THE CLINICAL EVALUATION OF PHYSIOLOGICAL POSTPARTUM UTERINE INVOLUTION IN MIXED-BREED DAIRY COWS

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This study evaluated the dynamics of uterine involution and validated the examination of vaginal secretion as an auxiliary method for the clinical diagnosis of endometritis in crossbreed dairy cows. Nineteen dairy cows without calving difficulties and hormonal therapy, but with complete uterine involution were evaluated from parturition through 44 days postpartum (dpp). All cows were evaluated by complete clinical and gynecological examinations at days 0, 3, 7, 10, 14, 21, 28, and 43. The clinical evaluation observed possible alterations to body score, rectal temperature, cardiac, respiratory and ruminal frequencies, and the color of the mucus membranes. The gynecological examinations were done by transrectal palpation and ultrasonography, vaginoscopy, and physical examination of the vaginal contents. The results obtained were statistically analyzed by comparing the averages, standard deviations, and percentages of the descriptive data. The clinical alterations were restricted to ruminal atony (22.2% of cows evaluated), and ruminal hypotony (66.7% of animals). Statistical differences were observed when the diameters of the gravid and non-gravid uterine horns were compared until 14 ddp, while the uterus was already observed within the pelvic cavity effective from 28 ddp in all cows. At parturition, vulvar, vaginal, and external cervical edema and hyperemia were observed in 80% of the cows evaluated, but were not observed at 14 dpp. Significant statistical differences were observed when the vaginal secretions were analyzed. Mucohemorrhagic and chocolate-colored mucus secretions varied throughout the postpartum and disappeared at 28 ddp. Purulent mucus secretion was observed from 3 - 28 ddp. At 21 ddp, 29.4% of the cows evaluated had mucopurulent secretions, with 23.5% having purulent secretions. At 28 ddp, mucopurulent secretions occurred in 11.8% of the animals evaluated, with 23.5% demonstrating purulent secretions. These secretions were admixed with mucus of fetid odor, clinically characterizing endometritis. However, at 43 dpp the mucus was either clear or odorless and absent, requiring no treatment. This study demonstrated characteristics that are specific to uterine involution in dairy cows. However, more studies are needed for the correct diagnosis and treatment of endometritis based on these characteristic between 21-28 ddp, since spontaneous recuperation was observed at 43 dpp.

Keywords: Postpartum; dairy cows; endometritis; vaginal secretions