J Vet Clin Vol. 24, No. 1(Suppl.) May (2007)

Changes of Blood Immuno-Chemistry Profiles in Hanwoo Calves After Birth

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This study was carried out to investigate the change of blood immuno-chemistry profiles in Hanwoo calves after birth. A total of 65 calves were used and blood samples were collected through the cervical vein by serum separator from added vacuum tubes on 1st (pre-feeding colostrum), 2nd, 3rd, 7th, 14th and 21th day of postpartum. Serum was separated from the blood immediately after the collection and stored in a -70℃ deep-freezer until analysis.

The neutrophil counts trended to decrease after birth, but they were within normal ranges. The concentrations of electrolytes(Na, K, Cl) and RBC were not changed or trended to increase after a slight decrease. The concentration of cortisol was maintained high level (42.4±25.3ng/㎖) after birth, but it was decreased sharply on the 2nd day of postpartum (13.4±11.4ng/㎖). The IgG concentration before the intake of colostrum was low(1.1±1.1㎎/㎖), but it was sharply increased and maintained high level after the intake of colostrum (2nd day, 15.4±1.7㎎/㎖). The IgA concentration after the intake of colostrum was sharply increased (2nd day, 18.0±4.4㎎/㎗), but decreased on 21th day to the level of pre-colostrum intake (1.9±0.7㎎/㎗).

Those results obtained from this experiment might be helpful to understand the immune response of Hanwoo calves after the intake of colostrum during the postpartum period.

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