

Milk prolactin response after experimental infection with different coagulase-negative staphylococci in dairy heifers

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Dairy heifers infected with coagulase-negative staphylococci (CNS) seem to produce more milk than uninfected heifers. This study investigates the response of milk prolactin (PRL) as a mediator of milk yield (MY) after CNS infection. Eight mid-lactating Holstein-Friesian heifers were challenged in a split-udder design with 3 different CNS isolates: one *S. fleurettii* isolate (from sawdust) and two different *S. chromogenes* isolates (one isolated from a subclinical mastitis case, the other from a teat apex). Three quarters were simultaneously inoculated with $1,0 \times 10^6$ CFU. The remaining quarter was infused with phosphate-buffered saline. Milk PRL was measured by radioimmunoassay at various time points until 72 hours after challenge. A linear mixed regression model, using heifer and quarter as random effects, was built to evaluate the PRL response after infection with sampling time and inoculation type as fixed effects. All bacteria were eliminated before the end of the trial. Although this study did not focus on MY, a decreased production was observed in all quarters. The infection status did not have a demonstrable effect on milk PRL ($P = 0.40$). However, milk PRL generally changed over time ($P < 0.05$). In conclusion, milk PRL is not likely to explain any difference in MY after a subclinical infection caused by *S. chromogenes* or *S. fleurettii*.