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Characterization of an intravenous lipopolysaccharide inflammation model in calves with respect to the acute-phase response

Plessers, E. , Wyns, H. , Watteyn, A.

Response of inflammatory cytokine levels in calves with LPS-induced endotoxemia

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Abstract

The most common form of toxemia observed in large animals is endotoxemia. Endotoxemia is caused by the presence of lipopolysaccharide cell wall components of gram-negative bacteria in the blood and characterized clinically by abnormalities of many body systems. This study aimed to determine changes in serum inflammatory cytokine levels in calves with LPS-induced endotoxemia. Ten healthy Holstein breed calves were used in the study. To create experimental endotoxemia, LPS at 0.1 µg/kg dose was given intravenously to the calves from the vena jugularis as an infusion within 30 min. Blood samples to evaluate cytokines, biochemical, blood gases, and