ABSTRACTS

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Disseminated transmissible venereal tumour in a dog associated with Leishmania ssp

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OBJECTIVES AND METHODS: Transmissible venereal tumour (TVT) is a well-documented transplantable tumour in dogs, with no breed or sex predilection and a low metastatic rate (1). The clinical manifestations of TVT depend on the dog’s immune status (2) and occasionally it has been reported in association with leishmaniosis (3). In this case report, an 8-year-old intact crossbreed bitch was presented to the Veterinary Teaching Animal Hospital, with suspected pyometra. The clinical history included four normal deliveries, regular oestrus, last estrus occurred two months before and it was accompanied by mating with free roaming dogs. The owner reported the use of an unknown contraceptive during the last two years. Major complaints included emesis, loss of appetite, dyspnea and abdominal distention with ascites. The dog was submitted to gynecological examination, complete blood count (CBC), evaluation of hepatic and renal function, abdominal effusion ultrasound, ultrasonography and radiography. The patient was submitted to routine serum diagnosis for leishmaniosis (ELISA) due to the endemic condition of the related area (Araçatuba, Brazil 21º12'32", 50º25'58"E). After physical examination the bitch was submitted to an exploratory laparotomy.

RESULTS: Physical examination revealed congested oral and ocular mucosa, abdominal distention, with absence of nodular structures. Results of serum biochemistry analysis and CBC were normal, although hypoalbuminemia was present. Radiography showed increased generalized abdominal radiopacity, with reduced definition between the organs, being indicative of fluid inside the abdominal cavity. Ultrasound examination revealed increased echogenicity at the mesentery region, suggestive of peritonitis. Dorsal to the urinary bladder a complex echogenic structure with irregular margin was identified. Neither the uterine horns nor the uterine body were visualized by ultrasonography. Abdominal fluid cytology revealed the predominance of mononuclear rounded cells (75%), with low nucleus:cytoplasm ratio, basophilic cytoplasm containing well-defined vacuoles, suggestive of TVT, beyond neutrophils (17%), lymphocytes (5%), eosinophils (4%) and rare mast cells. Exploratory laparotomy was performed to establish the diagnostic and to determine whether the disease was treatable or not. During abdominal cavity evaluation, the presence of serosanguineous fluid was immediately observed. The serosa surface of the peritoneum, epiploon, spleen, liver and broad ligament were all covered by small granulomatous structures with light red colored. A mass of approximately 7.0cm x 5.0cm x 5.0cm was visualized at the peritoneum being attached to the abdominal aorta near the bladder. Due to the disseminated aspect of this tumour, a total splenectomy, nodulectomy, ovariectomy and partial removal of the epiploon was performed. The animal recovery after surgery indicated a poor prognosis, which was followed by death ten days later during treatment at the post-operative period. Cytology examination of the mass located at the abdominal cavity revealed the presence of rounded to ovoid cells, with abundant basophilic and intense vacuolated cytoplasm. A large nuclei with mitotic figures was present and few infiltrating mononuclear and neutrophil cells were observed among the tumour cells. Uterine histopathology confirmed the presence of tumour cells at the serous and endometrial surface, with presence of cystic endometrial hyperplasia. Tumour histology of the uterus and epiploon revealed loose sheets and cords of generally uniform rounded to ovoid cells. Cell margins were generally indistinct, nuclei were large, rounded with a single centrally placed nucleolus. There was a moderate amount of light pink and clear cytoplasm. Cytology and histology findings were consistent with TVT and leishmaniosis was confirmed by ELISA.

CONCLUSION: In the present case, despite absence of specific clinical signs for the disease, dissemination of the transmissible venereal tumour inside the abdominal cavity to various organs was a result of leishmaniosis immunosuppression, which probably favored the presence of circulating neoplastic cells. These findings are important considering the classic presentation of this disease, which in a non immunocompromized dog are normally characterized by external, but not internal tumour mass as observed in this case.