ABSTRACTS

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Granulosa cell tumor in a bitch - Case report

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OBJECTIVES AND METHODS: Granulosa cell tumor (GCT) originates from ovarian sex cords and may be unilateral, measuring 4 to 16 cm diameter. Females with GCT generally have hormonal unbalance such as excessive estrogen and/or progesterone production, triggering prolonged estrus, dermatological changes, and cystic endometrial hyperplasia with serosanguineous, mucupurulent or purulent (pyometra) discharge. GCT incidence increases with age, and approximately 20% cases show metastasis. Diagnosis is generally based on abdominal palpation, abdominal radiography, exploratory laparotomy and histopathology. The initial treatment is ovariohysterectomy (OHE) and in cases of metastasis, chemotherapy (1).

The objective of this study was to report a case of a young bitch with granulosa cell tumor and absence of clinical signs. The 4-year-old bitch, attended at Araçatuba Veterinary Hospital, was nulliparous, had history of contraceptive use of unknown date, and scheduled to undergo elective OHE. During clinical examination, however, an increased volume in the ventral abdominal epigastric region of firm consistency was identified, while no change was noted in the specific physical examination. Complementary tests such as hemogram and abdominal radiography were performed. There were no changes in the hemogram and the radiograph showed presence of a mass, but the exact location of the latter could not be concluded. The animal underwent exploratory laparotomy which evidenced a mass occupying the whole right ovarian region with partial adherence of the kidneys and pancreas. Nephrectomy and OHE were carried out. Surgical specimens were sent to the Pathology Sector.

RESULTS: Following surgery, biochemical assays (ALT, creatinine and urea) were carried out, indicating an increase in the enzyme creatinine (149.17µmol/L). Results of the histopathological test revealed no significant uterine changes, whereas neoplasm showed infiltration by continuity of the renal capsule and kidney compression due to its expansive growth. The neoplasm was constituted of cells arranged in distinct areas, some showing tubular arrangement and morphologically similar to follicular granulosa cells, some with areas of luteinization and others with papillary growth areas suggestive of ovarian carcinoma.

The result of immunohistochemistry favored the diagnosis of granulosa cell tumor, since cells stained positive for vimentin, cytokeratin AE1/AE2 and inhibin, and the latter is considered the most sensitive and specific marker for granulosa cell tumors (2,3).

Histological sections were subjected to an immunohistochemistry panel, leading to the following results: CKAE1/AE3 (pan-cytokeratin): positive with focal distribution (+++), Vimentin: positive (+++), Inhibin: positive (+), alpha-fetoprotein: negative, CA125 (cancer associated antigen 125): negative, CK7 (cytokeratin 7): negative, CK20: negative, EMA (epithelial membrane antigen): negative.

CONCLUSION: The immunohistochemical and histopathological results characterized the neoplasm as granulosa cell tumor (GCT). Apart from the morphological variety of the cell population, there was no clinical manifestation, characterizing a probable nonfunctional tumor, which is a rare manifestation for this type of neoplasm.