

EFFECTS OF INORGANIC SELENIUM SUPPLEMENTATION ON ANAEMIA AND SUSCEPTIBILITY OF ERYTHROCYTES TO *IN VITRO* PEROXIDATION IN *TRYPANOSOMA BRUCEI* INFECTED RATS

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Abstract

The Influences of Selenium (Se) administration on anaemia and erythrocytes peroxidation in acute *Trypanosoma brucei* (Federe strain) have been studied. Thirty mixed sex albino rats were used, 10 rats were Infected with *T. brucei* and received treatments with 8mg of selenium daily in drinking water, 10 rats were Infected with *T. brucei* and no selenium treatment, and the remaining 10 rats were left as control. Packed cell volume were measured to assessed degree of anaemia and washed erythrocytes from the heart blood were Incubated in physiological saline containing 1.5% hydrogen peroxide to measure by-products of peroxidation spectrophotometrically (as thiobarbituric acid reactive substance). Packed cell volume decreased In se-deficient rats ($P<0.05$) compared to supplemented and control. Heart blood erythrocytes peroxidation were higher in deficient rats than se-treated and control rats ($P<0.05$). Peroxidative damage to erythrocytes may have contributed to pathogenesis of severe anemia as observed. Similar packed cell volume was observed on day 14 pi in both supplemented and control. Prolonged survival time in supplemented rats may be due to protective influence of selenium.

Key words: Selenium, Anaemia, Erythrocytes, Peroxidation, Rats, *T. brucei* (federe strain)