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Analysis of relationship between pathogen infection rate and diarrhea severity in Hanwoo calvesSukhan Jung¹, J H Kang¹, J B Chae², S H Kim³, A Cho³, Y H Jung³, C Y Choe³, J G Yoo³, D H Yu⁴, K S Choi⁵, H C Kim⁶, B K Park⁷, J S Chae² and J Park¹¹Chonbuk National University, South Korea²Seoul National University, South Korea³National Institute of Animal Science, South Korea⁴Gyeongsang National University, South Korea⁵Kyungpook National University, South Korea⁶Kangwon National University, South Korea⁷Chonnam National University, South Korea

The fecal appearance of calves is an important direct/indirect diagnostic indicator for the occurrence of enteritis. In order to understand the relationship between pathogen infection rate and fecal appearance, fecal scoring and infection with specific pathogens of parasites and viral infection were analyzed. Fecal scoring was determined by subjective observation in 115 farm calves aged 1-90 days: solid, semi-solid, loose and watery. And then fecal pathogens (*Coronavirus*, *Rotavirus*, *Cryptosporidium*, *Giardia*, *E. coli* K99+) were detected by 5-type pathogen diagnosis kit and multiple RT-PCR tests. Also, *Eimeria* was detected by microscopic observation. The association between fecal appearance and pathogen was analyzed by logistic regression model or chi-square test using SPSS. Among the total of 115 calves, 35 were solid fecal type, 38 semi-solid fecal type, 32 loose fecal type and 10 watery type. Pathogen infection rate is positively associated with more liquid fecal type. However, there was no difference in pathogen infection rate between solid and semi-solid type ($P>0.05$). Based on the results, a fecal score of 2 or more (loose and watery feces) was judged as diarrhea. The diarrhea group had 12 times higher probability of being infected ($P=0.00$) compared to the normal group. *Rotavirus*, *Coronavirus* and *Cryptosporidium* were closely associated with diarrhea severity ($P<0.05$). The research confirmed the relationship between fecal scoring and infection rate in calf diarrhea. Infection was associated with more liquid fecal type. Especially, BCV, BRV and *Cryptosporidium* are involved in change to liquid feces. This research could be an important indicator for better appropriate treatment of calf diarrhea and for providing information of calf diarrhea with clinical symptoms and pathogen infection.

Biography

Sukhan Jung is a Researcher of Veterinary Medicine at Chonbuk National University, South Korea. She has graduated from the Veterinary Science Graduate School of Chonnam National University and recently been participating in research related to health care and disease prevention of large animals.

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