



A156 Folliculogenesis, oogenesis, and superovulation

**Characterization of cystic ovarian condition in Nelore (*Bos Indicus*) cows used as oocyte donors****Otávio Augusto Faria<sup>1</sup>, Luzia Renata Oliveira Dias<sup>2</sup>, Luiz Gustavo Bruno Siqueira<sup>3</sup>,  
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Repeated ultrasound-guided follicle aspiration (OPU) may alter follicular dynamics in oocyte donors (Viana et al. 2010), probably due to changes in LH/FSH releasing patterns. Moreover, donors cows usually undergo frequent hormonal treatments to synchronize follicular wave emergence and are prone to become obese, both risk factors for the development of endocrine misbalance and, consequently, cystic ovarian disease (COD). Thus, the aim of this study was to characterize COD in Nelore (*Bos indicus*) cows previously used as oocyte donors. Cows (n=16) were selected based on records indicating recurrent occurrence of COD and lack of response to conventional treatments. The average weight and body condition score were 615.9±11.5 Kg and 4.0±0.1, respectively. Weekly transrectal ultrasonography was performed to evaluate the number of follicles and distribution among size classes, endometrial thickness, and clinical presence of mucometra (scored in a scale of 0 to 3). Non-pregnant, cyclic Nelore cows from the same herd (Controls) were used as a reference of physiological distribution of follicle population among size classes. Results are shown as mean±SEM. The average diameter of the largest follicle in cows with COD was 20.6±0.6 mm, larger than the usual maximum diameter of ovulatory follicles in Nelore (17.0 mm, Sartori et al. 2011), but smaller than the classic reference value to determine follicular cysts in *Bos taurus* (25 mm). However, 37.5 % (6/16) of donor cows did not have a follicle larger than 17 mm in at last one exam. When compared to controls, donor cows with COD had a greater number (3.6±0.2 vs 0.9±0.1, P<0.001) of follicles larger than the maximum diameter reported for the dominant follicle at deviation in Nelore (8 mm) and a lesser number (16.4±1.1 vs 23.5±2.6, P<0.01) of small follicles (≤4.9mm). Follicular population was negatively correlated both to the size of the largest follicle and the number of follicles ≥7.9 mm (R= -0.44 and -0.36, respectively; P<0.01). There was no difference in endometrial thickness between groups (4.4±0.2 vs 4.1±0.2 mm; P>0.05). In cows with follicular cysts, however, endometrial thickness was negatively correlated to the amount of mucus in the uterine lumen (R= -0.71). In summary, our results suggest that: 1) classification of follicular cysts must consider the expected range of follicular diameter in each breed; 2) COD in oocyte donors is characterized not only by ovulation failure and persistent dominant follicles, but also by an abnormal distribution of follicle population of distinct size classes; 3) COD decreases the average number of follicles on the ovaries of oocyte donors and, consequently, may compromise the outcome of OPU/IVF.

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