

## Abstracts - 35th Annual Meeting of the Brazilian Embryo Technology Society (SBTE) OPU-IVF and ET CIRURGICAL DESCRIPTION OF LAPAROSCOPIC OVUM PICK-UP IN BUFFALO CALVES

Alysson Jorge de Oliveira Sousa <sup>1,2</sup>, Heytor Jales Gurgel <sup>1</sup>, Paula Sabrina Arruda Coelho <sup>1</sup>, Carla Rozilene Guimarães Silva <sup>1</sup>, Luiz Henrique Vilela Araújo <sup>1</sup>, Hamilton Silva do Nascimento <sup>1</sup>, Izamara do Socorro Ramos Rodrigues <sup>1</sup>, Luciano Cruz Pantoja <sup>1</sup>, Pedro Paulo Maia Teixeira <sup>1</sup>, Moyses dos Santos Miranda <sup>1</sup>

<sup>1</sup> IMV - UFPA - Instituto de Medicina Veterinária - Universidade Federal do Pará (Br. 316, Km, 60, Castanhal - PA), <sup>2</sup> IFPA - Instituto Federal do Pará - Campus Castanhal (Br. 316, Km, 60, Castanhal - PA)

## Resumo

The aim of this work was studying the technique of the laparoscopic ovum pick-up (LOPU) in buffalo calves, describing in detail its cirurgical particularities, complications and results. Six lactating Murrah calves aged between 3 and 5 months were used, raised on pasture. Three LOPUs were performed in each animal, with intervals of 15 days between surgeries, totaling 18 procedures. In order to facilitate the analysis of the surgical time, the procedures were divided into four stages: 1) Anesthetic and antisepsis procedure (AA); 2) Dieresis, abdominal insufflation and establishment of laparoscopic portals (DP); 3) Ovarian manipulation and aspiration (OM) and 4) Washing, desinsufflation and synthesis (DS), also making it possible to determine the learning curve of the technique in buffalo calves. After being sedated (Xylazine 0,2 mg/Kg), the calves were placed in a 45° Trendelemburg position. Two 10 mm and one 5 mm trocar were used to establish the three laparoscopic portals, located in the right and left inguinal and central hypogastric positions. The abdomen was inflated with CO2 (5L/min), stabilizing intra-abdominal pressure between 5-8 mmHg two atraumatic forceps (5 mm and 10 mm) were introduced into the inguinal portals for ovarian manipulation. For follicular aspiration, a 20-gauge needle, connected to a vacuum system calibrated to 50 mmHg, was introduced via transabdominal and oocytes were recovered in a 50 mL tube containing saline solution supplemented with 1% FBS and 10 IU/mL of Heparin, kept at 38°C. Data were submitted to ANOVA and subsequent Tukey test, the descriptive statistics (mean ± SD) was used to present the results. GraphPad Prism 9® Software was used for statistical analysis. The surgical total time (from sedation to removal of the animal from the stretcher) was 49.8 ± 10.1 min, and the step that took the most time was manipulation and ovum pick-up of both ovaries (20.6  $\pm$  9.7 min) (p<0.05) varying according to the number of follicles to be aspirated, there were 22.2% of cases of preperitoneal insufflation resulting in an increase in surgical time by 9.0 ± 1.0 min. The total number of aspirated follicles, recovered oocytes and viable oocytes were 126, 76 and 31, respectively. The same parameters per procedure were 7.17 ± 7.17; 4.22 ± 7.1 and 1.72 ± 4.2; respectively. The recovery rate was 60.3%. The high SD values demonstrated the great individual variation of the ovarian follicular reserve present in this species. The low rate of viable oocytes showed the lowest oocyte competence in prepubertal females. The short surgical time and the good recovery rate demonstrated that this is a safe technique, possible to be performed in farm environment also in the buffalo species, provided that the basic antisepsis procedures are respected, presenting an excellent postoperative response, allowing it to be performed repeatedly, without damage or side effects to the donor.