

Evaluating Pain Response of Metritic versus Healthy Cows

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Metritis is a uterine infection commonly affecting dairy cows around parturition and little work has been done evaluating the pain associated with this disease. Physiological changes, such as back arching, are indicative of pain and tissue palpation has been shown to be an effective evaluation of visceral pain. The objective of this study was to evaluate the pain response through rectal palpation in cows diagnosed with metritis as compared to clinically healthy cows through rectal palpation. A systematic health check were performed on postpartum Holstein cows (n= 52) between 3 and 15 d in milk to determine health status. The health check consisted of a passive rectal palpation where the examiner's hand was placed above the area of the uterus in a stand-still position to evaluate the response to visceral pain, followed by a vaginal examination. Vaginal discharge (VD) scoring was used to diagnosis metritic cases by the following scale no mucus or clear mucus, no odor = 0; cloudy mucus, with some pus or blood, no odor = 1; mucopurulent, foul smell= 2; purulent, foul smell = 3; and putrid= 4. A total of 23 metritic cows (VD \geq 2) occurred, and thus there were 29 healthy cows used in the study. The back arch was recorded using video recording and computer programing was used to determine back arch area (cm²). Metritic cows on the day of diagnosis had an average vaginal discharge score of 3.48 versus healthy cows with an average score of 0.86 (P < 0.0001). The back arch of metritic cows was higher than healthy cows during the passive rectal palpation (566 cm² vs. 771 cm², P < 0.01). As expected, the VD as greater for metritic than healthy cows. In addition, it was determined that passive rectal palpation provides an indication of pain associated with metritis.