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# Awareness on Lymphatic Filariasis: An Initiative for Elimination

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**ABSTRACT:**

Objective: An survey was conducted to know and spread awareness in people on various aspects of Filaria, like causative organism, basic treatments, tendency to consume tablet and to know if they have seen or observe any cases which is also helpful in estimation of disease burden in particular area. This survey was conducted with an intention to support government Filaria elimination program.

Methodology: A well designed questionnaire and leaflet on awareness was prepared with the help of clinical pharmacist and standard WHO questionnaire format. With door to door communication and spreading awareness we have received fully filled 100 forms and dispatch leaflets on disease awareness. A percentage analysis for each question was carried out.

Results: From the study the data suggest that, 80% aware about the lymphatic Filariasis. 65 % people were aware about the cause of spreading, 60% were aware about its contingency. 95% people have received annual medication from nurses as per government program out of which only 41% people have consume the tablets. 44% have seen the Filaria cases which help in studying the epidemics.100% people have shown willingness to know about the disease and 100% have assured to help in spreading the awareness to others.

Conclusion: From the result on awareness on Filaria in semirural area was around 80% and we were able to find the presence of case of Filaria in Killa-Pardi, Valsad. This might be helpful to the government in mapping the disease. The low percentage in medication taking behavior needs to be improved by awareness programs like this.

**Keywords:** Lymphatic Filariasis, Awareness, Killa-Pardi, Valsad

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## INTRODUCTION:

Lymphatic filariasis which is also known as elephantiasis in common population is mostly a disease of tropical countries is caused by types of parasitic worms called as nematodes.[1, 2]

Infection occurs when filarial parasites are transmitted to humans through mosquitoes. Infection is generally acquired in childhood causing hidden damage to the lymphatic system. Lymphatic Filariasis is world's second most leading cause of long term disability. True, it does not kill but it can cause disability and impose social and financial burden to patients and his family. Over 100 million people in 83 countries are infected with this parasitic disease. India, Bangladesh, Nigeria and Indonesia alone contribute 70% of infection worldwide.[1,2] In India almost 20 states except north and western states are identified to be endemic for Filariasis.[1,2]

**Pathogenesis: -** *Wuchereria bancrotti* & *Brugia Malayi* are nematodes parasites causing lymphatic filariasis found in India. Mosquitoes are infected with microfilaria by ingesting blood when biting an infected host. Microfilaria matures into infective larvae within the mosquito. When infected mosquitoes bite people, mature parasite larvae are deposited on the skin from where they can enter the body. The larvae of the parasite than migrate to lymphatic vessels where they make a nest and develop into adult worms, thus continue the transmission cycle.[1, 2]

**Clinical Features:** Lymphatic Filariasis ranges from initial phase of no symptoms to development of acute, chronic & occult stages of severity. Symptoms like lymphangitis, lymphadenitis, cellulitis or abscess with severe pain and tenderness. In chronic stage, lymphoedema, hydroceles, elephantiasis and chyluria (excretion of chyle in urinary tract).[1-3] These patients are not only just physically disabled but they also suffer mental, social and financial losses contributing to stigma and poverty.

In 2000, WHO launched its Global Program to Eliminated lymphatic Filariasis (GPELF) with an aim of eliminating the disease as a public health concerns. In 2012, the WHO NTD roadmap reconfirmed the target date for achieving Lymphatic Filariasis elimination by 2020.[1]

Many healthcare people and students of pharmaceutical background don't know that for the elimination of diseases two of the biggest Pharmaceutical companies GlaxoSmithKline-line and Merck have made a pledge to donate the much needed drugs for as long as it would take to eliminate the disease.[1,4,5] The elimination strategy has two components: 1) to stop the spread of infection and 2) to alleviate the suffering of affected populations to control morbidity. For implementation of elimination strategy following are the main components:Disease burden estimation, mapping and stratification background surveillance to prevent resurgence and advocacy and social mobilization.[1, 2]

In order to interrupt transmission, districts in which the Filariasis is endemic must be mapped and community wide mass

treatment program implemented to treat the entire at risk population.6 Most of these program are once yearly-administration of single dose of two drugs given together .the following recommended drug regimen must be needed to administered once a year for at least 5 years, with a coverage of at least 65% of total population.[1,2,4] The suffering caused by the disease can be alleviated through community education programs to raise awareness among patients. These programs promote the benefits of the intensive local hygiene practice as well as the prevention of the debilitating and painful episodes of inflammation. Eliminating lymphatic filariasis can prevent unnecessary suffering and contribute to reduction of poverty. Massive efforts have been taken by the national and state governments along with World Health Organization, towards the elimination of Lymphatic Filariasis in India. In India Mass Drug Administration is a economic option and our health care system is capable enough in operating the program but studies indicates the main limitation is a comparatively poor coverage of drug distribution and consumption in urban areas.[6, 7.]

**TREATMENT:** Large scale treatment:

Prevention of lymphatic Filariasis is possible by stopping the spread of infection. Large scale treatment involves a single dose of two medicines give annually to an entire at risk population in following way.[8, 9]

Albendazole (400 mg) together with Ivermectin (150-200 mcg/kg)

Diethylcarbamazine Citrate (DEC) (6mg/kg)

Large scale treatment conducted annually for 4 to 6 years, treating all persons living in areas where the infection is present can interrupt the transmission cycle. The concept on about the side effects of the drugs are due to the primary response to the killing of parasites and can easily be resolved and managed.8,9 Recent research data indicates that the transmission of the infection in at risk-population has dropped by 43% since the beginning of the GPELF. Scientific research over last decade has shown the efficacy of new drug combinations,[10] created a simple diagnostic tools diagnostic tools,[11] improved knowledge of pathology and demonstrated that symptoms of filariasis like lymphoedema and elephantiasis alleviated by community based home care and management.

**PRECAUTIONS:**

There are various general aspects on which if population becomes aware the infections can be Avoid frequent mosquito bites.[1,2]

Take the necessary precaution when travelling to areas where the disease is endemic.

Sleep under a mosquito net.

Avoid areas where standing water is present.

Limit your outdoor activities to time after dawn and before dusk.

Wear long sleeves, long pants and socks.

Use a mosquito repellent on exposed skin.

Maintain Good sanitary conditions.

The present survey was aimed to determine and spread the awareness in people on the filarial disease and to assess strategies to bring awareness of filarial disease in various preventive aspects.

**Methodology:**

A well designed questionnaire was developed with assistance from clinical pharmacist and standard WHO format. With an intention to spread awareness door to door visit and person to person communication we were able to communicated 100 fully filled forms and dispatch same numbers of awareness leaflets on Filaria. A survey was conducted in semi rural regions like Udvada and Killa Pardi of Valsad, Gujarat. The concept is to know and spread about awareness on causative organism, its contingency, curiosity to know about the disease, receiving the tablets or not and if so than consuming or not, and whether seen any cases to help in mapping of the disease and last will they spread the same awareness to others or not. For each question the respective choices were given. Percentage analysis for each question was carried out. The respondents were explained and advised to choose the answers that match their perception.

**Results:** 80 % people were aware about the lymphatic Filariasis, out of which 65% were aware about its causative organism and 60 % were aware about the contingency of the disease.95 % people have received annual medication from the nurses and only 41% had consume the tablets. 48% were male and 52% female. The 41% were graduates in the survey who has participated. 44% people have seen the case of filariasis in their surroundings. The important aspects of the awareness program was 100% people were interested to know about the disease and 100% of them were ready to spread awareness of the disease in others.

**Discussion:**

As per the strategy designed by the WHO to eliminate the lymphatic filariasis before 2020 the mapping and estimating the burden of the disease are two main key components in preventing the spreading of the disease. To achieve it the survey with patients education involving the community pharmacist may be helpful in spreading and preventing spreading of filarial in various Indian states. This program is a kind of an initiative for ours as a student while studying the theoretical concept about community pharmacist and implements the same functions in practical lead to contribute and received satisfactory response in prevention of the disease. Pharmacist can effectively communicate the information by patient counseling about sign and symptoms of disease; spreading of the disease and by explaining various preventive measures and available treatment for the disease. Still in the awareness point of view many things can be done which might be possible with the support of World Health Organization and other health agencies.

**Conclusion:** From the result on awareness on Filaria in semirural area was around 80% and From our study we were able to find the presence of case of Filaria in Killa pardi, of Valsad district which might be helpful to the government in mapping the disease. But still the low percentage in medication taking behavior needs to be improved and for that People needs to be aware of the epidemic area about the disease and clinical features. To support the government in elimination program through community awareness every students of graduation level in Pharmacy must work together on same platform and utilize their skills and knowledge for the lifting up the community healthcare. Awareness programs on Filaria and other parasitic disease have to be conducted in the various semirural and tribal areas for the healthcare development.[s]

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