**EFFECT OF THE PRESENCE OF CORPORA LUTEA ON IN VITRO EMBRYONIC DEVELOPMENT OF BOVINE OOCYTES**

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In vitro fertilization (IVF) with conventional and sex-sorted semen is used worldwide. Cleavage and blastulation are essential for a successful pregnancy (Peippo et al., 2001). Previous studies have reported inconsistent results regarding the effect of a corpus luteum (CL) on embryonic development (Islam et al 2007; Hajarian et al, 2016). The objective of this study was to determine the effect of CL on cleavage and blastulation rates of bovine oocytes after IVF with conventional or sex-sorted semen. Ovaries from slaughtered Holstein cows were collected. Those with at least one CL formed CCL group, while ovaries without CL formed OCL group. A total of 747 oocytes were collected and those of categories 1 or 2 (CCL n=238 and OCL n=138; Stojkovic et al. 2001) were matured, fertilized with conventional or sex-sorted semen (CONV n=133, SEX n=243) and cultured in vitro. Proportions of cleavage and blastulation in CCL and OCL groups fertilized by both types of semen were compared in a combined model using SAS (version 9.0) software. No interaction between semen type and corpus luteum criteria were observed. CONV showed higher proportions of cleavage and blastulation (104/133, 78.2% and 24/133, 18.0%, respectively) than SEX (102/243, 42.0% and 23/243, 9.5%, respectively; P<0.05). OCL yielded higher proportions of cleavage and blastulation (99/138, 77.7% and 26/138, 18.9%, respectively) than CCL (107/238, 44.9% and 21/238, 8.8%, respectively; P<0.01). Sex-sorted semen appears to be lees capable of in vitro fertilization, and that the presence of CL affects negatively cleavage and blastulation of bovine oocytes.