

EPIDEMIOLOGICAL STUDY ON SAND FLIES IN AN ENDEMIC FOCUS OF CUTANEOUS LEISHMANIASIS, BUSHEHR CITY IN SOUTHWESTERN IRAN

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Cutaneous Leishmaniasis (CL) is the most important health problem in the city of Bushehr, southwestern Iran. The objective of the study was to determine some ecological aspects of sand flies in the city during 2010-2011. Sand flies were collected monthly from outdoors and indoors by sticky traps at four selected districts of the city. They were also dissected and examined by Nested-PCR for identification of the parasite during August- September of 2011. A total of 1234 adult sand flies were collected and 6 species including 3 of Genus *Phlebotomus* and 3 of Genus *Sergentomyia* were identified. Four species including *P. papatasi* (3.98 %), *P. sergenti* (1.14 %), *S. tiberiadis* (87.18 %) and *S. baghdadis* (7.7 %) were found indoors. Five species including *P. papatasi* (3.47 %), *P. sergenti* (3.17 %), *P. alexandri* (0.1%), *S. tiberiadis* (77.85 %) and *S. baghdadis* (15.41 %) were collected from outdoors. Sand flies started to appear from March and disappear at the end of January. There was only one peak in the density curve in July. The study revealed that *S. tiberiadis* and *S. baghdadis* could enter indoors which 89 % and 81.8 % of them were found blood-fed respectively. Moreover, *P. papatasi*, *S. tiberiadis* and *S. baghdadis* were active indoors and outdoors in most months of the year. Nested-PCR of *P. papatasi* females were positive against kinetoplast DNA of *L. major* and *L. turanica* and also mixed natural infections were found by *L. gerbilli* and *L. turanica*. Moreover mixed infections by *L. major* and *L. turanica* were observed in this species. *Phlebotomus sergenti* females were found infected with DNA of *L. turanica* and this the first report of natural infection and detection of the parasite from this sand fly species in worldwide.