

Maternal plasma Interleukin-6 and early conception failure in dairy cows

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Abstract

Pro-inflammatory cytokines may contribute to physiological, e.g., tissue reconstruction and vascularization, or pathological, e.g., inflammation or some metabolic disturbances, processes during pregnancy establishment. The current study aimed to investigate IL-6 plasma levels at 30 and 45 days post-insemination (dpi) in pregnant and non-pregnant dairy cows. The cows were examined for pregnancy diagnosis at 30 and 45 dpi. Cows (n=71) were assigned into four groups: Non-pregnant at 30 dpi (n=16), pregnant at 30 dpi (n=36), non-pregnant at 45 dpi (n=11), and pregnant at 45 dpi (n=8). Blood samples were collected at 30 and 45 dpi for IL-6 assay. Results showed high levels of plasma IL-6 at 30 dpi either cow-conceived or not. Cows with healthy embryos at 45 dpi had lower concentrations of IL-6 than cows with late embryonic death. The plasma IL-6 concentrations showed different patterns of changes in dairy cows during the first two months of pregnancy.

Key words: Pregnancy loss, Embryonic death, IL-6, Cows

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