ABSTRACTS

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Successful management of metastasis of transmissible venereal tumour to lung and mammary region

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OBJECTIVES AND METHODS: Canine transmissible venereal tumor (TVT) has been reported from many regions of the world and is a contagious round cell tumor of dogs (1). It is the only known naturally occurring tumor that can be transplanted as an allograft across major histocompatibility barriers within the same species, and even to other members of the canine family (2). Due to the unique nature of sexual transmission, the external genitalia of either sex are most commonly affected. Metastasis is reported to occur in <5% of the cases (3). Less commonly, the tumor may be transmitted to the nasal/oral cavities, skin, and rectum by sniffing or licking; and more rarely to lips, oral mucosa, and peritoneum, or in organs such as tonsils, eye, liver, spleen, kidney, lung, musculature (4) and mammary region (3).

A 28kg, Dalmatian female was presented with a history of vaginal bleeding for the last 45 days and swelling near the mammary gland since 4 days. Feeding and voiding were normal, with up-to-date deworming and vaccination history. The objective of the present study was to diagnose the case and deliver appropriate treatment. The methods used were vaginal cytology stained with Leishman stain, aspiration cytology of the swelling and radiography. Complete blood count (CBC) and biochemistry parameters were assessed prior to chemotherapy.

RESULTS: Physical examination revealed pink mucous membranes, slightly enlarged popliteal lymph nodes and rectal temperature (RT) was 104ºC. Multiple nodules were observed near the abdominal and inguinal pair of mammary glands (Fig 1). Clinical examination revealed serosanguinous exudate oozing from the vulva and a cauliflower-like growth was palpated in the posterior vagina about 1.5-2cm in diameter. CBC revealed relative neutrophilia with mild-moderate toxic changes in neutrophils (Table). Vaginal cytology of the growth revealed cells with round hyperchromatic nucleus, pale blue cytoplasm with clear, distinct vacuoles and fairly distinct cytoplasmic border suggestive of typical TVT cells.(Fig 2). Aspirate from the swelling revealed similar cells confirming metastasis to the mammary region (Fig 3). Thoracic radiograph revealed nodular interstitial pattern confirming metastasis to lungs (Fig 4). Since the bitch was hyperthermic, 2ml of analgin (Novalgin, Novartis) was administered IM to lower the temperature. For chemotherapy, vincristine sulphate (Cytocristin, Cipla) @0.025mg/kg BW was administered IV. Multivitamin syrup (Vitabest, Virbac) @1tsp BID for 15 days was advised to be given. One week after first injection, there was reduction in size of the tumour and nodules, RT was103.6ºC with drastic reduction in total leukocyte count. Vaginal cytology revealed considerable decrease in the number of typical TVT cells and an increase in the number of atypical cells with distorted nuclei, indistinct borders and increased vacuolation (Fig 5). The chemotherapy was repeated. One week after the second chemotherapy, there was minimal tumour mass with reduced size of nodules and RT was 103.4ºC. The chemotherapy was repeated. One week after the third chemotherapy, there was absence of tumour and nodules (Fig 6), RT was 103.6ºC and the last injection of vincristine sulphate was administered. Four weeks after the start of the treatment, showed absence of tumour and nodules, and post-treatment thoracic radiograph revealed absence of interstitial pattern (Fig 7), suggesting complete recovery.

CONCLUSION: From the present case, we conclude that vincristine sulphate is an effective chemotherapeutic agent in the treatment of TVT with metastasis to vital organs. However, side effects observed were high body temperature, mild neutropenia and significant decrease in PCV, hemoglobin, total leucocyte and erythrocyte count. Routine hematological assessment is useful to determine the prognosis of the case. The present case made an uneventful recovery with no recurrence till date.