



ISSN (E): 2277-7695  
ISSN (P): 2349-8242  
NAAS Rating: 5.23  
TPI 2023; SP-12(8): 1640-1641  
© 2023 TPI

[www.thepharmajournal.com](http://www.thepharmajournal.com)

Received: 11-06-2023

Accepted: 20-07-2023

#### RM Gowtham

Post Graduate Scholar,  
Department of Veterinary  
Clinical Medicine, Madras  
Veterinary College, Chennai,  
Tamil Nadu, India

#### M Balagangatharathilagar

Assistant Professor, Department  
of Veterinary Clinical Medicine,  
Madras Veterinary College,  
Chennai, Tamil Nadu, India

#### M Chandrasekar

Professor Department of  
Veterinary Clinical Medicine,  
Madras Veterinary College,  
Chennai, Tamil Nadu, India

#### S Subapriya

Assistant Professor, Centralised  
Clinical Laboratory, Madras  
Veterinary College, Chennai,  
Tamil Nadu, India

#### Corresponding Author:

#### RM Gowtham

Post Graduate Scholar,  
Department of Veterinary  
Clinical Medicine, Madras  
Veterinary College, Chennai,  
Tamil Nadu, India

## Successful management of ocular transmissible venereal tumor in a dog

**RM Gowtham, M Balagangatharathilagar, M Chandrasekar and S Subapriya**

#### Abstract

A two year old, intact female Golden Retriever was presented with the history of reddish discoloration and watery discharge from the left eye for a period of one month. The pet was already treated in a private clinic with various eye drops and oral antibiotics. Based on the clinical and cytological examination, the case was diagnosed as Ocular Transmissible Venereal Tumor (TVT). The pet was treated with Vincristine sulphate at the dose rate of 0.025mg/kg intravenous once a week for three weeks, resulted in excellent resolution of clinical signs. The pet was recovered uneventfully.

**Keywords:** Dogs, eye, TVT, vincristine

#### Introduction

Transmissible Venereal Tumors were malignant tumors arise from the dysregulated growth of Histiocytes cells (Behera *et al.*, 2012) [3]. It is transmitted between dogs mainly through direct skin contact. This type of tumor was more common in tropical and subtropical countries. It commonly affects external genitalia but rarely affect extra genital sites such as oral cavity, nasal cavity, skin, sclera and anterior chamber. TVT incidence was more common in non-descriptive intact female stray dogs followed by young immune compromised dogs (Purohit, 2009) [6]. TVT in eye was rare occurrence which was typically results of auto or hetero implantation of tumor cells (Abeka, 2019) [1].

A two year old, intact female Golden Retriever was presented to the Critical Care Unit of the Department of Veterinary Clinical Medicine, Madras Veterinary College Teaching Hospital, Vepery, Chennai with a history of reddish discoloration, watery discharge and frequent rubbing of left eye for a period of one month. The pet was already treated in a private clinic with various eye drops and oral antibiotics. Feeding habit, urination and defecation were observed to be normal. The pet's vaccination and deworming details were done properly followed and were upto date. The owner reported that the pet was house-break one month back.

On physical examination, diffused punctate, raised lesions with discoloration of cornea and sclera of the left eye (oculus sinister, OS) were observed (Fig.1). The routine ophthalmic examination revealed absence of menace and dazzle reflexes in left eye, congested conjunctival mucus membrane and unable to check papillary light reflex. Schirmer tear test value of left eye was 28 mm/minute. There was corneal uptake of fluorescein stain on left eye. The right eye was absolutely normal.

Clinical examination revealed normal vital signs such as temperature (101.3°F), heart rate (128 beats/minute) and respiratory rate (26 breaths/minute). No vaginal lesions and mass were palpated or visualized. Routine hematology and biochemical parameters were within reference range.

Corneal impressions smear cytology of left eye using Giemsa staining revealed characteristic round cell population with cytoplasmic vacuoles (Fig.3).

Based on the physical, ophthalmic and cytological examination, the case was diagnosed as rare ocular transmissible venereal tumor.

The pet was treated with chemotherapeutic agent Inj. Vincristine sulphate at the dose rate of 0.025 mg/kg intravenously q7d for a total of three doses and also with ophthalmic preparation such as Gatifloxacin (0.3%) and hydroxypropyl methyl cellulose (0.7%). The pet was monitored with CBC before each chemotherapy. One month after initial presentation, the pet showed marked resolution of clinical signs (Fig.2).

Transmissible venereal tumor also called as venereal granuloma, Sticker's tumor, Transmissible venereal sarcoma, Infective venereal tumor and transplantable lymphosarcoma is malignant tumor commonly affect external genitalia of the intact dogs and usually transmitted through skin to skin contact which includes sexual contact, licking, biting and sniffing of the tumor affected area. Transmission from dam to pup occurs during licking, while a very rare occurrence during maternal behavior was also possible. The way of transmission suggestive of an infectious etiology but no infectious particle has been detected in tumor cells. Most commonly affect intact female dogs than male dogs (Purohit, 2009) [6].

The signs of the tumor were entirely depends on the region of the tumor on animals body. Metastasis was usually seen in regional lymph nodes, spleen, kidney, eye, brain, peritoneum, skin and sub cutis but very uncommon (5%). It can occur without a primary vaginal or penile tumor. It appeared as small hyperemic papules when time progress to nodular, multi lobulated, cauliflower like proliferation with friable in nature and size may extend upto 15 cm in diameter and easy to

bleed. Phimosis and paraphimosis is the common sequence in male dogs (Rezaei *et al.*, 2016) [7].

TVT can be diagnosed by clinical examination and confirmed by cytological examination. Sample collected either by fine needle aspiration or impression smear and stained with Giemsa stains. Examination under microscope reveals characteristic round cell population with intracytoplasmic vacuoles and red blood cells (Behera *et al.*, 2012) [3].

Complete surgical excision, chemotherapy and radiation therapy were the effective treatment option for TVT. Recurrence rate was high with sole therapy of surgical excision (60%). So chemotherapy was considered the treatment of choice. Various chemotherapeutic agents can used in TVT such as vincristine, doxyrubicin and cyclophosphamide. Vincristine has been reported to be the most effective chemotherapeutic agent without any adverse effect at the dose rate of 0.025 mg/kg intravenous one a week for 3 weeks (Antonov, 2015) [2]. Complete remission takes around 3 to 6 week treatment. The prognosis for complete remission with chemotherapy is good.



**Fig 1:** Diffused raised lesion with discoloration of cornea and sclera



**Fig 2:** After treatment



**Fig 3:** Round cell population with cytoplasmic vacuoles

### Conclusion

Confirmative diagnosis of ocular transmissible venereal tumor was done by impression smear and microscopic examination. Treatment with vincristine has been reported as most effective without any adverse effect.

### References

1. Abeka YT. Review on Canine Transmissible Venereal Tumor (CTVT). *Cancer therapy & Oncology International Journal*. 2019;14:86-94.
2. Antonov A. Successful treatment of canine transmissible venereal tumor using vincristine sulfate. *Advances in Research*. 2015;5(5):1-5.
3. 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. *Veterinarski Arhiv*. 2012;82(4):401-410.
4. Boscos CM, Ververidis HN, Tondis DK, Stamou AI, Samartzi FC. Ocular involvement of transmissible venereal tumor in a dog. *Veterinary Ophthalmology*. 1998;1(2-3):167-170.
5. Pigatto JAT, Hunning PS, Bercht BS, de Albuquerque L. Transmissible venereal tumor in the palpebral conjunctiva of a dog: case report. *Semina: Ciencias Agrarias*. 2011;32(3):1139-1144.
6. Purohit GN. Canine transmissible venereal tumor: A review. *The Internet Journal of Veterinary Medicine*. 2009;6(1):1-7.
7. Rezaei M, Azizi S, Shahheidari-pour S, Rostami S. Primary oral and nasal transmissible venereal tumor in a mix-breed dog. *Asian Pacific Journal of Tropical Biomedicine*. 2016;6(5):443-445.