



134 Assisted Reproductive Technologies

**Transcervical is more efficient than surgical embryo collection in Brazilian hair sheep**

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This study compared the efficiency of either transcervical (TC) or surgical (laparotomy; LP) embryo collection in hair sheep. Santa Inês ewes (n = 27) were subjected to a short-term protocol for estrus synchronization and superovulation. Both cervix passage attempt and laparoscopic *corpora lutea* (CL) count were performed 12 to 24 h before embryo collection. Depending on the success of cervical passage, the ewes were collected by either TC (n = 16) or LP (n = 11). The cervical dilation protocol was applied in all ewes and consisted of 120 µg cloprostenol i.m and 100 µg estradiol benzoate i.v. (diluted in 2.5 mL of saline + 2.5 mL of ethanol), both given 12 h before, and 100 IU oxytocin i.v. 15 min prior to cervical passage attempt. All ewes were sedated with 0.1 mg.kg<sup>-1</sup> acepromazine and 0.2 mg.kg<sup>-1</sup> diazepam i.v. and then received an epidural injection with 2.0 mg.kg<sup>-1</sup> ketamine. The TC collection was performed using a circuit closed system (Circuito Embrapa for goats/sheep embryo recovery). LP collection was carried out using the same sedation procedures but with anesthetic induction with 4 mg.kg<sup>-1</sup> propofol and 0.1 mg.kg<sup>-1</sup> diazepam i.v. and maintenance with 3% isoflurane. Uterine flushing recovery was aided by a foley catheter and an urethral probe. Behavioral aspects such as time to standing and to eat after each procedure were recorded. Heart rate (HR) and rectal temperature (RT) were measured at 10 moments: before fasting, before sedation, during the procedure, immediately after the procedure, and 1, 3, 6, 12, 24 and 48 h after the procedure. Normal data were compared by one-way ANOVA followed by Student's t-test or Tukey's test. Non-normal data were analyzed by Kruskal-Wallis test followed by Student Newman-Keuls. the LP procedure took longer than TC (31.6 ± 14.3 vs 24.5 ± 6.5 min; P < 0.05). The uterine flushing recovery (99.2 vs 91.9%) and embryo recovery (60.5 vs 37.1%) were greater for the TC than LP method (P < 0.05). Compared with the LP group, TC ewes had a higher RT during (37.0 vs 36.4°C; P < 0.05) and immediately after (36.9 vs 35.7°C; P < 0.05) the procedures. HR was higher in TC when compared to LP group immediately after collection (101.8 vs 88.0 bpm; P < 0.05). However, HR was higher (P < 0.05) in the LP than TC group at 12 h (94.2 vs 79.8 bpm) and 24 h (108.7 vs 88.3 bpm) after the procedures. Behavioral aspects were not different between techniques (P > 0.05). This study demonstrated the overall superior efficiency of TC embryo collection in Brazilian hair sheep. FAPERJ, CNPq (400785/2016-1) and Embrapa (02.13.06.026.00.02).