

Species abstracts

Small animal

ENDOMETRIAL CYTOLOGY IN THE BITCH NUCLEI MEASUREMENT IN DIFFERENT PHASES OF THE ESTROUS CYCLE AND IN UTERINE DISORDERS

D. Groppetti¹, A.M. Pecile¹, S. Arrighi², F. Cremonesi¹

¹ *Department of Veterinary Clinical Science, Università degli Studi di Milano, Via Celoria, 10 Milano, Italy*

² *Department of Veterinary Science and Technology for Food Safety, Università degli Studi di Milano, Via Celoria, 10 Milano, Italy*

The cytology of the canine uterus is a relatively new research field and the nuclear appearance of the endometrial cellular population has not yet been examined. The objective of this study was to investigate aspects of the endometrial cell nuclei throughout the reproductive cycle and in cases of uterine disorders. A total of 46 dogs that had undergone ovariohysterectomy were used, including 35 healthy bitches (5 prepubertal, 6 in proestrus, 6 in estrus, 9 in diestrus and 9 in anestrus) and 11 bitches with uterine pathologies (2 cystic endometrial hyperplasia, 1 hydrometra, 5 pyometra, 1 uterine stump and 2 subinvolution of placental sites). Stage of the estrous cycle was determined by progesterone concentrations (ELFA system, miniVidas, Biomerieux, France). The cytologic uterine samples were collected immediately after surgery by apposition of the endometrial surface on a slide, stained with hematoxylin and eosin, and examined under an Olympus BX51 light microscope. Each slide was analysed for the presence of: single endometrial epithelial cells, groups of normal and degenerate endometrial epithelial cells, naked nuclei, erythrocytes, leucocytes, macrophages, plasma cells and bacteria. The cells present in 20 fields of each slide, at 400 $\times$ magnification, were counted and the mean $\pm$ S.D. number of cells for field calculated. Computer morphometry evaluation, expressed as mean $\pm$ S.D. of the nuclear area, perimeter, diameter, density, aspect and roundness of the endometrial epithelial nuclei, was performed at 400 $\times$ using software for image analysis (Image-Pro Plus, Media Cybernetics, Inc). For each sample, a total of 100 nuclei were evaluated. Histological examinations confirmed the diagnosis of the uterine state. Data were analyzed with a Student's *t*-test. Proestrus and

estrus had similar distribution of endometrial cell population and analogous nuclear features ($P > 0.1$). The nuclear morphometry was significantly different among the remaining stages of the reproductive cycle. Cytological specimens from middle diestrus to early anestrus had epithelial signs of involution, with foamy cells and pyknotic nuclei and predominant macrophages. The uterine cytological appearance of late anestrus abruptly changed; a great number of intact cell groups with round-shaped nuclei and uniform cytoplasm were present. Uterine pathologies were always characterised by degenerate endometrial cell groups with cytoplasmic large vacuoles and nuclear alterations. In conclusion, nuclei morphometric data of endometrial epithelial cells differed significantly among phases of the reproductive cycle in healthy dogs (no difference between proestrus and estrus) and allowed to discriminate among uterine disorders. The potential role of the nuclear morphometry of the canine endometrium should be further investigated in view of a useful reproductive soundness examination of the bitch.

Keywords: Endometrial cytology; Nuclear morphometry; Bitch; Canine

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INDUCTION OF ABORTION IN QUEENS BY ADMINISTRATION OF AGLEPRISTONE (ALIZIN[®]): PRELIMINARY RESULTS

R.N. Favre, F. Giménez, M.C. Stornelli, C.M. Tittarelli, C.A. Savignone, R.L. de la Sota, M.A. Stornelli
Departamento de Ciencias Clínicas, Facultad de Ciencias Veterinarias, U NLP, Calle 60 y 118, La Plata, B1900AVW, Buenos Aires, Argentina

Aglepristone is a well-known drug used for pregnancy termination in bitches with satisfactory efficacy and excellent general safety. Nevertheless, pregnancy termination in the queen is less documented, especially with antiprogesterone. The aim of this study was to assess the efficacy of aglepristone to induce abortion in queens. The hypothesis was that aglepristone would induce termination of mid-pregnancy in queens without side effects. Six adult queens (age, 24–36 months; weight 3–4 kg) were maintained under artificial illumination (14-h light:10-h dark) in cages and monitored daily for estrous behavior and vaginal cytology. At evidence of estrus, the queens were placed with a tom cat for 48 h. First mating was documented. Twenty-five days after mating, ultrasonography was