

Serum interleukin-6 levels in transition dairy cows with subclinical ketosis

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Summary

This research communication aimed to describe the concentrations of pro-inflammatory interleukin-6 (IL-6) in subclinical ketotic and non-ketotic fresh lactating dairy cows. The question whether ketotic dairy cows show high levels of IL-6 compared to non-affected cows was based on already reported relationships between metabolic disorders and inflammatory mediators. Blood samples from 24 diseased, recovered and healthy dairy cows was available and revealed differences between the groups but these results proved contrary to what had been expected. Non-ketotic dairy cows (recovered as well as the control group) showed the highest IL-6 concentration compared to cows suffering subclinical ketosis in this study. Nonetheless, the general IL-6 level for all probes was on a low level averaging 27.2 pg/ml \pm 10.2 and within a close range. The nonappearance of a higher degree of pro-inflammatory mediators in cows suffering subclinical ketosis as well as poor relationships between IL-6 and serum BHBA (β - hydroxybutyrate), NEFA (non-esterified fatty acids), and total Bilirubin suggest that IL-6 concentration is a poor indicator to indicate possible inflammatory conditions during subclinical ketosis in an early stage of lactation.