Research Summaries

Moderator: **Lawrence Heider**

Risk of an Altered Interestrus Interval Following Clinical Mastitis in Dairy Cattle

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Clinical mastitis and reproductive records from two southern California dairy herds were used in a cross-sectional study to determine the risk of an altered interestrus interval following clinical mastitis. An altered interestrus interval (IEI) was defined as estrous cycles occurring at either less than 18 day or greater than 24 day intervals. The data were stratified by herd to assess herd differences. Stratification was also used to assess confounding by cow parity. The predominant pathogen isolated from mastitis cases in Herd 1 was *Staphylococcus aureus*, whereas the majority of cultures of mastitic milk from Herd 2 yielded gram-negative isolates. Records from cows in Herd 1 which had coliform organisms cultured from mastitic milk were eliminated from the analyses. In Herd 1, cows with clinical mastitis were less likely to have an altered IEI (Risk ratio [RR]= 0.95;95% CI=0.57,1.6) than herdmates without clinical mastitis. However, cows in Herd 2 were 1.6 times more likely to have an altered IEI following an episode of clinical mastitis compared to herdmates without clinical mastitis (95% CI=1.27,2.01).

Incidence and Treatment of Abnormal Postpartum Ovarian Function in Dairy Cows

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The objectives of this study were to determine 1) the incidence of abnormal postpartum ovarian function in a large dairy herd in North Central Florida and 2) the effectiveness of gonadotrophin releasing hormone (GnRH) in treating this condition. The study was conducted from April 1988 to June 1989. The internal genitalia of the cows were initially examined per rectum (Day 0) between 19 and 29 (23 ± 0.25) d after calving and again 14 d later (Day 14) for evidence of uterine involution and ovarian activity. The presence of a palpable corpus luteum (CL) and retrospective determination of plasma progesterone (P4) concentrations >1 ng/ml on Day 0 were the criteria used to assess ovarian activity. Cows possessing a palpable CL and P4 concentrations > 1ng/ml on day 0 were determined to be cycling normally. A total of 1356 cows was used in this study. On Day 0, two groups were formed: Group 1 consisted of normal, cyclic cows, Group 2 of noncyclic cows. On Day 0, alternate cows in Group 2 were treated with GnRH (100ug i.m.). On Day 14, the previously nontreated cows in Group 2 were further divided into two groups, forming Group 3, nontreated cows and Group 4, cows treated with GnRH at this time. Group 5 was comprised of cows from Group 2 that did not respond to treatment with GnRH on Day 0; these cows were treated on Day 14 with GnRH (100ug i.m.). Group 6 was comprised of nontreated cows from Group 2 that responded spontaneously (presence of a CL) by Day 14. Reproductive parameters evaluated were the percentage of cows pregnant within 180 d after calving and at the end of the study, the number of days open and the number of services per conception. Data were statistically analyzed using Chisquare and survival analysis. The results of this study indicate that the incidence of abnormal postpartum ovarian function in this herd was 30.2% and that the nontreated cows experienced more days open and required more services per conception than the treated cows, those that were cycling normally on the initial examination, and those that responded spontaneously by Day 14.

Key words: dairy cows, postpartum, ovarian function, GnRH