



A133 OPU-IVP and ET

Effect of hormonal treatments pre-OPU on oocyte recovery and *in vitro* embryo production in Girolando cows (*Bos taurus* x *Bos indicus*)

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The Girolando (*Bos taurus* x *Bos indicus*) breed is widespread in Brazil due to its morphologic and physiologic characteristics being favorable for dairy production in the tropics. The success and efficiency of the *in vitro* embryo production mainly depend upon the quantity and quality of oocytes recovered in OPU. To enhance the efficiency of the technique, the use of hormonal treatments pre-OPU may be necessary. The objective of this study was to compare oocyte recovery in the presence of a CL or not at the moment of the OPU and blastocyst production of cows subjected to different hormonal protocols pre-OPU. Twelve cyclic and non-lactating Girolando cows were blocked by parity and genetic traits and were randomly assigned to three groups: G1 - OPU in a random day of the estrous cycle; G2 - follicular wave synchronization, in which cows received on D 0 an intravaginal device of progesterone (CIDR[®], Zoetis, Auckland, New Zeland), 2 ml of estradiol benzoate I.M. (Gonadiol[®], Schering-Plough, Sao Paulo, Brazil) and 2 ml of PGF_{2α} I.M. (Ciosin[®], Schering-Plough, New Jersey, EUA), and on D 5 OPU was performed; G3 - similar to G2, adding I.M. injection of 40 mg of FSH (Folltropin[®], Bioniche, Belleville, Canada) on D 3. The cows underwent a total of six OPUs in a cross-over design, in which all of them went through all the treatments twice, in 30 days apart (between one OPU session and the next one). During OPU, the number of aspirated follicles was recorded and the presence of a CL was verified. Oocytes retrieved were quantified and classified, as well as the number of blastocysts produced in each experimental group. Data were analyzed by ANOVA. In a total of 68 OPU sessions, 778 follicles were aspirated, resulting in 689 COCs recovered (88.6%; G1 - 260; G2 - 278; G3 - 240; P>0.05). The average of aspirated follicles, oocytes recovered and viable oocytes per experimental group were, respectively: G1 - 10.8 / 9.4 / 6.1; G2 - 12.1 / 11.8 / 8.0; G3 - 11.4 / 9.1 / 6.2; (P>0.05). The average of *in vitro* matured COC, number of cleaved embryos and blastocysts produced per treatment were, respectively: G1 - 6.9 / 5.7 / 1.3; G2 - 6.8 / 5.2 / 1.3; G3 - 6.5 / 6.0 / 1.8 (P>0.05). The number of CL present at OPU was greater (P<0.05) in G1 (16 in 24 OPU) than in synchronized groups (G2 - 5 in 23 OPU; and G3 - 5 in 21 OPU). Hormonal protocols of follicular wave synchronization were effective to regress the CL, which can facilitate the OPU procedure. The FSH dose used did not influence the quantity and quality of oocytes recovered. Also, hormonal treatments to synchronize the follicular wave and the use of low dose of FSH aiming the efficiency of OPU did not improve embryo production. In summary, in Girolando breed, OPU performed every 30 days results in similar embryo production between synchronized and FSH-stimulated cows and those without a treatment previously to OPU.