Session (1) : Keynotes

Effects of Selenium and Vitamin E Injection during Transition Period on Serum Protein Parameters of Camels (*Camelus dromedarius*) Reared Under Semi- intensive System

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ABSTRACT

Transition period is defined as a stressful condition leads to an increase in oxidative stress biomarkers, which interferes with intracellular homeostasis. Therefore, transition period has been considered as one of the most critical periods for health and productivity in female camels. In biological systems, selenium (Se) and vitamin E (Vit E) are used as antioxidants in order to minimize cellular damage caused by endogenous peroxides. In farm animals, supplementation with Se +vit E during transition period caused a significant enhancement in the metabolism as indicated by increasing in serum proteins parameters; therefore, the study was aimed to investigate the effect of intramuscular injection of Se +vit E during transition period on serum protein parameters in dromedary camels. Twenty clinically healthy female camels (age: 7-11year, number of parities: 2-3) during late pregnancy were divided into 2 groups; the control group and the treated group (10 each). The treated group was injected I/M with 10 ml of Se + vit E (0.6 mg/ml of sodium selenite and 80 mg/ml of vitamin E acetate, LABORATORIOS CALIER, Spain) three times: one month before parturition, at parturition and one month postpartum. Venous blood samples were collected at the same time of the injection for the determination of serum total protein, albumin and globulins. Statistical analysis was performed using ANOVA (SPSS for Windows version 20.0). Intramuscular injection of Se +Vit E during transition period caused a significant ($P<0.05$) increase in serum total protein, albumin and globulins. It was concluded that intramuscular injection of Se+Vit E during transition enhanced the intracellular antioxidant status, which reflected positively on the metabolic activity of pregnant dromedary camels. The data can be utilized to improve health and productivity in female camels during the critical transition period that associated with physiological oxidative stress.

Keywords: *selenium, vitamin E, proteins, transition period, camels*