

**Abstracts - 35th Annual Meeting of the Brazilian Embryo Technology Society (SBTE)****OPU-IVF and ET****Effect of the synchronization protocol on embryo recovery after IFOT**

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**Resumo**

The aim of the present study was to compare the total structures recovery rates and embryo recovery rates after IFOT on animals submitted to different synchronization protocols. Multiparous non-lactating Nelore (*Bos indicus*) cows (n=39) were randomly assigned to one of the following protocols: animals in the Control Group (CG, n=20) received on D-10 a P4 intravaginal device (ReproNeo®, Global Gen) together with an injection of 2 mg of estradiol benzoate (EB; Sincrogen®, Global Gen); at D-8 the device was removed simultaneously to administration of 0.5 mg of prostaglandin (PG, i.m.; Indocio®, Global Gen) and at D-1, 1 mg of EB (i.m.) on D0 cows received injection of 25 µg of GnRH (TecRelin®, Tecnopec). In the second group cows were submitted to an adapted Ovsynch protocol, (OvS, n=19), on D-8 received a 50 µg of GnRH (i.m) and a P4 device that was maintained until D-3, together with administration of 0.5 mg of PG, that was repeated on D-2. After 10 hours from the second PG cows received and an injection of 25 µg of GnRH. The heat was recorded based on the Heat Watch® mark, inserted at the time of P4 removal. The IFOT was performed on D0, 52h (CG) or 72h (OvS) after P4 removal. The criteria used to choose a cow to IFOT was the heat detection (CG=95.0%; OvS=73.7%) and the presence of only one dominant follicle larger than 10mm. In total, 10 IFOTs were performed in each group and each injection was performed with 35 COC's (Grade I, II and III) on average, which were obtained by OPU from Nelore donors. The final number of injected COC's were 356 for CG and 314 for OvS. A single dose of semen was used for AI, immediately after IFOT. All animals had their ovulation evaluated 7 days later, and animals that presented a CL were submitted to uterine flushing. For comparison between treatments, continuous variables were analyzed by ANOVA and Tukey's, the percentage of recovered structures, recovered embryos and freezable embryos were analyzed by Chi-square test. Statistical significance was set at 5%. On average, the time from heat to IFOT was shorter (P=0.04) on CG (10.4h) than OvS (18.8h). The dominant follicle diameter (CG=13.6±2.1 vs OvS=11.7±1.2 mm) was similar on D0 (P>0.05). However, the CL diameter was larger (P=0.04) on GC (20.0±1.6mm) compared to OvS (17.5±1.2 mm). The recovery rate of total structures was greater (P>0.01) on CG (11.2%) than OvS (6.0%). However, the recovery of viable and freezable embryos did not differ (P>0.05) between CG (3.9% and 3.4%) and OvS (3.8% and 3.5%). In conclusion, both protocols are able to synchronize the estrous producing a dominant follicle at the time of IFOT. However, despite the very low embryo recovery on both treatments, the EB based protocol still is the best option to IFOT based on the percentage of recovered structures.

**Keywords:** TIFOI, hormone, oocyte, blastocyst.