PCR based on identification of vectors of zoonotic cutaneous leishmaniasis in Shahrood District, central of Iran

A study was made in rural region of Shahrood city, Semnan province in the central of Iran during ٢٠٠٥ to investigate of vectors of zoonotic cutaneousleishmaniasis. Sticky traps and an aspirator were used for collecting of sandflies. Three species of Phlebotomus papatasi, P. caucasicus and Sergentomyia sintoni were collected and identified and the first species was dominant (٥٣%). Nested PCR method were employed for identifying of isolated parasites of dissected female of sandflies. Among the dissected sand flies ٣ out of ٢٤ (١٢.٥%) Phlebotomus papatasi and ٢ out of ٤٨ (٤.٢%) Phlebotomus caucasicus were found naturally infected with promastigotes. Species-specific amplification ofGiemsa staind promastigote slides revealed specific PCR production of Leishmania major DNA in the infected P. papatasi and P. caucasicus sand flies. Having high prevalence and infection rate provide enough evidence to incriminate of P. papatasi as the main and proven vector of cutaneous leishmaniasis to human in the region and the species of P. caucasicus play the second role for maintenance of disease between rodents.