



A118 OPU - IVF and ET

Serum FSH, AMH related to number and morphology of oocytes in superovulated 4 to 7 months old Nelore breed females (*Bos Taurus Indicus*)

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The inclusion of prepubertal bovine females in reproductive management can make herd's genetic gain faster by shortening generation interval. However, these female oocytes have lower competence, blastocyst and pregnancy rates, when compared to those obtained from postpubertal animals. So, this study aimed to evaluate serum FSH and AMH concentrations in superovulated (TG-Treated Group) Nelore females of 4 to 7 months old, as in control group (CG) and their respective oocyte retrieval and quality by OPU (Storz Xenon300W Laparoscope, Tuttlingen, Germany). Nine females (cross-over design) were allocated at random to two groups: The CG (n=9), which the greatest follicle ablation was performed on D2 (5 days before OPU) with the aid of transrectal ultrasonography (MyLab 30VetGold, Esaote, 5-7.5MHz transducer, Genova-Italy). And to the TG (n=9), in which D0 represented the protocol beginning with intravaginal device Progesterone insertion (P4, 0.33g. Eazi-Breed-CIDR, Pfizer Animal Health, Brazil) plus 2mg Estradiol Benzoate injection (im Ric-BE, Tecnopec-Brazil). From D4 on, 6 FSH injections were given during 3 days (im, 12/12h: 1x40mg + 5x20mg = 140mg; Folltropin, Bioniche Animal Health, Belleville-Ontario, Canada). At the last FSH injection, LH (2.5 mg) was administered (Lutropin, Bioniche Animal Health, Belleville-Ontario, Canada). Then, the OPU was performed 20-24h after the last FSH injection (D7) and the P4 devices were removed thereafter. The follicles were counted and aspirated COCs were classified. Blood sample collections for FSH measuring were performed 2 days before, at the day and 1 day after the OPU procedure, as for the AMH measuring, it was performed at D5 and at D8. Data were analyzed by Kruskal-Wallis, ANOVA, T-test and Chi-square test. The TG had higher serum FSH concentrations ($p < 0.05$) on days 5 (1.16 ± 0.31 ng/ml), 6 (1.21 ± 0.45 ng/ml) and 7 (0.95 ± 0.26 ng/ml) than the CG (0.56 ± 0.17 ng/ml at D5, 0.60 ± 0.25 ng/ml at D6 and, 0.60 ± 0.14 ng/ml at D7). In addition, a greater number of aspirated follicles (152 vs. 95) and higher numbers of oocytes grades I and II (59% vs. 25%) were observed in the TG compared to the CG, respectively ($p < 0.05$). However, GC presented more grade III and IV oocytes when compared to TG (53.3% vs 37.1%), whereas the mean AMH concentration (1.48 ± 0.37 ng / ml) was not different between TG and CG nor between the days of collection ($p > 0.05$). Thus, this superovulation protocol led to higher serum FSH concentrations, which possibly had a role to a greater quantity and better quality of the retrieved oocytes, without changing the serum AMH levels in the animals. Financial support: EMBRAPA, CAPES, FAPEMIG e FAP-DF.