

Summary of the DVM thesis No 19149 , Faculty of Veterinary Medicine, Urmia University.

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Title of thesis: Evaluation of haptoglobin, ceroplasmin, fibrinogen, and serum amyloid A levels in horses infected with *Theileria equi*.

Summary:

Equine piroplasmiasis is a tick-borne disease caused by intra erythrocyte protozoan, *Theileria equi* and *Babesia caballi*. The current study was conducted to evaluate the changes of inflammatory indices (haptoglobin, ceroplasmin, fibrinogen and serum amyloid-A) in horses naturally infected with *Theileria equi*. Blood samples were taken from 300 horses in west of Iran, after history taking. The infected animals were divided into 3 subgroups on the basis of parasitemia rate (<1% low, 1-3% moderate, > 3% high). As a control group 20 healthy horses (based on clinical and laboratory tests) from the same farms were sampled. The infection induced severe anemia in a parasitemia burden-dependent fashion. The infected animals had significantly lower numbers of RBC and lower levels of hemoglobin and hematocrit compared to the controls. In addition, the results of measuring serum amyloid-A and haptoglobin levels in healthy (control) and diseased horses showed that with the increase in the severity of the disease (percentage of parasitism), the mentioned parameters gradually increased. Also, the results of measuring ceroplasmin and fibrinogen values in healthy (control) and diseased horses showed that, in general, the values of the mentioned parameters are higher only in horses with severe infection than in the control group, respectively, but there is no significant difference between horses with mild and moderate infection compared to the control group.

Keyword: Acute-phase Protein, Haptoglobin, Ceroplasmin, Serum amyloid A, *Theileria equi*