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Clinical Signs of Neonatal Calves in Experimental Colisepticemia

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Abstract : Escherichia coli (E.coli) is the most isolated bacteria from blood circulation of septicemic calves. Given the prevalence of septicemia in animals and its economic importance in veterinary practice, better understanding of changes in clinical signs following disease, may contribute to early detection of the disorder. The present study has been carried out to detect changes of clinical signs in induced sepsis in calves with E.coli. Colisepticemia has been induced in 10 twenty-day old healthy Holstein- Frisian calves with intravenous injection of 1.5 X 109 colony forming units (cfu) of O111: H8 strain of E.coli. Clinical signs including rectal temperature, heart rate, respiratory rate, shock, appetite, sucking reflex, feces consistency, general behavior, dehydration and standing ability were recorded in experimental calves during 24 hours after induction of colisepticemia. Blood culture was also carried out from calves four times during the experiment. ANOVA with repeated measure is used to see changes of calves' clinical signs to experimental colisepticemia, and values of $P \leq 0.05$ was considered statistically significant. Mean values of rectal temperature and heart rate as well as median values of respiratory rate, appetite, suckling reflex, standing ability and feces consistency of experimental calves increased significantly during the study ($P<0.05$). In the present study, median value of shock score was not significantly increased in experimental calves ($P> 0.05$). The results of present study showed that total score of clinical signs in calves with experimental colisepticemia increased significantly, although the score of some clinical signs such as shock did not change significantly.

Keywords : calves, clinical signs scoring, E. coli O111:H8, experimental colisepticemia
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