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Sub-cutaneous transmissible venereal Tumor in a dog and its management

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Abstract

A 5 years old Non-descriptive intact male dog weighing 18.5 kg was presented with the history of multiple nodular lesions distributed irregularly all over the body. The lesions were not ulcerated and cauliflower or nodular like in sub-cutaneous, measuring up to 2 to 5 cm in diameter. Cytologic examination of the cutaneous mass revealed large round cells, discrete round to spherical nucleus with chromatin granules and multiple vacuoles in the cytoplasm confirmed as transmissible venereal tumor. Mitotic figures were also observed. Vincristine sulfate was administered weekly @ 0.025 mg/kg, BW, intravenously for four weeks and the animal had an uneventful recovery.

Keywords: Transmissible venereal tumor, subcutaneous, dog

Introduction

Transmissible venereal tumor (TVT) transmits coitally with no breed or sex predilection. It occurs between 1 and 7 years old (mean: 3 years old) (Santiago-Flores *et al.*, 2012) [5]. The incidence ranging from 2 to 43 per cent of all tumors in temperate and tropical climates (Prasad *et al.*, 2007; Shiju Simon *et al.*, 2014) [3,6]. It has been reported in the eyes, skin, brain, subcutaneous tissue, lymph nodes, tonsils, liver, spleen, oral mucosa, hypophysis, peritoneum, and bone marrow (Santos *et al.*, 2008) [4]. The present paper reports on the occurrence of subcutaneous transmissible venereal tumour in a dog.

Case history and observations

A 5 years old Non-descriptive intact male dog weighing 18.5 kg was presented with the history of multiple nodular lesions distributed irregularly all over the body. The owner also reported that the subcutaneous mass was initially of peanut size and gradually enlarged. On physical examination cauliflower or nodular like growth (measuring 2 to 5 cm) was irregularly scattered all over the body. Fine Needle Aspiration Cytology of the subcutaneous mass revealed large round cells, discrete round to spherical nucleus with chromatin granules and multiple vacuoles in the cytoplasm confirmed as transmissible venereal tumor (Fig. 1). Mitotic figures were also observed. Blood samples were collected for haemato-biochemical examination, which was found normal. Radiography of thoracic lateral view confirmed no metastasis.

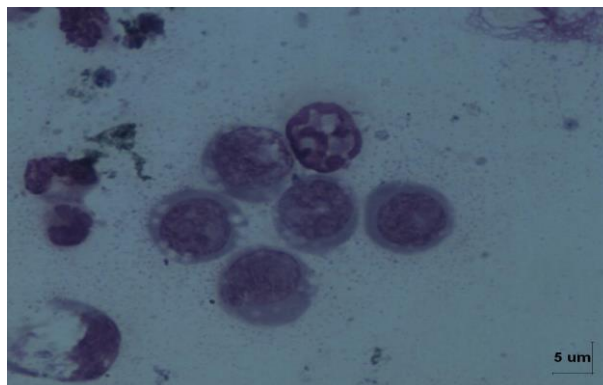


Fig 1: Transmissible Venereal Tumour — Large round cells with round nuclei and multiple vacuoles in the cytoplasm, Scale bar L & G - 5µm

Treatment and discussion

Vincristine sulfate was administered weekly @ 0.025 mg/kg, BW intravenously for four weeks and the mass regressed gradually after the first dose itself. Chemotherapy has been shown to be the most effective and practical therapy, with vincristine sulfate being the most frequently used drug and for complete remission usually required 2 to 8 injections (Nak *et al.*, 2005)^[2].

Transmissible venereal tumors are immunogenic tumors and immune system of the host plays a major role in inhibiting tumor growth and metastasis (Shiju Simon *et al.*, 2014)^[6]. These tumors are usually spread during coitus or other social behaviors such as sniffing and licking. Thus, the typical locations of these tumors are the external genitalia and the nasal and oral cavities. Other less common locations include the anal mucosa and the skin and subcutaneous areas (Von Holdt and Ostrander, 2006)^[7]. Transmissible venereal tumor metastasis has been seen involving the lymph nodes, skin, eyes, liver, musculature, abdominal viscera, lungs, and brain. The frequency of extra-genital affection is 5 per cent. It rarely invades other organs but animals with poor health or immunosuppressed for various reasons might be more likely to have more aggressive or metastatic lesions (Shiju Simon *et al.*, 2014)^[6]. In the present case the subcutaneous tumour might be due the oxidative stress and impaired endogenous antioxidant defense mechanism by the action of free radicals and exogenous factor (Behera *et al.*, 2012)^[1]. Despite the atypical clinical presentation, response to chemotherapy with vincristine was excellent, leading to complete regression of the neoplasm without relapse even after 8 months. In the present case, the diagnosis was made early with cytological examination and the animal recovered uneventfully.

Summary

Subcutaneous transmissible venereal tumor is reported in a Non-descript dog and presented for record.

References

1. Behera SK, Kurade NP, Monsang SW, Das DP, Mishra KK, Mohanta RK. Clinico-pathological findings in a case of canine cutaneous metastatic transmissible venereal tumor. *Vet. Arhiv.* 2012;82:401-10.
2. Nak D, Nak Y, Cangul IT, Tuna B. A clinico-pathological study on the effect of vincristine on transmissible venereal tumor in the dog. *J Vet. Med. A. Physiol. Pathol. Clin. Med.* 2005;52:366.
3. Prasad AA, Vijayanand V, Rajasundaram RC, Balachandran C. Cutaneous transmissible venereal tumour in a dog. *Indian Vet. J.* 2007;84:978-979.
4. Santos JP, Barbosa MAG, Tenorio APM, Coelho COC, Rolim MBQ, Tudury EA. Transmissible venereal tumor disease in a dog with involvement of the skin. *Arq. Bras. Med. Vet. Zootec.* 2008;2:39-43.
5. Santiago-Flores ML, Jaro MC, Recuenco FC, Reyes MF, Amparo MRG. Clinical profile of canine transmissible venereal tumor cases. *Philipp. J Vet. Anim. Sci.* 2012;38:63-72.
6. Shiju Simon M, Chhavi Gupta, Prabhavathy H, Ramprabhu R, Pazhanivel N, Balachandran C, *et al.* Nasal transmissible venereal tumour in a pug and its management. *Indian Vet. J.* 2014;91(09):82-83.
7. Von Holdt BM, Ostrander EA. The singular history of a canine transmissible tumor. *Cell.* 2006;126(3):445-447.