

Abstract:

*Leishmania* parasites have a digenetic-life cycle, circulating between vertebrate hosts and insect vectors, mainly phlebotomine sand flies (Diptera: Phlebotominae). Mammals serve as principal reservoirs of the disease and maintain the leishmania population even in the absence of the vector. Knowledge of the role of asymptomatic hosts in parasite transmission is one of the key prerequisites to understand epidemiology of leishmaniases. The aim of this work is to summarize the studies on asymptomatic hosts of visceral leishmaniasis caused by *L. infantum* and *L. donovani*. In *L. infantum*, asymptomatic hosts have been shown to be involved in transmission, namely dogs, humans, and other putative reservoir hosts. Asymptomatic dogs infect the same proportion of vectors as symptomatic dogs, and in humans, HIV coinfection significantly increased the infectiousness. VL caused by *L. donovani* is regarded as mostly anthroponotic, but the parasite has been often detected in animal hosts and zoonotic transmission has been suggested in East Africa. Transmission from asymptomatic individuals has not been established, but the studies on this topic are very scarce. Further intensive research is needed to confirm the role of potential reservoir hosts and asymptomatic individuals in the transmission of leishmaniases. Also, definition of asymptomatic hosts should be unified and detection methods optimized.