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Evaluation of different protocols of epidural anesthesia for relaxing cervical in Santa Inês sheep

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The aim of this study was to promote analgesia and dilation in the cervix of Santa Inês ewes, allowing the passage of a stainless steel rod into the uterus for embryo collection by the nonsurgical method. Thirty primiparous ewes were studied. Each animal underwent four epidural treatments described below with minimum intervals of three weeks between the procedures. G1: NaCl 0.9% (saline - 1mL for each 7.5 kg); G2: ketamine (2.0 mg.kg⁻¹ Cetamin®, Syntec, Cotia, Brazil); G3: ketamine (2.0 mg.kg⁻¹) and morphine (0.1 mg.kg⁻¹ Dimorf® Cristalia, Itapira, Brazil) and G4: ketamine (2.0 mg.kg⁻¹) and xylazine (0.05 mg.kg⁻¹ kensol®, König, Buenos Aires, Argentina). For G2, G3 and G4 volume was completed with saline solution until the concentration of 1ml for each 7.5kg. For estrus synchronization, the ewes were injected with two doses of synthetic prostaglandin (0.5mL Prolise, Tecnopec®, São Paulo, Brazil) with an interval of 11 days. Nine days after the second injection, the animals were sedated with acepromazine (0.1 mg.kg⁻¹ Acepran®, Vetnil, Louveira, Brazil) and diazepam (0.2 mg.kg⁻¹ Diazepam, Teuto, Anápolis, Brazil) duct IV. Ten minutes after sedation of epidural space was punctured with a Tuohy needle and the animals received the epidural injections. Ten minutes later, a Collins speculum was inserted into the vagina, the cervix was clamped and tractioned until the vulvar commissure using an Allis tweezer and was fixed using two Pozzi clamps. The attempts to passage the cervix using a Hegar dilator were performed at 10, 20 and 40 minutes after epidural analgesia and each trial lasted five minutes. When cervix was traversed, a urinary catheter was inserted into the vagina using a mandrel and 20 to 40 ml of saline solution was injected into the uterus to confirm that the catheter was correctly positioned and thus allowing uterine flushing. The following parameters were analyzed using a scoring system (Rafael DeRossi, Small Rum Res 83, 74-8, 2009.): Relaxation of the vulva and vagina, anal relaxation, analgesia and cervical dilation. Data were submitted to ANOVA and Friedman test, and the comparison whether the uterus could be entered among groups was analyzed by the Chi-square test. Regarding analgesia and anal relaxation, there was no difference between G2, G3 and G4 (P>0.05) and all of them promoted adequate analgesia and anus relaxation, but just the G1 (P<0.05) no followed that. Regarding the transcervical passage rate, for G1 it was 50.0% (15/30), G2 53.3% (16/30), G3 46.6% (14 /30) and G4 53.3% (16/30). These results lead us to conclude that the protocols of epidurals used did not induced dilation of the cervix in ewes, although G2, G3 and G4 have promoted adequate analgesia.