

Measures taken by health authorities for eradication of leishmaniasis in Larkana region

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About Larkana Region

Larkana district comprises of seven talukas namely Larkana, Ratiodaro, Miro Khan, Shahdad Kot, Kamber, Warah and Dorkri. It covers an area of 7432 km². The population of the district is 2.1 millions. Main crops are rice, sugarcane, and wheat. The climate of the region is hot in summer (33-48°C) and moderate in winter (11-21°C). Geographically, the district is divided into three tracts i.e. Kohistan, Central Canal and Eastern Tract.

About Leishmaniasis

Leishmaniasis is an infectious skin disease, which occurs due to the bite of sand fly. The bite produces a hard boil on the skin which turns into a wound. The parasite of the leishmaniasis is found in rats, squirrels, mongooses, dogs and cats. When a rodent dies, sand flies consume its blood harboring the parasites of leishmaniasis and transmit it to the human being through subsequent bites. The sand fly emerges from its habitat in summer, particularly in August and goes into hibernation in the winter to lay eggs and breed, to reappear in February. These flies only appear after sunset from their inhabitation/holes and crevices of the

muddy houses. In the wake of the war in Afghanistan (which is part of the leishmaniasis belt in Asia), the migration of Afghan refugees into Pakistan led to introduction of this skin disease. The hilly areas of Larkana district i.e. Warah, Kamber and Shahdad Kot talukas, bordering with Baluchistan and Kheirthir mountains range fell a victim to the disease from February, 2001 onwards.

Measures taken by Health Department

The disease was brought to the notice of Local Health Authorities in the month of February, 2001 when cases of infected wounds were reported from village Sono Khan Chandio, about 75 kilometer from Larkana city. A team of doctors comprising of Dr. Farooq Rahman Soomro (dermatologist) and Dr. Guhlam Murtaza Pathan (Assistant Professor Pathology and expert in parasitology) was sent to the affected area to diagnose a mysterious disease characterized by nonhealing wound refractory to various ointments and antibiotics. 350 patients were tested, out of which 130 cases were confirmed to have leishmaniasis and request was made to the government to arrange 3000 ampoules of injection meglumine antimonate in order to combat this infectious disease. In

addition, a “Leishmaniasis Treatment Cell” was also established in the Leprosy Cell of Chandka Medical College, Larkana.

In the month of April 2001, 3000 ampoules of injection meglumine antimonate were provided by the National Institute of Health, Islamabad, which were administered to patients along with medicated soaps, ointments and antibiotics. After these efforts leishmaniasis was brought under control.

With the cooperation of various NGOs, media and prominent figures of the area, lectures on all aspects of the disease as well as preventive steps that needed to be taken to eradicate the disease were delivered. The main focus was to create awareness amongst people as to how sand flies transmit leishmaniasis from rats, squirrels, mongooses and other rodents, which must be killed to get rid of the disease.

In the month of January, 2002 outbreak of leishmaniasis was reported again. One-day workshop was conducted by WHO at Executive District Officer (EDO), Health Department, Larkana to evaluate the strategy. Afterwards following activities took place:

1. Seven-days detailed survey was carried out in order to collect data base in affected areas of Dadu and Larkana districts from 4th to 9th February, 2002.
2. 2500 cases of active disease were detected and treated.
3. In March, 2002, WHO conducted a training programme on the treatment of leishmaniasis treatment at EDO (Health) Office, Larkana and a WHO team visited the affected area.
4. 2340 ampoules of injection meglumine antimonate were provided by Health Department of Government of Sindh in the month of March, 2002.
5. 2000 vials of injection meglumine antimonate were provided by WHO in the month of March, 2002.
6. 1000 vials of injection sodium stibogluconate were provided by WHO.
7. The doctors along with field staff reached the affected area and accorded treatment. Some areas were provided with special medicated soaps, ointments and antibiotics in case they developed symptoms. Besides these, arrangements were made to spray the area to eradicate the flies.
8. In the month of April, 2002, one day workshop was held by WHO to share the experience.
9. WHO team arrived to analyze the disease, (Dr. P. Dsjus, Focal Person WHO Headquarter, Dr. Riadh Bin Ismail, WHO EMRO, Dr. Abraham Manzava, WHO EMRO).
10. 2000 vials of injection sodium stibogluconate provided by WHO were utilized on patients.
11. In the month of October, 2002, National Agriculture Research Council and National Agriculture Research Institute were approached to pesticide the rodents. In addition, WHO representatives in Islamabad were also approached to provide specific drugs for leishmaniasis.
12. In the month of January, 2003, a three-member Japanese team of Medical experts completed its initial study regarding spread of leishmaniasis in Larkana district and promised to launch a four year project for research and control of disease, which had severely affected the rural areas of the district. Again from 13th to 25th December research was conducted on various aspects of disease. Karachi

University (H.E.J. Institute of Chemistry) and Gomal University (Pharmacy Department, Dera Ismail Khan) are also contributing towards the leishmaniasis control research.

CONCLUSION

To combat leishmaniasis epidemic in the Larkana region, a multidisciplinary approach was launched. The role played by different agencies is shown in **Table 1**. In order to keep the treatment programme manageable Health outlets in each talukas of affected area and Leprosy Cell of CMCH, Larkana are functioning. Currently 10 to 15 cases of leishmaniasis are diagnosed at Leprosy Cell and 5-10 cases at Leprosy Cell and 5-10 cases are diagnosed at Taluka Hospitals by Dr. Farooq Rahman Soomro on daily basis.

Table 1 Role played by different agencies.

<i>Control measures</i>	<i>Action to be taken by</i>
Insecticidal focal spray	Health department Government of Sindh
Bed nets (Insecticidal)	Health Department, Federal Government
Killing of Rodents	Agriculture Department
Arrangements of specific medicine	Health Department Government of Sindh
Initiation of preventive phase	WHO