Abstract

Heterophyiasis is an important food-borne parasitic zoonosis in Egypt, among the inhabitants living around brackish-water lakes especially fishermen, and it is a common human parasite in the Nile Delta.

The experiment was done on two laboratory animals (rats and dogs), and the time of sample collection was done periodically at 6, 9, 15, 21, and 28 days post-infection to evaluate different tests required. Whole blood was collected with heparin or ethylenediamine tetra-acetic acid as anticoagulant to help in the hematological studies such as red blood cells count (RBCs), white blood cells count, packed cell volume (PCV), and hemoglobin (Hb).
Only marked increase in the total leucocytic count was recorded while RBCs, PCV, and Hb were decreased in most of the results obtained. Total protein and globulin decreased while albumin and A/G ratio increased. Liver enzymes showing marked increase in aspartate aminotransferase and increase in alanine aminotransferase in dogs and rats denoting that liver has a role in the response to that infection. Kidney-function tests, urea, and creatinine showed slight increase at 6 days post-infection (d.p.i.).

After preparation of different Ag (antigen) from different collected helminthes, the protein content of each was determined. The sera of infected animals were collected to find antibodies in their blood against the parasite using enzyme-linked immunosorbent assay and using crude heterophyid antigen collected from their intestines after scarification. The worms washed, homogenized, and then centrifuged to collect supernatant fluid as antigens. The results indicated that antibody starts to appear at 9 d. p.i. and increases till 21 and 28 d.p.i. and detection depends on antigen concentration.

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