Original Article

A STUDY ON COVERAGE EVALUATION, COMPLIANCE AND AWARENESS OF MASS DRUG ADMINISTRATION FOR ELIMINATION OF LYMPHATIC FILARIASIS IN OSMANABAD DISTRICT

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ABSTRACT

Problem statement: Mass drug administration is carried out since 2004 in endemic area of India but mass drug administration as a preventive measure will be effective only when the compliance of drug is satisfactory and this is possible only when enough motivation of drug distributors and consumer is there. Lymphatic filariasis though non fatal is responsible for considerable suffering, deformity, disability and it is fourth common cause of disability worldwide. So the present study was carried out to evaluate, coverage, compliance and reasons for non compliance and awareness of Lymphatic Filariasis.

Method: Present study is cross-sectional, observational study done by cluster sampling method. There are four clusters, 3 rural and 1 urban that were selected randomly. 120 houses were visited.

Result: Coverage reported by District Malaria Office Osmanabad was 89.37%, little higher, in rural area (89.83%), than urban area (87.36%). The evaluation survey carried by P.S.M. team and they found the compliance of drugs by eligible population, was 73.1% which is less than required compliance i.e. 85%. It was higher in rural area (75.58%) than urban area (64.75%) the difference was statistically significant ($z=1.957$, $p<0.05$). The most common cause of non compliance was fear of side reactions of drugs (45.38%), followed by unawareness of L.F. 60% of eligible population did not know the purpose of administration drugs, cause, route of transmission, symptoms and signs of Lymphatic Filariasis so the reluctance was there for consumption of drugs.

Conclusion: So to improve compliance there is need to strengthen awareness programme by health staff together with community volunteers prior of mass drug administration.

Key words- Mass drug administration, Lymphatic filariasis coverage, compliance

INTRODUCTION

Lymphatic filariasis though not fatal, is responsible for considerable suffering, deformity and disability. It is fourth common cause of disability worldwide. The formal goal of the global lymphatic filariasis is to eliminate the disease as public health problem and 2016 is the informal target date for interrupting transmission of the disease.[1]The strategy to interrupt transmission of the disease calls for mass drug administration which is feasible, effective and relatively inexpensive prevention.

Lymphatic filariasis is a public health problem in India and endemic all over country, MDA is being implemented in India since 2004.In 2007 two drugs, Diethylcarbamazine (DEC) and Albendazole were given and number of the people treated increased steadily. In mass drug administration approach DEC is given to almost everyone in community irrespective of whether they have microfilaraemia, disease manifestation or no signs of infection except children below 2 years, pregnant women and seriously ill patients but people are reluctant to consume drugs in the absence of obvious signs of disease or symptoms. When people's felt needs are not satisfied, such as treatment of fever, diarrhea and emergency obstetric care etc, people have little trust in preventive programme like MDA.

One or two hour's health promotion activity was not sufficient to convince people about the importance of taking drugs.

The present study was done to evaluate the success of MDA programme in terms of coverage, compliance and to identify the reasons of non compliance and awareness of disease and preventive measures.

MATHODOLOGY

MDA activity was carried out by health staff on 16th to 20th January for 3 days in rural area and for 5 days in urban area. The evaluation was done by P.S.M team . The specific objective of this evaluation study was to find out coverage, compliance and reasons for non compliance and awareness of disease and preventive measures. Four clusters, one from urban (out of 8 urban areas) and three from rural areas, (one village from one primary health centre) were selected randomly to cover entire rural and urban area of Osmanabad Dist. and from each cluster 30 houses were surveyed. To select 30 houses the area was divided into 5 regions by salient landmarks such as temple, chawadi or majjid and then from each region 6 houses were selected randomly.

The head of the family or responsible member present at the time of survey was interviewed with predesigned and pretested proforma.

RESULTS

Coverage reported by district malaria office, of mass drug administration done by drug distributors i. e. health worker male and anganwadi worker was 89.37%, it was little higher in rural area (89.83%) than in urban area (87.36%) the difference is statistically significant ($z=1.957$, $p<0.05$) due to good rapo of drug distributors with rural people and also it was higher than recommended level (85%) (table1).

Table .1 Population selected, eligible and covered by DMO for MDA

Place	Selected	Eligible	Covered (%
Rural	1360907	1266809	1137979 (89.83
Urban	313744	291881	254992 (87.36
Total	1674651	1558690	1392971 (89.37

Table2.Reasons for non coverage by DMO

Reasons	Rural (%)	Urban (%)	Total (%)
Absent	57578 (43.2)	14919 (40.4)	72497 (42.6)
Not willing	7819 (5.86)	4617 (12.5)	12436 (7.31)
Locked	66052 (49.6)	15818 (42.87)	81870 (48.12)
Other*	1793 (1.3)	1535 (1.8)	3328 (2)
Total	133242 (100)	36889 (100)	170131 (100)

* Other includes Fear of side reactions, previous history of side reactions, rumors about medicine

The reasons for non-coverage in district, reported by district malaria office were locked houses at the time distribution (48.12%), people's absentee (42.6%), non willingness

(7.31%) and others (1.7%)such as fear of side reactions, previous history of side reactions, rumors about medicine. In rural area % of locked houses (49.6%) and absentee were more than urban area but refusal to take drugs was more in urban place (12.5%).(table2)

Coverage of population may not result compliance i.e. consumption of drugs by eligible which is the aim of mass drug administration for elimination of Lymphatic Filariasis and for this reason there was need for evaluation study which was done by P.S.M. team where 3 rural clusters (from 3 villages total 90 houses) and 1 urban cluster (30 houses) were selected randomly. Overall compliance rate found by P.S.M. team in district was 73.1%. Compliance rate was 73.23% in rural area and 64.7% in urban area. Consumption of drugs was very less in Narangwadi village (57.5%) than Bori(86.25%) and Makni (84.5%).The difference between Narangwadi and Bori was statistically significant($z=5.642, p<0.05$), while in Tuljapur urban area it was 64.7%. As Narangwadi was remote and scattered place so satisfactory IEC (Information, Education, Communication) activities were not carried out.

Drug distributors were instructed to make people consume drugs in their presence but only 37.5% in urban area and 45.9% in rural area took drugs in their presence.

Table3.Compliance of M.D.A founded by P.S.M team

Village/urban	Bori	Narangwadi	Makni	Tuljapur	Total
Eligible in 30 houses	160	165	142	139	606
Eligible consumed tablets	138	95	120	90	443
Not consumed tablets	22	70	22	49	163
%of consumption	86.25	57.5	84.5	64.7	73.1
Consumption in the presence of DD	60	25	77	52	214
% Consumption in presence of DD	37.5	15	54.2	37.5	35.31

Difference between Rural and Urban area was significant ($z=1.97, p<0.05$)
Difference between Bori and Narangwadi Significant ($z=1.97, p<0.05$).

It is essential to know the reasons for non compliance as they may help us to make changes in future. Out of 120 houses surveyed, 163 eligible did not consume drugs and the most common cause was fear of side reaction (45.38%), 19.06% said that they did not know the purpose of drug consumption , 9.2% said that drug distributor did not insist for consumption, 8.58% were not ready to consume drugs in the absence of symptoms , 4.9% were absent and 1.48 reported sick at the time of drug distributions ,11.04% were on empty stomach at time of drug distribution and afterward they forgot to take drugs.

Table 4.Reasons for non compliance in various study areas

Reason	Bori	Narangwadi	Makni	Tuljapur	Total (%)
Not aware lymphatic filariasis	7	21	1	2	31 (19.06)
Fear of side reactions	5	38	4	27	74 (45.38)
Empty stomach	10	0	8	0	18 (11.04)
Drug not given	0	9	0	6	15 (9.2)
Absent at the time of drug	0	0	8	0	8 (4.9)
No need as no symptoms	0	0	9	5	14 (8.58)
Sick	0	2	0	1	3 (1.84)

Awareness of MDA activity, purpose of drug administration and knowledge about lymphatic filariasis was present in 60% of people while 30% did not know about it and 10% did not answer the question.

DISCUSSION

Success of mass drug administration approach to eliminate lymphatic filariasis by killing microfilaria present in blood of infected patients thus interrupting the transmission of disease by mosquitoes to others depends upon how sincerely health staff motivates people to consume drugs, that too in the absence of obvious signs or symptoms of disease. Thus coverage as well as compliance of MDA by people in endemic area is challenging job for health staff. To increase the compliance, drugs

should be given when people are at home i.e. at night time or as per convenience of people and with enough motivation. In present study only 89.37% people were covered by health staff .Reasons for non coverage were locked houses (48.12%), absentee of the people at the time of drug distribution (42.6%) as drug distributors distributed drugs in morning time which is suitable time for drug distributor and not for the people, 7.31% people were not willing to take drugs due to inadequate knowledge.

District malaria office of Osmanabad reported coverage of drugs, 89.37% which was lower than Ravish K. S. et al[3] (93.6%) due to locked houses(48.12%), absentee of the people (42.6%) in the present study but nearly similar to MiraniV.Weerasooria et all[6] in Sri Lanka (86.6%).In present study, observed coverage by PSM team during evaluation survey was 100% as all 120 houses surveyed received drugs but NavneetBhullar[2] (58%) ,Ravish K.S. et al[3](86.%), B.V. Babu and S. K. Kar[4]67.09%) found lower coverage. Compliance rate found by various authors such as Ravish K. S. et al[3] (45.9%), B. V. Babu et al [4] (41.5%), P. Ray et al[5] (69.43%) was much lower than present study (73.1%).

Out of 606 eligible, 163 did not consume drugs and the main reason for non compliance was fear of side reactions in 45.38%. B.V Babu et al[4] found fear of side reactions in 82.1% but Ravish et al[3](15.2%), Pradeep et al[9] (19.4%) and P Ray et al[5] (30.84%) found less percentage for reason of fear of reaction. In a present study 19.06%people told that they don't know about lymphatic filariasis while Ravish et al[3](51.8%), P Ray et al[5] (27.8%)had higher percentage and reason is that enough motivation was not there due poor IEC activities . 4.9% people were not at home at the time of distribution of drugs and same percentage was found by B. V. Babu et al[4] (.6%) and P. Ray et al 5(5.26%). 8.58% peoples said that disease is not there so there is no need to take the drugs while B V. Babu[4] reported same reason in 3.6%.In present study 9.2% said that drugs were not given in their hands or D. D did not insist for consuming them.8.58% people said that they are healthy and 1.84% were sick and Ravish et al[3] found same reason in 7%.

So the present study revealed that mere distribution of MDA will not result compliance and considering the reasons for non compliance there is need to strengthen the I.E.C. activities along with active community participation.

RECOMMENDATION

Various modes of pre MDA IEC such as radio TV. Newspaper, visits by health staff should be there. To increase the compliance if some snacks are provided along with drugs that will take care of empty stomach.

Drugs should be distributed when all people are at home with enough motivation by giving adequate knowledge of lymphatic filariasis and the purpose of MDA.

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