High levels of glutathione peroxidase and catalase activity in rats infected with T. evansi.

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Trypanosoma evansi is a haemoprotozoan that causes a disease characterized by high parasitemia, red blood cells (RBC) destruction in various species. The glutathione peroxidase (GPx) and catalase (CAT) can be considered one of the most important agents of antioxidants defense system of the cell, protecting against damage resulting from exposure to hydroperoxides. **Objectives:** Evaluate GPx and CAT activity in rats infected by *T. evansi.* **Methods:** Sixty animals were infected intraperitoneally containing $10^3$ parasites/ml. Fifteen non-inoculated animals were used as control. They were classified according to average number of parasites in 10 random homogeneous fields. Group A: control; B: rats with 1-10 trypanosomes/field; C: 11-30 trypanosomes/field; D: 31-60 trypanosomes/field; E: more than 61. Blood samples from *T. evansi*-infected and control were used to determine the hydroperoxides production and GPx and CAT activity. **Results:** Concentration of hydroperoxides increased in infected compared with control (p<0.001). There was a significant increase in GPx activity from groups C (p<0.05), D and E (p<0.001), and catalase in groups D and E when compared with control. **Conclusion:** The infection resulted in production of hydroperoxides and high levels of GPx and CAT activity, which may be related to the direct action of the parasite in erythrocytes, contribute to the pathogenesis in trypanosomosis.

Keywords: oxidative stress; *T. evansi*; antioxidants.