Identifying the Disease

Clinical Presentation
After an incubation period that generally lasts between 2 and 6 months, VL infection leads to signs of persistent systemic infection including fever, fatigue, weakness, loss of appetite and weight loss. Furthermore, the parasitic protozoa invade parts of the body causing enlarged lymph nodes, spleen and liver. Hypersplenism, a condition where red blood cells are destroyed rapidly...

**FIGURE 3 Path of infection of visceral leishmaniasis.**
Source: Hailu et al; Centers for Disease Control and Prevention

Transmission
The phlebotomine sandfly breeds in warm humid microclimates and is typically found in rodent burrows, termite hills, and organic remnants. There are two major types of VL characterized by how they are transmitted. Zoonotic VL is transmitted from animal to vector to human, and anthropoformic VL is transmitted from human to vector to human. The major animal reservoir for zoonotic VL in humans is dogs. Other animals that may serve as reservoirs include chickens, pigs, cattle, and horses as well as foxes, gerbils, and rodents.

Post-kala-azar dermal leishmaniasis (PKDL) is a complication of VL that has been frequently observed in Sudan. It can also occur in immunosuppressed individuals in *L. infantum*-endemic areas. Characterized by a macular, maculo-papular or nodular rash, PKDL is highly infectious because the lesions contain many parasites which serve as a reservoir for anthropoformic VL.

Furthermore, an increase in the populations of vector and reservoir can led to the spread of disease to previously “kala-azar-free” geographical areas. Climate change may lead sandflies to migrate to more favorable temperatures and proliferate. As the environment changes, the sandfly acquires new areas to inhabit, but this relationship must be investigated further for substantial conclusions to be drawn.

Direct person-to-person transmission of VL, such as blood transfusion as well as sexual and congenital transmission, has also been shown. Syringe exchange amongst intravenous-drug addicts may also allow transmission of VL.