Abstract

Mycotoxins as secondary metabolites are known to be common contaminants of both human food and animal feed. If ingested in minute but regular doses, they are known to cause suppression of the immune system and therefore, alter pathogenesis of many infectious diseases. Trypanosoma congolense an intravascular parasite is the most important cause of African animal trypanosomosis. The aim of this work was to investigate the effect of aflatoxin B-1, a common mycotoxin on transmissibility of T. congolense. Female Swiss white mice were intraperitoneally injected with 0.05mg/kg body weight aflatoxin B-1 every after 3 days upto 10 times and on the 21st day were infected with T. congolense. Parasitological parameters including weight, packed cell volume and parasitemia levels of aflatoxin B-1-injected-T. congolense-infected mice were compared with those of T. congolense-infected mice. In a separate study, aflatoxin B-1-injected-T. congolense-infected and T. congolenseinfected mice (12 each) were fed on by 400 tsetse flies. Some of these flies were used to cyclically infect 100 uninfected mice. ANOVA and mean separation were used to determine differences between the test and control mice. It was observed that there was significant difference ($p<0.05$) in body weight but no significant difference in packed cell volume, establishment of infection within the tsetse flies and subsequent transmission to uninfected mice. It was concluded that aflatoxin B-1 has an effect on pathogenesis and hence transmissibility of T. congolense.