days for both the gravid and non-gravid horn and radio-opaque markers method is a useful method to study changes of the uterine size after parturition in live ewes.

Key words: Ewe, Postpartum, Uterine Involution, Radiography

Funding: Urmia University

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607 (3437)
Intrauterine pressure response to oxytocin in cows treated at 12-14 h after uncomplicated calvings

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A recently validated, digital data acquisition and analysis technique for recording early puerperal intrauterine pressure (IUP) changes enables to test the effect of uterotonic drugs on uterine contractility in cows. In a previous study with untreated cows we found that mean contraction frequency, amplitude and area under pressure curves decreased significantly during the first 48 h after uncomplicated calving, with the largest drop (to nearly 50% of the initial mean values at 12 h postpartum) occurring between 12 and 24 h after parturition. Individual variation in uterine contractility between cows was high.

The present on farm study aimed to investigate the effect of a single dose of oxytocin on IUP during early puerperium. After shedding the fetal membranes within 12 h after calving, pluriparous dairy cows were randomly assigned to either a saline-treated control group (n=6) or an oxytocin treatment group (n=6) between 12 and 14 h after calving. For measurements of IUP, an open tip plastic catheter, which had been transcervically inserted and fixated to a stalk of a caruncle, was connected to an externally attached disposable pressure transducer. Within LabVIEW® (Vers. 5.0), operator-made programs were used for data acquisition (sampling frequency: 4 Hz) and analysis. Baseline IUP recordings were performed for 60 minutes after which either a single injection of 50 IU. oxytocin or 5 ml saline was given IM. Recording was continued for another 12 hours, from which only the first three hours were selected for analysis.

The results showed a significant (repeated measures ANOVA) elevation of mean contraction frequency ($P<0.001$) and mean total uterine activity (described as the sum of the area under accepted pressure curves; $P<0.05$) when the first period of 60 min. after injection was compared with the pre-injection period: frequency and total uterine activity increased by 68% and 122%, respectively. The effect of oxytocin disappeared during the 3rd hour after treatment. Saline treatment did not alter uterine activity significantly.

It is concluded that, although a single injection with 50 IU. oxytocin significantly stimulates uterine contractility when given between 12 and 14 h after uncomplicated calving, this effect lasts only shortly. The clinical benefit of such a treatment remains to be demonstrated.

Funding: Utrecht Int.PhD-Progr., OTKA-T043505, Hung. State Eötvös Scholarship, Bolyai János Res. Scholarship

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608 (2640)
Effects of sire genotype and fetal sex on bovine fetuses growth

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The present study evaluated the gestation of Nelore females which included fetal growth by B-Mode real-time ultrasonography. The aim of this work was to study the sire and calf sex effects in the fetal growth and birth characteristics. Four groups of Nelore females were mated with Nelore (G1), Canchim (G2), Aberdeen Angus (G3) and Simmental (G4) sires. The animals were maintained under intensive rotation grazing on fertilized pasture of Panicum maximum. The estrus synchronization was achieved using progestin, estradiol and pregnant mare's serum gonadotropin (PMSG). The fetal development was evaluated through ultrasonographics exams, accomplished at 31st, 45th, 59th, 94th, 150th, 192nd, 220th and 225th days of gestation. The evaluated parameters were the conceptus (embryo proper and diameters of the allantoic and amniotic cavities) and fetal head and optic diameters and circumference. At birth, the body weight, height, heart girth and head and optic diameters of the calves were evaluated. The results were analyzed by the procedure GLM of the SAS (SAS, 1993) and compared within groups. The studied characteristics did not show significant difference in fetal development at 122 days after conception, provided by the paternal breed or calf sex. At birth, the sire effect influenced the gestation length, birth weight, length, heart girth and optic diameter of the calves. Calves from the crossings with Bos taurus bulls (Simmental and Angus) showed phenotypical similarity and were more develop at birth, taking into account the weight, length and heart girth. The Canchim X Nelore calves litters were intermediary size and the pure Nelore calves were comparatively the smallest ones. The calf sex was also responsible for a difference in the gestational length and birth weight, both greater in male.

Uniterms: Gestation; Bos indicus; Bos taurus; Crossing; Fetal Growth; Sex.

Funding: FAPESP - processo n98/09889-9

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609 (2587)
OVIREP: An online course on ovine reproduction

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OVIREP is an online course, of six didactic units, presenting the sheep farming systems in Morocco and focusing on husbandry issues of sheep breeding. The didactic units of this course (physiology, lambing and lamb rearing, methods of reproduction and intensification, reproductive pathology) provide insights in breeding soundness of sheep and tools for managing a sheep enterprise.

The main goal of OVIREP is to apply husbandry and management principles to successful management of reproduction in sheep. This includes topics such as breeding, performance testing, health, nutrition, feeding and grazing systems, management and pathology matters. Current issues important to the sheep industry are also an important part of this course. Furthermore, this course provides the basic knowledge of sheep reproduction and husbandry needed for management of a sheep enterprise. The course gives a broad overview of sheep sector and its economic importance to Morocco.

OVIREP is a web-based course that contributes to (1) developing an understanding and appreciation for the sheep industry, (2) developing an understanding of the nutrition, reproduction, selection, and anatomy/physiology that is involved in livestock production, (3) providing learners with information for problem solving of infertility in sheep, and the opportunity to develop technical skills necessary for fertility evaluation, (4) teaching manipulative procedures for sheep handling, and (5) developing an understanding of the application, scientific principles, and recent research advancements involved in sheep production. In sum, the knowledge gained in this course acquaints the learners with a general understanding of sheep reproduction.

After completing this course, the learner will have the skills necessary to answer general questions and to solve fundamental