

Abstract

Phlebotomus duboscqi (Diptera: Psychodidae) has been incriminated as the vector of *Leishmania major*, the causative agent of zoonotic cutaneous leishmaniasis (ZCL) in various parts of the world. This study sought to describe the influence of *Tarchonanthus camphoratus* (Asteraceae), *Acalypha fruticosa* (Euphorbiaceae) and *Tagetes minuta* (Asteraceae) crude extracts on longevity of *Phlebotomus duboscqi*. These medicinal plants were prepared from the dried aerial parts followed by grinding into a fine powder and then soaking the plant materials in methanol and ethyl acetate solvents for 48 hours. After 48 hours, the materials were filtered and dried out using a rotary evaporation at 30-35°C. The extracts obtained were later prepared into appropriate concentrations for bioassay. Groups of ten female sand flies were aspirated into vials where they were fed on a mixture of the plant extracts and sucrose solution. The crude extracts reduced the survival time of *P. duboscqi* significantly ($P < 0.05$). It was found out that *P. duboscqi* flies that had fed on *A. fruticosa* extract had a life span of 7 days, *T. minuta* 1 days and *T. camphoratus* 9 days as compared to a life span of 12 days in *P. duboscqi* flies that formed the control group. The observation that *A. fruticosa*, *T. minuta* and *T. camphoratus* have effect on longevity of *P. duboscqi* implies that these plants can be used as a natural means of reducing transmission of leishmaniasis by reducing the life span of *Phlebotomus duboscqi* eventually killing them.