districts of Andhra Pradesh, Guntur district was one of them and incidentally, highest compared to other parts of the state. All the health indicators are better in this part of state as well as literacy is higher, and community participation is better. With little enhancement in IEC activity in field and little appreciation of health care personal at the field level,

we may be able to attain hundred percent coverage and compliance that can be taken as a model for other areas of the state or country.

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REFERENCES:

1. Ottesen, E. A. et al (1997), strategies and tools for the control/elimination of lymphatic filariasis. Bull World Health Organisation .75, 491-503.
2. Ottesen, E. A (2000), Towards eliminating lymphatic filariasis In lymphatic filariasis (Nuttman, T.B. ed), pp.201-215, Imperial college press.
3. Ottesen E.A (1999) The role of Albendazole in programmes to eliminate lymphatic filariasis. Parasitology today 15,382-386.
4. Ottesen E.A. (2000) The global Programme to eliminate lymphatic filariasis. Trop. Med Int. Health 5,591-594.
5. Kumar p, et al, Evaluation of MDA 2006 in Gujarat I.J.C.M Vol. 33 No 1, January 2008, 38-42.
6. B. V. Babu and S K Kar MDA against filariasis in Orissa. Tropical Medicine & International Health. Vol. 9 No. 06 page 702-709 June 2004.
7. Kapa D. Ramaiah and Pradeep K Das MDA to eliminate lymphatic filariasis in India TRENDS in Parasitology vol. 20, No. 11, November 2004.

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