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## Investigation of cytokine levels in calves with naturally occurring sepsis

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### Abstract

This study aimed to detect changes in clinical parameters, biochemical and serum cytokine levels in calves with naturally occurring sepsis. In the study, 34 calves diagnosed with sepsis according to clinical and laboratory results and 7 calves deemed to be healthy according to clinical and laboratory results were used. The blood sampling was performed by jugular venapuncture for hematological and biochemical analysis and the determination of cytokine levels. Significant changes were observed in the clinical parameters of calves with sepsis. Serum concentrations of IL-1 beta, IL-6, IL-10, TNF-alpha, and INF-gamma were significantly increased ( $P<0.05$ ) in calves with sepsis compared to the control group. Also, a significant increase ( $P<0.05$ ) of BUN, creatinine, CK, and CK-MB levels and a significant decrease of TP level ( $P<0.05$ ) were determined in the blood serum of calves with sepsis compared to the control group. In conclusion, it was concluded that varying degrees of tissue/organ damage developed in calves with sepsis and cyto-kines played an important role in the development of inflammatory damage during sepsis.

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