THE INCIDENCE OF SUBCLINICAL ENDOMETRITIS AND ITS EFFECTS ON THE PREGNANCY RATE OF BOS INDICUS BEEF COWS

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The objectives were to determine the prevalence of subclinical endometritis and evaluate its reproductive effect on Bos indicus beef cows. Endometrial samples were obtained from 41 Nelore postpartum cows before fixed-time artificial insemination (AI) was done: 11 were primiparous (42±6 days postpartum, dpp; 31-52 dpp) and 30 were multiparous (44±8 dpp; 29-60 dpp). The ovulation was synchronized; briefly, cows received 0.5mg IM injection of estradiol cypionate at the time of insertion of an intravaginal device containing 1.9 g of progesterone (CIDR). At day 7, 12.5mg IM dinoprost tromethamine was administered; day 9, a 0.5mg IM injection of estradiol cypionate was given on CIDR removal with temporary calf removal, followed by fixed-time AI 48 h later. After this initial AI, cows were inseminated on the observation of estrus and cows were inseminated within 12 h of detection of standing estrus. The diagnosis of pregnancy was done 28 d after AI by transrectal ultrasonography, and confirmed at 45 d of pregnancy.

The collection and analyses of endometrial cytology samples (low-volume uterine lavage) were done as described by Gilbert et al. (2005). Samples from each cow was categorized as positive subclinical endometritis when the proportion of neutrophils was >10%. The pregnancy rate resulted from the first AI of Nelore cows was 68.3% (28/41). The pregnancy rate after the first AI was 45.4% (5/11) for primiparous and 76.6% (23/30) for multiparous cows. The total pregnancy rate after the second round of AI was 73.2% (30/41). However, this was 45.5% (5/11) for primiparous and 83.3% (25/30) for multiparous cows. The results obtained from these groups were within expected values, and were similar to other studies. Twelve percent (12.2%; 5/41) of all cows investigated had subclinical endometritis; this being in 18% (2/11) of primiparous and 10% (3/30) of multiparous cows. Further, subclinical endometritis did not affect the pregnancy rate either at the first AI (p=0.1596, Fisher’s exact test) or at the second AI (p=0.2998, Fisher’s exact test). Additionally, all cows with subclinical endometritis became gravid at the first AI. These results suggest that the importance of subclinical endometritis in Nelore cows is probably of reduced significance when compared to dairy cows, and that subclinical endometritis in these animals did not affect the pregnancy rate of Nelore beef cows.

Keywords: Subclinical endometritis, postpartum, beef cows, endometrial cytology