LYMPHATIC FILARIASIS IN MEDAK DISTRICT: TELANGANA, INDIA

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ABSTRACT

The aim is to study the disease surveillance of Lymphatic Filariasis in random areas in 10 villages of Medak district. Culex quinquifaciatus Mosquito is a vector of (Wuchereria bancrofti) Filariasis disease and it is more abundant in this particular area. Cx. quinquifaciatus species are 70% dominant on other mosquito species. For identification of Filariasis we took blood samples according to the WHO procedures. There are 63 positive filaria cases found in 10 Villages out of 5091 Blood slide (BS) collection in the initial month of the year. It increased day by day of and we studied that the main cause of the disease spread and it may be people are not aware of Filariasis, The present data may be useful in planning for the elimination of LF, as per the WHO goal by the year 2020.

KEYWORDS: Culex quinquifaciatus, Lymphatic filariasis, Sampling, Disease, Wuchereria bancrofti.

INTRODUCTION

Medak district occupies an area of approximately 9,699 square kilometres (3,745 sq mi), comparatively equivalent to Canada's Prince Charles Island. It is located at 18.03° N 78.27° E. It has an average elevation of 442 metres (1450 feet). Lymphatic Filariasis (LF), the second most common vector-borne parasitic disease after malaria, is found in 81 tropical and subtropical countries.¹ World Health Organisation (WHO) estimates that 120 million people are infected with this parasite and 1.3 billion (i.e. .20% of the global population) are living at risk of infection.¹-³ It is estimated that 40 million people are suffering from the long term complications of the disease. One-third of people infected with LF live in India. National health policy 2002⁴ aims at elimination of transmission and the prevention of disability due
to LF by the year 2020.\textsuperscript{[5]} There are four endemic Districts out of ten districts of Telangana. Medak district is one of the seriously LF affected districts in Telangana. In Medak there are ten Villages are more effected by the LF. The population of ten Villages of Medak District are 27,618. \textbf{Figure.1} Shows the Pie chart of individual population of the 10 Villages.

\textbf{Fig 1. The Population Pie chart of 10 villages of Medak District, Telangana.}

Lymphatic filariasis (LF) caused by Wuchereria brancrofti and transmitted by the Southern house mosquito \textit{Culex quinquefasciatus} (Diptera; Culicidae). Lymphatic Filariasis (LF), commonly known as elephantiasis is a disfiguring and disabling disease, usually acquired in childhood. In the early stages, there are either no symptoms or non-specific symptoms. Although there are no outward symptoms, the lymphatic system is damaged. This stage can last for several years. Infected persons sustain the transmission of the disease. The long term physical consequences are painful swollen limbs, it is shown in Fig. 2 (lymphoedema or elephantiasis).\textsuperscript{[4]} To assess the LF disease and its based factors, a pilot scale study was carried out at the month of August 2014 in Medak district of Telangana. The 10 villages of this district have been recognised as endemic for LF in Medak.

\textbf{Fig 2. Shows A. initial stage of LF, B. Final stage of LF}
METHODS AND METHODOLOGY

1. Survey of disease Surveillance
Volunteer participants in the 6-75 year-old group, from randomly selected ten villages of Medak District i.e. Kammarlapally, Potharam, Dharmagipet, Pedda masanpally, Yellareddy pet, Narayanraopet, Pullur, Kondamrajpally, Bandaram, Aantasagar. The study was undertaken over at month of August 2014, in 10 Villages. The Village development committees (VDCs) are the smallest administrative entity in Medak. The aim of the study was explained to the villagers and a request was made for volunteers to come forward. Every subject was informed of the purpose of the study and his or her consent was obtained. The survey consisted of a questionnaire and a blood sample for parasitological examination. We aimed to select 500 volunteers over 6-75 years of age per VDC; however, in view of the dispersed nature of most volunteers were tested. Before blood sampling all individuals who participated were interviewed, using a structured questionnaire, on their knowledge, attitude and behavior in relation to filariasis. A record of age, sex, occupation, educational status, medical history and use of bed net number of bed nets used in the household, was kept. All participants were examined with the help of the local health worker for signs of clinical filariasis i.e. elephantiasis (lymphoedema), presence of non-pitting oedema, scrotal swelling (hydrocele), breast swelling and hand swelling.

2. Parasitological test
According to WHO procedures, night blood collections were made from 23.00 PM- 2.00 AM. Sixty micro liters of finger pricked blood were drawn for thick blood film, air dried, then stained with Giemsa solution (dilution 1 in 20) for 15–20 minutes. The parasites were examined and counted after returning to the laboratory (Fig.2 shows the Micro filaria).
RESULT AND DISCUSSION
Lymphatic filariasis has been identified as a potentially rooted out disease\cite{4,6} and the 50th World Health Assembly 1997 passed a resolution that 'elimination of lymphatic filariasis as a public health problem' should be considered a priority by member states.\cite{4} Delimitation of endemic localities is an essential prerequisite for planning control or elimination programmes.

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Data collected at the month of August 2014.

Table.1 The prevalence of lymphatic filariasis due to *Wuchereria bancrofti* infection in selected Villages of Medak District.

<table>
<thead>
<tr>
<th>Sl.no</th>
<th>Name of the village</th>
<th>Population</th>
<th>Blood sample Collection</th>
<th>MF positive</th>
<th>Disease Cases</th>
<th>Disease rate in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kammar pally</td>
<td>1377</td>
<td>498</td>
<td>3</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>2</td>
<td>Potharam</td>
<td>3030</td>
<td>507</td>
<td>5</td>
<td>2</td>
<td>0.39</td>
</tr>
<tr>
<td>3</td>
<td>Dharmajipet</td>
<td>4650</td>
<td>508</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Pedda masanpally</td>
<td>1636</td>
<td>506</td>
<td>9</td>
<td>3</td>
<td>0.59</td>
</tr>
<tr>
<td>5</td>
<td>Yellareddy pet</td>
<td>2918</td>
<td>519</td>
<td>9</td>
<td>4</td>
<td>0.77</td>
</tr>
<tr>
<td>6</td>
<td>Narayanraopet</td>
<td>4250</td>
<td>522</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Pullur</td>
<td>4280</td>
<td>508</td>
<td>12</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Kondamraj pally</td>
<td>1025</td>
<td>511</td>
<td>4</td>
<td>1</td>
<td>0.19</td>
</tr>
<tr>
<td>9</td>
<td>Bandaram</td>
<td>2300</td>
<td>504</td>
<td>15</td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td>10</td>
<td>Anantha sagar</td>
<td>2152</td>
<td>508</td>
<td>5</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>Total Populations</td>
<td>27618</td>
<td>5091</td>
<td>63</td>
<td>23</td>
<td>0.45</td>
</tr>
</tbody>
</table>

CONCLUSION
Our study clearly indicates active transmission of Bancroftian filariasis in the study areas of Medak District Telangana State. A high mf rate in Pullur and Bandaram 2.36, 2.95 percent respectively, is a matter of concern and therefore, there is an urgent need to develop strategies to implements the MDA programme such a way that MDA is really effective by increasing the drug compliance. Lymphatic Filariasis is one of the most effective diseases to human beings, which is not easily solved neither with drugs nor treatments. It’s one of the main ideas to resolve this disease with having awareness on Lymphatic Filariasis, precaution from Mosquito bites and hospitalization within the time.
REFERENCES