

EFFECT OF PRESENCE OF CORPUS LUTEUM AT THE TIME OF FOLLICULAR ASPIRATION ON OOCYTE RECOVERY AND IN VITRO COMPETENCE IN *Bos indicus* CATTLE

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Two hundred thirty two follicular aspirations (ovum pick up - OPU) rounds were performed in a total of 10 Gir (*Bos indicus*) cows. At the time of each follicular aspiration round (once a week), with the use of an ultrasound (Scanner 200s) equipped with a setorial intravaginal probe of 7,5 MHz, the follicles in the ovary, the diameter (\emptyset) of the two biggest follicles, and the presence of a corpus luteum (CL) were evaluated. Then, all follicles with $\emptyset \geq 3\text{mm}$ were aspirated and the oocytes were morphologically evaluated, matured for 24 hours in TCM-199 media + 10% of estrus-cow serum and FSH, for 24 hours at 38°C, with 5% of CO₂ and 95% of humidity. The matured oocytes were fertilized by sperm cells that were selected by the swim up procedure. Twenty two hours after fecundation in FERT-TALP media + 10 $\mu\text{L/mL}$ of heparin, with a inseminating dose of $2,0 \times 10^6$ spz/mL, the possible zygotes were cultivated with granulosa cells in CR_{2aa} media + 10% of BFS. In the statistical analyzes, the OPU rounds were divided according to the presence of a CL in the ovary (With/CL vs. Without/CL). The residue distribution was analyzed and data transformation was performed in non-normal distributions. Variables were analyzed with ANOVA and Chi-Square test. Conclusions were made based in a significance level of 5%. Out of 232 aspirations, 2195 oocytes were collected (9.6 ± 0.4 oocytes/cow/round). There were no interactions between presence of CL and OPU round. The number of rounds OPU (n) corresponding to the With/CL group vs. Without/CL group were, respectively, 90 vs. 142. The averages for With/CL group vs. Without/CL group were, respectively: Follicular pool (16.5 ± 0.6^b vs. 20.4 ± 0.8^a); Follicles $< 6\text{mm}$ (14.8 ± 0.6^b vs. 18.7 ± 0.8^a); Follicles with 6-9mm (0.5 ± 0.1 vs. 0.5 ± 0.0); Follicles $> 9\text{mm}$ ($1.2 \pm 0,1$ vs. 1.2 ± 0.1); \emptyset biggest follicle (12.2 ± 0.3 vs. 12.8 ± 0.4); \emptyset 2nd biggest follicle (7.1 ± 1.2 vs. 9.7 ± 1.8); Oocytes recovered ($9,6 \pm 0,6$ vs. $9,6 \pm 0,6$); Recovery rate (recovered oocytes/ aspirated follicles) [$842/1307$ (64,4%)^a vs. $1353/2553$ (53,0%)^b]; Grade 1 oocytes [($126/842$ (15.0%)^b vs. $289/1353$ (21.3%)^a]; Viable oocytes [$504/842$ (59.8%) vs. $814/1353$ (60.2%)]; Cleavage rate [$286/411$ (69.6%) vs. $373/522$ (71.5%)], and Blastocyst forming rate [$63/306$ (21.9%)^b vs. $122/416$ (29.3%)^a]. these results demonstrate that the presence of a CL at the time of follicular aspiration decreased the number of visualized follicles, but the number of total structures recovered did not change due to an increase in recovery rate. This might be due to aspiration of follicles that are not visible at the ultrasound ($< 3\text{mm}$). There was no effect of CL in the Blastocyst production 1.

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