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Hematologic, trace minerals and MDA status in anemic-piroplasmosis infected horses from Egypt

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Equine piroplasmosis is a clinically significant widespread tick-borne disease affecting equine population and industry. The aim of this study is to describe the clinical signs, the correlation between the developed anemia and trace mineral status along with lipid peroxidation product (MDA) in naturally occurring Equine piroplasmosis. Fever, Hemoglobinuria and Icterus were the most consistent clinical signs recorded in this study. The hematologic evaluation showed decrease in red cell parameters along with leucocytosis. Macrocytic hypochromic anemia was recorded in infected horses alongside relative increase in copper and relative decrease in ferrous and zinc. MDA showed very statistically significant difference when compared to control data. High level of MDA along with reduction in PCV, HB, and RBCs count is indicating the presence of oxidative stress and implicating the process as a cause of anemia in *T. equi* infection. The trace mineral status (Cu, Zn, and Fe) appeared to be directly affected by the parasite and the mineral status influenced by the anemic syndrome associated with *T. equi*. Inversely correlation between zinc and MDA level might be used in planning the treatment strategy of *T. equi*.

Biography

M A El-Sherif graduated from faculty of veterinary medicine, Cairo University in August 2010. He finished his MVSc in January 2014, and his master thesis was on Equine Metabolic Syndrome (EMS) – Laminitis and has one paper published in veterinary medical journal 01/2014; "Evaluation of selected serum biochemical constituents and combined glucose insulin test in equine metabolic syndrome affected ponies".

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