

عنوان مقاله:

Effect of Parenteral Vitamin D³ Supplementation in Several Doses During a Six-day Period on Total Antioxidant Capacity in Healthy Holstein Bulls

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نویسندگان:

Morteza Kaywanloo - *Department of clinical sciences, Faculty of Veterinary Medicine, Semnan University, Semnan, Iran*

Mahmood Ahmadi Hamedani - *Department of Clinical Sciences, Faculty of Veterinary Medicine, Semnan University, Semnan, Iran*

Ashkan Jebeli Javan - *Department of Health Food Education, Faculty of Veterinary Medicine, Semnan University, Semnan, Iran*

Hesamodin Emadi Chashmi - *Department of Clinical Sciences, Faculty of Veterinary Medicine, Semnan University, Semnan, Iran*

Farzaneh Rakhshani Zabol - *Graduated from Faculty of Veterinary Medicine, Semnan University, Semnan, Iran*

خلاصه مقاله:

BACKGROUND: Vitamin D³ is one of the most important vitamins that can be used either as an injection or as an oral supplement, alone or in combination with other vitamins in cows. Vitamin D³ has known effects on calcium regulation and bone health, and also has several non-calcium effects, including improving immune function and therapeutic and preventive effects on many chronic diseases. **OBJECTIVES:** Many of these non-classical effects of vitamin D appear to be due to the effect of vitamin D on improving the body's antioxidant system. This positive effect on the antioxidant status can be due to the effect of vitamin D on the expression of many genes, including genes related to proteins involved in the antioxidant system such as Superoxide dismutase (SOD) and Catalase. **METHODS:** In the present study, 15 bulls were divided into 3 groups and by intramuscular injection of 3 doses of vitamin D³, their serum levels of total antioxidant capacity (TAC) were calculated before injection and in two, four and six days after injection. The amounts of vitamins used in groups A, B and C were 330000, 660000 and 990000 units, respectively. **RESULTS:** The results of the study showed that TAC levels increase in groups depending on the dose. Total antioxidant capacity levels will also increase in the following days. **CONCLUSIONS:** Therefore, it can be concluded that TAC in cattle is time-dependent and dose-dependent, and regardless of the therapeutic dose of vitamin D³ the use of higher doses of vitamin D³ can improve the antioxidant status.

کلمات کلیدی:

Cattle, Parenteral, Six days, Total antioxidant capacity, Vitamin D³

لینک ثابت مقاله در پایگاه سیویلیکا:

