ABSTRACTS

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Clinical, endocrinological, ultrasonographic and histological findings of granulosa cell tumor in the bitches

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OBJECTIVES AND METHODS: Ovarian tumor in the bitches are relatively uncommon. Three histological types of ovarian neoplasia were described: epithelial, sex cord/stromal and germ cell tumors (1). Granulosa cell tumor, origin to the sex cord/stromal cells, the incidence is the most common among ovarian neoplasia and usually was diagnosed in nulliparous, intacts and adulte-olds bitches. Generally is functional, variable of diameter (4-16 cm), benign, unilateral, but bilateral masses have been described (2-6). The aims of this work were to described the clinical, endocrinological, ultrasonographic and histological aspects of granulosa cell tumors in five bitches. Intact bitches, of different breed, aged from 7 to 14 years old, were submitted to clinical, ultrasonographic (Esaote My-lab 30 equipped with microconvex probe 6-7,5 MHz) and anatomo-histophatology esamination of genital tract. In one bitche blood samples were collected, by venopuncture of cefalic vein, 24, 48 and 72 hours before and 24, 48 and 72 hours after surgical treatment. Plasma was analyzed for concentration of immunoreattive inhibin, estradiol 17-β (E2) and testosterone(T) by RIA, and for progesterone (P4) by EIA.

RESULTS: Two subjects in persistent estrous presenting vulvar swelling and serosanguineus vulvar discharge, one was in diestrous and purulent vulvar discharge were observed and the others in anaestrous: one of these had abdominal alopecia, iperpigmentation, hipercheratosy of the skin and penile like clitoris. The tumors masses were palpable per abdomen and uterine enlargement was reported in bitch with purulent discharge Hematological and serum biochemistry profiles were within normal ranges exception in one case with anemia and in another with neutrophilia. Concentration of immunoreactive inhibin, T and E2 shown an evident decrease after neoplastic removal (2.13±0.05 versus 0.14±0.1 ng/ml, 501±16 versus 81±16 pg/ml and 21.1±7 versus 7.9±1.9 pg/ml respectively) while P4 concentration remain at very low level (0.17 ± 0.03 versus 0.16 ± 0.02 ng/ml) comparable with that of an anoestrus bitch (<1ng/ml).The ultrasonographic exam visualized one/or two enlarged ovary (one case) predominantly solid (ecogenic or iperecogenic area) cystic (anechoic fluid-filled areas separated by echogenic septa) or solid with a cystic component. In diestrous bitche the uterine luminal content was hypoechoic and the endometrium appears thick and irregular. Histological examination confirmed the diagnosis of granulosa cell tumor in all cases; all the histological patterns were observed, often in combination within the same tumor. Generally the cells were round to polygonal, with a variable amount of cytoplasm, frequently with clear vacuoles, mitotic activity was generally low (except bitch in diestrous) and anisocytosis and anisokaryosis moderate.

CONCLUSION: In this study the granulosa cell tumor occur in middle age to older intacts bitches, only one case was bilaterally and the clinical signs are related to production of sex hormone (5). The ultrasonographic exam is helpful for diagnosis of ovarian masses but when the neoformation is very large in diameter identification of origin could be difficult. In our study the echotexture of granulosa cell tumor was variable and ultrasound guided biopsy could be usefull. Therefore the histological examination of the neoformation is necessary to confirm clinical diagnosis.