Tittle

Efficacy of Crude Extract of *Aloe Secundiflora* Against*salmonella Gallinarum* in Experimentally Infected Free-Range Chickens in Tanzania

Authors
R.K Waihenya, M.M.A Mtambo, G Nkwengulila, U.M Minga

Abstract

The ethnoveterinary use of *Aloe species* extract in free-range local chickens against fowl typhoid was investigated. Five-months-old local chickens, free of antibodies against fowl typhoid were used. The chickens were randomly assorted into five groups including pretreated and infected (G1, *n*=21), infected and untreated (G2, *n*=21), infected and treated (G3, *n*=21), untreated and uninfected (G4, *n*=10) and treated uninfected (G5,*n*=10). Groups 1, 2 and 3 were inoculated with 5.0×10^8 c.f.u/ml of *Salmonella gallinarum*, following which the chickens were monitored for 15 days. There was a delay on the occurrence of the clinical signs and reduced severity of the disease in the *Aloe* treated chickens (G1 and G3). The mortality rates were 23.8% (5/21) in G1 (pretreated and infected), 42.8% (9/21) in G2 (infected and untreated) and 14.2% (3/21) in G3 (infected and treated). Antibody levels were raised among the infected and untreated group (G2) while they remained relatively low in the *Aloe* treated groups (G1 and G3). However, there was a sharp increase in the levels of interleukin 6 (IL-6) in the *Aloe* treated groups (G1 and G3) as compared to the untreated group (G2) until day 9 post-infection. The results of this work indicate that the extract of *Aloe secundiflora* may be used in the control of fowl typhoid in chickens. Studies to determine the active ingredients of the plant extract are in progress.

Keywords

Aloe secundiflora;
Efficacy;
Salmonella gallinarum;
Free-range local chickens