

EFFECT OF SUBCLINICAL ENDOMETRITIS ON OVARIAN AND UTERINE
RESPONSE TO A TIMED AI PROTOCOL IN DAIRY COWS

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During parturition the uterus of the dairy cow is more exposed to the environment. Bacteria colonize the uterus causing infection. The immunological response of the cows is able to clear infection, however, around 20% of cows remain with infection and a prolonged inflammatory process after calving. Uterine disease with clinical or subclinical signs [subclinical endometritis (SCE)] can develop. Uterine disease impairs fertility by decreasing pregnancy rates, increasing days open and embryonic losses.

The short or long term effects of uterine disease on the ovary and uterus are not clear. This study evaluated the effects of SCE diagnosed by cytobrush on ovarian and uterine response to a timed AI protocol in dairy cows. Ovarian structures were evaluated by ultrasound at specific time points of the timed AI protocol. Blood samples were taken to evaluate plasma progesterone and IGF1 concentrations. Uterine performance was evaluated by using ISG15 expression in response to INFt secretion from the embryo. Pregnancy rate was evaluated by using different methods of pregnancy detection.

Overall, no major alterations were found in cows diagnosed with SCE on ovarian response to a timed AI protocol. Pregnancy rate also was similar in uterine healthy cows and cows with SCE at the first cytobrush exam, but 100 % of embryonic losses were found from day 25 to 45 after timed AI based on the second cytobrush exam.