

Original Article

A STUDY OF COVERAGE AND COMPLIANCE OF MASS DRUG ADMINISTRATION FOR ELIMINATION OF LYMPHATIC FILARIASIS IN REWA DISTRICT OF MADHYA PRADESH

Amarnath Gupta¹, Pankaj Prasad¹, Sukhendra P Singh²

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Author's Affiliation:

¹Assistant Professor; ²Associate Professor, Dept. of Community Medicine, Bundelkhand Medical College, Sagar, Madhya Pradesh

Correspondence:

Dr. Amarnath Gupta
E-mail: drangupta@yahoo.com

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ABSTRACT

Introduction: Lymphatic filariasis (LF), commonly known as elephantiasis is a global problem affecting more than 120 million people in 80 countries. It is one of the leading causes of long term permanent disability, accounting for more than 5 million disability adjusted life years (DALYs) annually. Present study was carried out to evaluate the coverage, compliance and reasons for non compliance of MDA in Rewa district of MP.

Materials & methods: A Community based cross-sectional Study was conducted for evaluation of coverage and compliance of MDA by Household survey in four selected clusters (three rural and one urban) of Rewa District of Madhya Pradesh as per NVBDCP guidelines. Pre-designed questionnaire was used to collect information from 120 families. Household survey was conducted within three weeks of MDA Campaign

Results: Out of 667 persons only 618 (92.65%) persons were found eligible for MDA. Coverage rate was 80.42% & Compliance rate was 67.96%. Compliance rate was higher among females 73.84% as compared to males 62.34%. The main reason for non compliance was (42.42%) persons were not at home and (37.37%) forget to take the tablets. Only (74.16%) respondents had some knowledge about DEC, (69.16%) knew about lymphatic filariasis and only (27.5%) had knowledge about disease transmission.

Conclusion: Improving the coverage and compliance rate of DEC consumption is the most important factor for the success of MDA. This can be done by better social mobilization and monitoring. There should be more involvement of the community leaders, educational institutions, volunteers and NGOs and private practitioners.

Key Words: Coverage, Compliance, Mass Drug Administration, Filariasis.

INTRODUCTION

Filariasis is a global problem. More than one billion people are at risk in about 80 countries and over 120 million have already been affected by it⁽¹⁾. It is one of the leading causes of long term permanent disability, accounting for more than 5 million disability adjusted life years (DALYs) annually⁽²⁾. It leads to irreversible chronic manifestations, which are responsible for social stigma besides causing considerable economic loss and severe physical disability to the affected individuals⁽³⁾.

India contributes to more than one-third of the global lymphatic filariasis problem. It has been a major public health problem in India next to Malaria. It was re-

corded in India as early as 6th century B.C. by the famous Indian physician, Susruta in his book 'Susruta Samhita'⁽⁴⁾. Andhra Pradesh, Bihar, Jharkhand and Madhya Pradesh are amongst the worst affected states in the country⁽⁵⁾. Total 11 districts of Madhya Pradesh are affected with Filariasis viz. Katni, Datia, Chatarpur, Tikamgarh, Panna, Damoh, Satna, Rewa, Chhindwara, Sagar & Umaria⁽⁶⁾.

In MDA drug is to be consumed in the presence of drug distributor. DEC is given to almost everyone in the community, irrespective of their symptoms. This is indicated in high and hyperendemic areas. Single dose is recommended by international task force (WHO) for all except for children below 2 years, pregnant women and very sick patients⁽⁷⁾. Present study was carried out

to evaluate the coverage, compliance and reasons for non compliance of MDA in Rewa district of MP.

METHODOLOGY

Mass drug administration of DEC was done in Rewa District on 22nd April 2012. A Cross-Sectional Study was conducted for evaluation of MDA by Household Survey in four selected clusters (three rural and one urban) of Rewa District of Madhya Pradesh as per NVBDCP guidelines. The field survey was conducted within three weeks of MDA Campaign. For selection of rural sites, one village was selected from PHC low coverage of DEC i.e. below 50%, one village was selected from PHC with medium coverage of DEC i.e. between 50%-80% and one village was selected from PHC with high coverage of DEC i.e. above 80%. For urban site one ward of was selected randomly. The selected three villages and one urban ward were designated as clusters. Selected PHCs and their representative village were- In rural area were- Raipur Karchulian: Raipur Karchulian Basti village, Govingarh: Lohi village and Gangeo: Chandeh village. In Urban area - Ward no. 24 Kamsariat ward of Rewa Municipal Corporation. House to house survey was done. In each of the selected clusters 30 households were surveyed. Thus a total 120 households was surveyed for evaluation of MDA⁽⁸⁾.The predesigned questionnaire (provided by Director Health Services, State Health Committee, NVBDCP) was used to collect information regarding consumption of DEC and other relevant information. Data was compiled and analyzed.

Inclusion criteria: All the sampled eligible population in the study area.

Exclusion Criteria: Pregnant and lactating mother, children below 2 years, seriously ill persons, severely debilitated patient and people of extreme age.

RESULTS

A total of 4 clusters yielded a population of 667. Out of 667 persons only 618 (92.65%) persons were found eligible for MDA. Coverage rate was 80.42% and compliance rate i.e. number of eligible persons receiving the tablets who actually consumed it was 67.96%. Compliance rate was highest (71.55%) in 6-14 years age group and lowest (61.11%) in 2-5 years age group (Table-1). Higher Compliance rate was observed among females (73.84%) as compare to males (62.34%) (Table-2).The reasons for non compliance were (42.42%) persons were not at home, at that time and (37.37%) forget to take the tablets, (11.11%) persons did not take the tablets due to fear of side effects (Table-3). Only 1.90% persons suffered side effect of DEC (Table-4). As far as the knowledge about MDA is concerned (74.16%) had knowledge about DEC, (69.16%) knew about lymphatic filariasis and only (27.5%) had knowledge about disease transmission (Table-5). Some families expressed their difficulty in giving tablet to children in 2-5 year category.

Table 1: Age wise coverage rate and compliance rate

Age (year)	Coverage rate (%)		Compliance rate (%)	
	Eligible pop ⁿ	Tab. Received	Eligible pop ⁿ	Tab. Consumed
2-5 yr	54	43 (79.62)	54	33 (61.11)
6-14 yr	109	91 (83.48)	109	78 (71.55)
> 15 yr	455	363 (79.78)	455	309 (67.91)
Total	618	497 (80.42)	618	420 (67.96)

Table 2: Gender wise coverage rate and compliance rate

Sex	Coverage Rate (%)		Compliance Rate (%)	
	Eligible Pop ⁿ	Tab. Received	Eligible Pop ⁿ	Tab. Consumed
Male	316	244 (77.21)	316	197 (62.34)
Female	302	253 (83.77)	302	223 (73.84)
Total	618	497 (80.42)	618	420 (67.96)

Table 3: Distribution of study population according to reason for non compliance

Reasons	Person	Percentage (%)
Not at home	84	42.42
Forget to take tab	74	37.37
Had fever or any minor ailment	8	4.04
Fear of Side effects	22	11.11
Other	10	5.05
Total	198	100.0

Table 4: Distribution of study population according to adverse reaction to DEC

Adverse Reaction	Frequency	Percentage
No	412	98.09
Yes	8	1.90
Total	420	100

Table 5: Distribution of respondents according to knowledge about MDA

Awareness area	Respondents	Percentage
DEC	89	74.16
Lymphatic Filariasis	83	69.16
Transmission of Filariasis	33	27.5

DISCUSSION

The concept of MDA is to approach every eligible individual in the target community and administer annual single dose of DEC. This annual dose is to be repeated every year for a period of 5 years or more with a minimum of 85 % drug compliance. A high effective coverage of (>85%)is essential to achieve the interruption of transmission and elimination of disease in India⁽¹²⁾. Here effective coverage means product of coverage and compliance

In the present study the Coverage rate was found to be 80.42% and Compliance rate was only 67.96%.NirgudeAbhay S. et al in asimilar study reported coverage rate of 79.7% and lower compliance rate of 43.04%⁽⁹⁾. GodaleLataB. et al reported higher

compliance rate of 73.1%⁽¹⁰⁾. Mehta Shreyash et al reported higher coverage and compliance rate of more than 90% and above 82% respectively⁽¹¹⁾.

Both Coverage as well as drug compliance needs to be improved. Preparation of good quality village/ward level micro-plan and ensuring that each drug distributor will not cover more than 50 families a day will help to improve the coverage⁽¹²⁾.

Intensive IEC activity needs to be done to motivate people for ingestion (preferably on the spot) of the drug. Timing of the MDA campaign is very important. It should be set so as to ensure maximum availability of the beneficiaries at home.

The main reason for non compliance was that (42.42%) people were not at home due to marriage season during this period. Other reasons for non compliance were (37.37%) forget to take the tablets, (11.11%) persons did not take the tablets due to fear of side effects.

Nirgude Abhay S et al in their study found that fear of side effects (47.51%) was the most common reason given for non compliance followed by forget to take the tablets (17.65%) and only (7.69%) respondents were not at home when drug distributor visited their house⁽⁹⁾.

Godalelata B et al also reported fear of side effects of drugs (45.38%) as the most common reason for non compliance followed by lack of awareness about lymphatic filariasis⁽¹⁰⁾.

The gap between Coverage and Compliance helps to understand why people fail to consume the drug. It needs to be reduced.

Although LF is a major public health problem but still it is not perceived as a serious public health problem by the people and they think that they will not be affected by this disease. To address this problem social mobilization through intensive IEC activities needs to be done.

In the present study only (74.16%) respondents had some knowledge about DEC, (69.16%) knew about lymphatic filariasis and only (27.5%) had knowledge about disease transmission. Karmakar P Ray et al in their study also reported that only 55.42% respondents heard about lymphatic filariasis and only 13.86% had knowledge about disease transmission⁽¹³⁾.

Training program for medical officers and health workers involved in MDA should emphasize more on how to address the fear of side effects among beneficiaries and measures to ensure "On the Spot Swallowing" of tablets.

One reason commonly given by the people for not consuming DEC on the spot was that it causes gastric problem when taken in empty stomach and so they prefer to take it after the meal and many times misplace it or forget to take it. This problem can be overcome by providing small packets of biscuits or some other ready to eat item along with DEC. Some respondents told that there was difficulty in swallowing of

tablets with small children; to overcome this problem DEC should be made available in liquid formulations for children between 2-5 years to improve compliance in this age group.

CONCLUSION

Good coverage and compliance is the most important factor for the success of MDA program and needs to be improved. The coverage rate and compliance rate are far less than the goals set for elimination of lymphatic filariasis. Social mobilization for changing the behavior and attitude of the people should be done. There should be more active participation of the community leaders, educational institutions, volunteers and NGOs and private practitioners. Quality supervision is must and has to be improved.

RECOMMENDATIONS

1. Timing of MDA campaign should be set such as to ensure maximum availability of the beneficiaries at home.
2. For better social mobilization; IEC activities should be done on regular basis and it should be intensified before the MDA campaign.
3. There should be training and retraining of health workers to sensitize them regarding transmission of filariasis and importance of on the spot drug ingestion.
4. There should be provision of follow up home visit to ensure that the drug is consumed by the persons who were not at home on Filaria day.
5. Provision of small packet of biscuit/ready to eat item to improve on the spot consumption.

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REFERENCES

1. Suryakantha A H. Community Medicine with Recent Advances, 2nd ed. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd. 2010 P407.
2. World Health Organization. First WHO Report on Neglected Tropical Diseases 2010: Working to Overcome the Global Impact of Neglected Tropical Diseases. ISBN 97892 4 1564090. Available from www.who.int/neglected_diseases/2010report/en/ Accessed . Oct 24on 2013.
3. Filariasis Control in India and its Elimination. Available from http://stg2.kar.nic.in/healthnew/pdf/copy_of_EIFG2015.04_REVISED2_18.8.pdf. Accessed on 18 Oct. 2013.

4. National Vector Borne Disease Control Programme, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. Lymphatic Filariasis. Magnitude of Disease. Available from: <http://nvbdcp.gov.in/fil10.html>. Accessed on 16 Oct.2013.
5. ChandrakantLahariya& Ashok Mishra, "Strengthening of mass drug administration implementation is required to eliminate lymphatic filariasis from India: an evaluation study" J Vector Borne Disease 45, December 2008, P313-20.
6. National Vector Borne Disease Control Programme, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. Filariasis Endemic Districts. Available from <http://www.nvbdcp.gov.in/fil-map.html>. Accessed on 16 Oct.2013.
7. Suryakantha A H. Community Medicine with Recent Advances, 2nd ed. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd. 2010 P 412.
8. National Vector Borne Disease Control Programme, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. Guidelines on Elimination of Lymphatic Filariasis India. Available from <Http://Nvbdcp.Gov.In/Doc/GuidelinesFilariasis-Elimination-India.pdf>. Accessed on 22 Oct.2013.
9. NirgudeAbhay S, NaikPoonam R, KondaguntaNagaraj , ReshmiSidramappa S, TakalkarAnant A, Prasad VG. Evaluation of coverage and compliance of Mass drug administration programme 2011 for elimination of lymphatic filariasis in Nalgonda district of Andhra Pradesh, India. National Journal of Community Medicine Vol 3 issue 2 P 288-93.
10. GodaleLata B, UkarandeBalaji V. a study on coverage evaluation, complianceand awareness of mass drug administration for elimination of lymphatic filariasis in Osmanabad District. National Journal of Community Medicine. Vol.3 issue 3 P 391-94.
11. Mehta Shreyash, Shah Vinesh, VermaAnupam Patel NB, Bansal RK.Comparison of coverage and compliance of mass drug administration 2012 in Surat, India. National Journal of Community Medicine Vol 3 issue 3 P 468-72.
12. National Vector Borne Disease Control Programme, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. Guidelines on Filariasis Control in India and it's Elimination (2009).Available from<http://www.nvbdcp.gov.in/Doc/Guidelines-Filariasis-Elimination-India.pdf>. Accessed on 14 Oct.2013.
13. Karamkar P Ray, K Mitra, ChatterjeeAnirban, Jana P K, Bhattacharya S, Lahiri SK. A study on coverage,compliance and awareness about Mass Drug Administration for elimination of lymphatic filariasis in a district of West Bengal, India. J Vector Borne Dis 2011;48: P101-4.