ABSTRACTS

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Hyperplastic granulosa cells in a boxer bitch – A case report

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CLINICAL CASE: A 4.5 years old sexually intact Boxer bitch was presented with general painfulness and anorexia, pretreated with carprofen since four days. All parameters of the clinical examination were found normal. Complete blood count was performed and the results including serum biochemistry were within normal range. The vulva was highly edematous without vaginal bleeding. Vaginoscopy revealed a thin vaginal mucosa without hyperaemia consistent with late diestrus. Vaginal culture was performed including antibiogram as well as a vaginal smear. Using a modified Romanowsky stain, basal cells, parabasal cells, bacteria and PMN were found. On ultrasonographic examination, the diameter of the uterus was 1cm. The ovaries were inactive, showing no follicular activity. Antibiotic therapy with amoxicillin/clavulanic acid (10mg/2.5mg/kg, BID) was initiated. Two days later, the owner reported an improvement of the general condition of the bitch. According to vaginal culture moderate haemolysing E.coli were found with higher sensitivity to enrofloxacin than amoxicillin/clavulanic acid. The latter was replaced by enrofloxacin (5mg/kg, SID). During the following five days the general condition of the bitch deteriorated. Hence serum progesterone (1.96 nmol/l) and serum estradiol (866 pmol/l) were measured. A complete abdominal ultrasonographic examination was performed and again the ovaries appeared inactive. Except for a slightly thickened uterus there was no pathologic finding concerning other organs in the abdomen. The owner ruled out any exogenous source of estrogens. Due to the bad condition of the bitch and the high serum estradiol concentration, ovariohysterectomy was performed. The pathological examination of the ovaries revealed multifocal microfollicular hyperplasia of granulosa cells with Call-Exner bodies. Except moderate petechiae and a mild accumulation of secretion, uterus and endometrium were found normal. Four days after surgery the owner reported a marked improvement of the bitch’s general condition. Two weeks after surgery serum estradiol had decreased to 547 pmol/l. The vulvar edema was markedly reduced. Fourteen weeks after surgery the bitch was re-examined and clinical examination was normal. The owner reported a healthy, lively bitch with great improvement of her general condition. Serum estradiol was 499 pmol/l. Further follow-up examinations will follow.

DISCUSSION: The incidence of ovarian tumors among canine neoplasia is reported to be 0.5 to 6 % (1). The pathohistological detection of Call-Exner bodies as in the present case has been described as characteristic for granulosa cell tumor (GCT) (2). The mean incidence of GCT among canine ovarian neoplasia is 38 % (1). In the present case, elevated serum estradiol concentrations were detected which is reported to be a typical sign of GCT (3). Despite the high values of serum estradiol the bitch never showed typical symptoms of estrogen effects such as attractiveness to male dogs, prolonged heat with thick vaginal mucosa and vaginal bleeding, pale gums, petechiae, fever or alopecia (4), except the extremely swollen vulva. In the present case the serum estradiol concentration decreased after the ovariohysterectomy but remained at a high level for the following 14 weeks. Prolonged elimination from the body fat reservoir, dysfunction of the adrenal glands as well as metastases has to be considered. The latter is described to be found in intra-abdominal organs (1) as well as in the myocardium, lungs and prescapular lymph nodes (5).