



histomorphological analysis is an effective technique to determine the real condition of the uterus, because it allows identifying the different uterine diseases. The endometrosis is a common endometrial disease in mares [1,2]. A detailed histomorphological characterization of endometrosis already exists for mares [3] but not for cows. Taking into account that characterization, the endometrosis is defined as an endometrial, periglandular and/or stromal fibrosis with alterations of the affected glands [1-3]. The aim of this project is the histomorphological description of the endometrosis in genital-healthy and sub/infertile cows. A total of 105 cows were assigned to two groups: I) 36 genital-healthy cows (age  $3.89 \pm 1.86$  years, parity  $2.33 \pm 1.4$ , open days  $94 \pm 28.4$ ) were taken endometrial biopsies, II) 69 sub/infertile cows (age  $4.38 \pm 1.56$  years, parity  $2.01 \pm 1.19$ , open days  $252.82 \pm 163.83$ ) were taken histological sections of the uteri. The samples were examined and characterized according to histopathological alterations [3]. The analysis of the samples was carried out at the Institute of Veterinary Pathology at the University of Leipzig, Germany. Data analysis was performed by using SPSS version 18.

An active fibrosis occurred in 96.2% of the cows, 1.9% showed an inactive and 1.9% a mixed endometrosis. A non-destructive appearance of the endometrosis was observed in 88.6% of the examined cows, and the rest of them (11.4%) showed an endometrosis with destructive character. The mild active, non-destructive endometrosis predominated over the other types of endometrosis. A severe and destructive endometrosis were more often observed in the sub/infertile cows than in the genital-healthy cows. A notable aspect of this work is the evidence of a statistically significant correlation between the degree of endometrial alterations and the fertility status of dairy cattle. The longer open-days period of the sub/infertile cows could therefore be a result of the altogether, in character and degree, more severely damaged endometrium in this group. Hence, taking into consideration the present results, it can be assumed, that the mentioned alterations have a negative influence on the bovine reproductive capacity. The present investigation can serve as a basis for future fertility prognostic evaluation.

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## PW1026 - Monitoring of uterine contents reduction and reproductive restore during breeding season in goats affected by Hydrometra

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The hydrometra is an important cause of infertility in dairy goats. By the use of ultrasound (US), diagnosis of hydrometra became more evident and it was possible to detect the relatively high occurrence of concomitant follicular cysts. Thus, the aim of this study was to evaluate uterine drainage and fertility rate after the use of d-cloprostenol treatment associated or not to GnRH. The study was performed during the breeding season of 2015 in Minas Gerais, Brazil. A total of 20 Saanen goats, aging 1 to 7 years old, weighting  $71.2 \pm 18.2$  kg and showing body condition score (BCS) of 2.75 to 4.75 (scale 1 to 5) was diagnosed with hydrometra. These goats received three doses of 37.5 mcg of d-cloprostenol (Prolise®, Tecnopec LTDA, São Paulo, Brazil) laterovulvar at 10 days apart (D0, D10 and D20). At D0, goats were randomly assigned into two groups to receive 1 mL (25 mcg) i.m. of GnRH (Gestran Plus®, Tecnopec LTDA, São Paulo, Brazil) or 1 mL of 0.9% saline i.m., respectively. Transrectal US (Mindray® M5Vet, Shenzhen, China) was performed at five days-interval from D0 to D25. According to uterine images, a range between 0 and 4 (grade 0: absence of liquid and grade 4: full of liquid) was applied to score uterus. Following each US, goats had their weight and BCS measured to estimate the amount of fluid lost, since nutrition was not altered. On days 0, 5, 10, 15, 20 and 30, blood samples



were collected for analysis of plasma progesterone (P4) concentration. Pregnancy rate was assessed 90 days after the end of treatment. Quantitative and qualitative data were analyzed by one way ANOVA and Chi-Square test, respectively, at 5% minimum significance. US at D0 revealed that 60% (12/20) of the goats presented a grade 4 uterus. All goats (20/20) responded to cloprostenol administration leading to reduced concentrations of P4. After the first and second d-cloprostenol administration, 50% (10/20) and 95% (19/20) of the goats, respectively, had their uterine fluid totally drained. In one female, full emptying of the uterus has occurred only after D20. After drainage, it was possible to detect ovarian cyst and hydrosalpinge in one (5%) and two (10%) goats respectively. Females weighted an average of  $6.1 \pm 7.6$  kg less and, interestingly, a goat presented a decrease of 30.3 kg at D25. US at 90 days after the end of treatment (D110) revealed 55% of pregnancy rate (11/20). Fertility did not differ (Chi-Square test;  $P > 0.05$ ) for GnRH (5/10) and Control (6/10) treated goats. In goats that were not pregnant, it was noted that follicular cyst and hydrosalpinges remained intact after treatment and two goats (10%) showed hydrometra again. The use of three doses of d-cloprostenol 10 days apart was efficient for draining the contents of the uterus resulting in a relative good pregnancy rate whilst GnRH promoted no extra benefits.

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### **PW1027 - Endometritis Post Puerperal Treatments in Dairy Cows**

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In the postpartum period, the bacteria can invade the uterine cavity via ascending through the birth canal. There is a consensus in the literature that up to 40 % of the animals presents metritis during the first two weeks after birth, and 10 to 15 % of these animals, the infection persist for at least three other weeks. This information emphasizes that the endometritis as a major cause of reproductive and economic losses in dairy herds. For this reason, the present study aimed to evaluate and compare the efficacy of Cefapirin with other antimicrobial (oxytetracycline) usually applied for post puerperal infections treatment. The experiment was conducted with a sample of 60 cows between the 3rd and the 5th week postpartum, divided into two groups according to birth order. The group 1 (n = 30) received a single uterine infusion with 500 mg cephapirin, the group 2 (n = 30, control) was treated with infusion of 2 g of oxytetracycline hydrochloride diluted in 50 mL of saline (single dose). The total rate of clinical cure was 73.3% for Group 1 and 46.7% for group 2 ( $p < 0.05$ ). In relation to uterine cytology, results of groups 1 and 2 were compared, and it is considered negative cytology animals with less than 10% of polymorphonucleate cells. Then, the first group was 81.8% and the second group with 57.1% negative cytology ( $p < 0.05$ ). Regarding the reproductive performance after treatments the service period of the group 1 was 142.3 days and Group 2 164.5 days ( $p < 0.05$ ). In addition, the Group 1 also obtained the highest number of pregnant animals to first insemination and 60, 90, 120 and 180 days postpartum. Therefore, it was concluded that the uterine infusion with Cephapirin 500 mg in single dose for the treatment of endometritis showed higher efficiency than conventional treatment with Oxytetracycline.

### **PW1028 - Characteristics of the ovarian activity in sub-fertile and fertile beef cows**

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Sub-fertile beef cows have greater progesterone (P4) concentrations than fertile cows associated to a similar area of the corpus luteum (CL) [1]. The aim of this study was to test the hypothesis that this difference is related to differences in the size and number of granulosa cells of the dominant pre-ovulatory follicle.