

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). Keratoconjunctivitis 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. The presence of these dogs should be reported through the regular health channels appropriate to your locality. Action against canine VL may be integrated with control of rabies and hydatid (see section 7.7). Domestic dogs that have become feral (free-running and wild) should be destroyed humanely and hygienically.

* In some endemic areas of human VL dogs are not known to be infected (e.g. in India, see Appendix 2)

1.7 **What minimum or special equipment and services are required?**

- 1.7.1 Notification of all *Leishmania* cases should be made obligatory by legislation.
- 1.7.2 Records of suspected or proven cases of human or canine VL should be made on standard forms of notification.
- 1.7.3 If no map of the local area is available one should be prepared showing houses and routes of access to them. All cases should be mapped to assist epidemiological studies and planning of control interventions.