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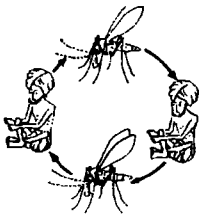
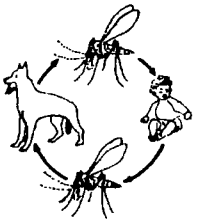


Manual on Visceral Leishmaniasis Control



World Health Organization
Division of Control of Tropical Diseases
Geneva, 1996

Overseas Development Administration

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INTRODUCTION

In March 1995 an international workshop took place at the London School of Hygiene and Tropical Medicine on the control of visceral leishmaniasis (VL). The workshop was initiated by the Overseas Development Administration (UK) as part of an ODA-funded research project, and was co-organised and co-sponsored by the World Health Organization and the Pan American Health Organization, with supplementary support from the European Commission and the International Development Research Centre (Canada).

The aim of the workshop was to:

(1) Produce a simple manual to the control of VL for the community, the physician, the diagnostician, the veterinary surgeon, the public health worker and the research scientist.

(2) Make the manual widely available in endemic regions and facilitate its translation into appropriate languages.

(3) Link efforts on control in the New and Old Worlds and to make the guide applicable in both.

There are many publications which concern the control of infectious diseases and this is certainly not the first that is relevant to VL. Two features of the international workshop and this report are, however, unusual:

(1) During the workshop interactive subgroups set down and answered the specific questions that confront those working at diverse levels on the control of VL.

(2) The text is divided into sections corresponding to the different roles of individuals.

This manual makes no attempt to present a scholarly debate on research enigmas. It is designed to provide a usable summary of the common practicalities of dealing with VL. To use the manual simply turn to the section of interest. Sections (1-9) are largely usable independently (except for the brief summaries of equipment at the end of each section) but where necessary follow the cross references to other sections.

Inevitably there will be errors and omissions in a first attempt at a manual of this type.

Please send suggestions for improvements or for other workshop topic to one of the following:

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1: VL AND PRIMARY HEALTH CARE

1.1 What are the diverse possible signs of human VL and PKDL?

(Paramedical or medical vigilance and response to suspected cases in the community)

The principal signs of VL are an enlarged spleen (Slide 1) and a prolonged irregular fever (Slide 2). Other signs and symptoms are loss of weight, pallor, an enlarged liver, enlarged lymph nodes, anaemia, cough and diarrhoea. These signs and symptoms may mimic those of malaria, typhoid, tuberculosis, schistosomiasis, malnutrition, tropical splenomegaly, histoplasmosis, and other diseases (see sections 2.1 and 2.2). Although VL occurs throughout its distribution in both children and adults, in the Americas and in the Mediterranean region (except in southern Europe) the disease is referred to as infant VL as the majority of cases occur in young children.

In endemic malarious areas kala-azar should be suspected when fever lasts for two weeks or more and no response has been achieved with anti-malarial drugs (assuming drug-resistant malaria has also been considered).

Post kala-azar dermal leishmaniasis (PKDL) is characterized by a maculopapular (patchy and raised) rash (Slide 3) and changes in skin colour (Slide 4). Late manifestations are plaques, papules or nodules (Slides 5 and 6). PKDL almost always occurs in patients previously treated for VL. It may be confused with lepromatous leprosy, fungal infections, diffuse cutaneous leishmaniasis (DCL) or other skin disorders.

1.2 What action should be taken with suspected patients?

Record the clinical history of the patient and the reasons for suspecting VL. The next step depends upon the structure of the health service of your country. If you have no means to confirm your clinical suspicion, you should refer the patient, without delay, to the next level for confirmation of the diagnosis. If it is possible, you should take samples from the patient and send them to a diagnostics laboratory (see sections 2.6 and 2.7).

1.3 What are the indicators that sandfly vectors are present?

Ask the local people if they are bitten by small flies (Slide 7) shortly after sunset or later during the night. Ask if there is a local name for such a fly. In some localities they are known as a serious biting nuisance (Slide 8), particularly at limited times of the year. At times sandflies can be found resting inside houses in the early evening hours. Attempts should be made to catch and keep suspect insects for later identification (Appendix 12).

1.4 **What immediate measures can be taken to reduce sandfly bites?**

Efforts should be made to reduce the number of bites by wearing appropriate clothes and, if available, by sleeping under fine mesh mosquito nets or preferably nets impregnated with a synthetic pyrethroid insecticide (Slides 9 and 10 and Appendix 3) (the impregnation of bednets by insecticides allows the use of bigger meshes). If it is known that sandflies are biting people inside the houses, the application of insecticide to the inner walls of the house (Appendix 12) should reduce exposure to sandfly bites. Since many species of sandflies which live in and around houses breed in organic rotting material, a community effort to keep the environment clean, particularly animal shelters (Slide 11), may be a useful intervention. When feasible, animal dwellings such as chicken sheds or pig sties, frequently infested with large numbers of sandflies (Slide 12) should be sprayed with insecticide to reduce breeding sites (Slide 13).

* 1.5 **What are the possible signs of canine VL?**

The initial stages of canine VL may be without obvious signs of disease (Slide 14). The earliest sign of VL in dogs is loss of hair, particularly around the eyes (Slide 15). As the disease progresses this becomes more pronounced. Dander, scaly lesions, and ulcers are common features (Slide 16). The dog is notably thin and becomes inactive. The lymph nodes are enlarged (the popliteal nodes at the back of the hind legs are the easiest to examine). The mucous membrane of the mouth and lips are pale and there may be shallow ulcers there or around the nose (Slide 17). In late stages, the claws are long and deformed (Slide 18) and there is a purulent discharge from the eyes (Slide 19). Kerato-conjunctivitis may be apparent (Slide 20).

* 1.6 **What action should be taken with suspected dogs and what should be done about reporting their presence?**

If the dog is seriously ill and is suspected of having VL, the owner should be advised to have it destroyed humanely and without delay.

Records should be kept of the number of suspected dogs and where they can be found.