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6. Summary

The prevalence of *Eimeria stiedae* in slaughtered rabbits and its molecular identification was investigated in this work. Three hundred samples (feces and liver tissues) were collected from poultry butcher's shops in Beni-Suef province. Fecal samples were microscopically examined by floatation technique. Moreover, *E.stiedae* oocysts were seen in bile using wet mount technique. The prevalence of infection was 15% in both feces and bile. The highest infection rate was found in the winter (26.4%). Rabbit aged of 2 - 3 months were the most susceptible (22.67%). There was no corelation between sex and infection rate, the sex factor has no relation with infection. The groud housing rabbitswere more infected than batteries housing. Macroscopic examination of infected liver showed the presence of characteristic white nodules. The collected oocysts from feces and bile were purified and subjected to sonication then the DNA was extracted by commercial DNA kits. Amplification of DNA with Es1F/R specific primer was conducted. Electrophoresis yielded the specific amplicon of 976 bp. Histopathological findings revealed that presence of gametocyte stages after staining with HE.

The early detection of *E.stiedae* stages in hepatic tissue of experimentally infected rabbits was studied. The experiment was conducted using 40 male New Zealand rabbits of six weeks age.The rabbits were divided into an infected group (A) of 30 rabbit and a control uninfected group (B) of ten rabbits. Group A was infected with 2.5×10^4 sporulated oocysts of *E.stiedae* per rabbit at zero day. Three rabbits of group A and one of group B were sacrificed at 0, 3, 6, 9, 12, 15,18,21,24 and 27 day post-infection. Gross findings, light microscopy, transmission electron microscopy (TEM), biochemical parameters and PCR were applied to detect specific findings of *E.stiedae* in the liver tissue pre- and post- shedding of oocysts in the feces. Grossly, liver showed irregular yellowish white nodules appeared

from the 15th days post-infection and became more prominent gradually. Hepatomegaly and ascites were obvious from the 21-24th day post-infection. Histopathologically, different schizonts and gametocytes of *E.stiedae* in the biliary epithelium appeared at the 15th day post-infection. Findings of TEM were matched with the light microscopy. Biochemical parameters showed gradual increase in the level of ALT, AST, GGT and ALP in the experimentally infected rabbits in the periods of the experiment, and then decreased at the end of experiment. In addition to, there was gradual increase in the level of total protein till the end of the experiment whereas the albumin level gradually decreased. PCR showed positive findings starting from the 12th day post-infection using specific *E.stiedae* primers. The shedding of oocysts began from the 17th day post- infection and reached the peak at the 23-25th day PI, then began to decline until the end of the study.

In a trail for the prophylaxis of rabbits against *E. stiedae* infection, an experiment was carried out to detect and evaluate the prophylaxis effects of some natural plant material as curcumin (200mg/kg.bw) in comparison to silymarin (100mg/kg.bw) in a daily dose for each rabbit before infection by one week, the rabbits were infected with 5×10^4 sporulated oocysts of *E.stiedae* per rabbit. At 5th week post infection, emergency treatment of diclazuril in drinking water was applied for all infected groups in the experiment.

The results revealed that the rabbits infected and treated with either curcumin or silymarin had similar findings in delaying and reducing clinical signs, decreasing mortalities and improving growth performance when compared to infected control group, but the oocyst shedding, liver weights, gross and microscopical lesions were nearly similar to that of infected control group. At the 5th week post infection , as a result of treatment with diclazuril in drinking water , there was a relative improvement in general health condition in all infected groups ,no mortalities were recorded , improvement in the body weight gain were

.....*Summary*

observed , the oocyst shedding markedly decreased and the shedded oocysts appeared destructed and deteriorated. At the end of the experiment, the concentration of the ALT, AST and GGT in all infected groups was slightly similar to normal levels while ALP decreased than normal values. In addition, hyperproteinemia accompanied by a decrease in the concentration of albumin were noticed in the IC, ICT and IST groups as compared to HC group. Hb conc. and lymphocytes percentage significantly decreased in the IC, ICT and IST groups as compared to NIC group while the leucocytes count significantly increased.