

## Ocular transmissible venereal tumour: diagnosis and clinical management in a dog

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Canine transmissible venereal tumour (CTVT) is a sexually transmitted tumour, which frequently affects both male and female dogs irrespective of age, breed and season. It mainly involves the external genital organs in dogs and found located on the caudal part of the penis in male and posterior part of vagina and at junction of vestibule and vagina in female dogs (Rajmani *et al.*, 2012). The CTVT has been reported to occur in dogs occasionally in many other extra-genital locations (Papazoglou *et al.*, 2001). This case report presents diagnosis and management of such a rare case of CTVT involving nictitating membrane (NM) of a dog.

A 4-yr-old, intact, mixed-breed male dog was referred by a field veterinarian after relapse of the "Cherry eye" condition 1 month after its repositioning surgery by Modified Morgan's conjunctival pocketing technique (MMCPT) in left eye. Close examination of the animal revealed swollen NM of left eye covering whole of the cornea. The dog was unable to close the eyelids completely due to physical hindrance by the swollen NM. Moderate epiphora and congested conjunctiva on both sides of NM was also evident. Based on the clinical examination, it was diagnosed to be a case of 'retention cyst' due to closure of openings of surgically created conjunctival pocket post MMCPT surgery. It was therefore, decided to drain out the cyst and to undertake a revision surgery.

The animal was prepared for aseptic ocular surgery under general anaesthesia. The sutures of previous surgery were removed, and the incarcerated accessory lacrimal gland was exposed after careful dissection of the conjunctival pocket. The accumulated lacrimal secretions were drained, and the site was flushed with normal saline. The NM gland was inspected and was found to be congested and slightly larger than usual but with smooth margins. It was presumed that prolonged exposure to the environment might have caused such inflammatory reaction and once the gland is repositioned back into conjunctival pocket in a proper manner, the inflammation would subside in due course of time. Thus, the revision surgery was done employing

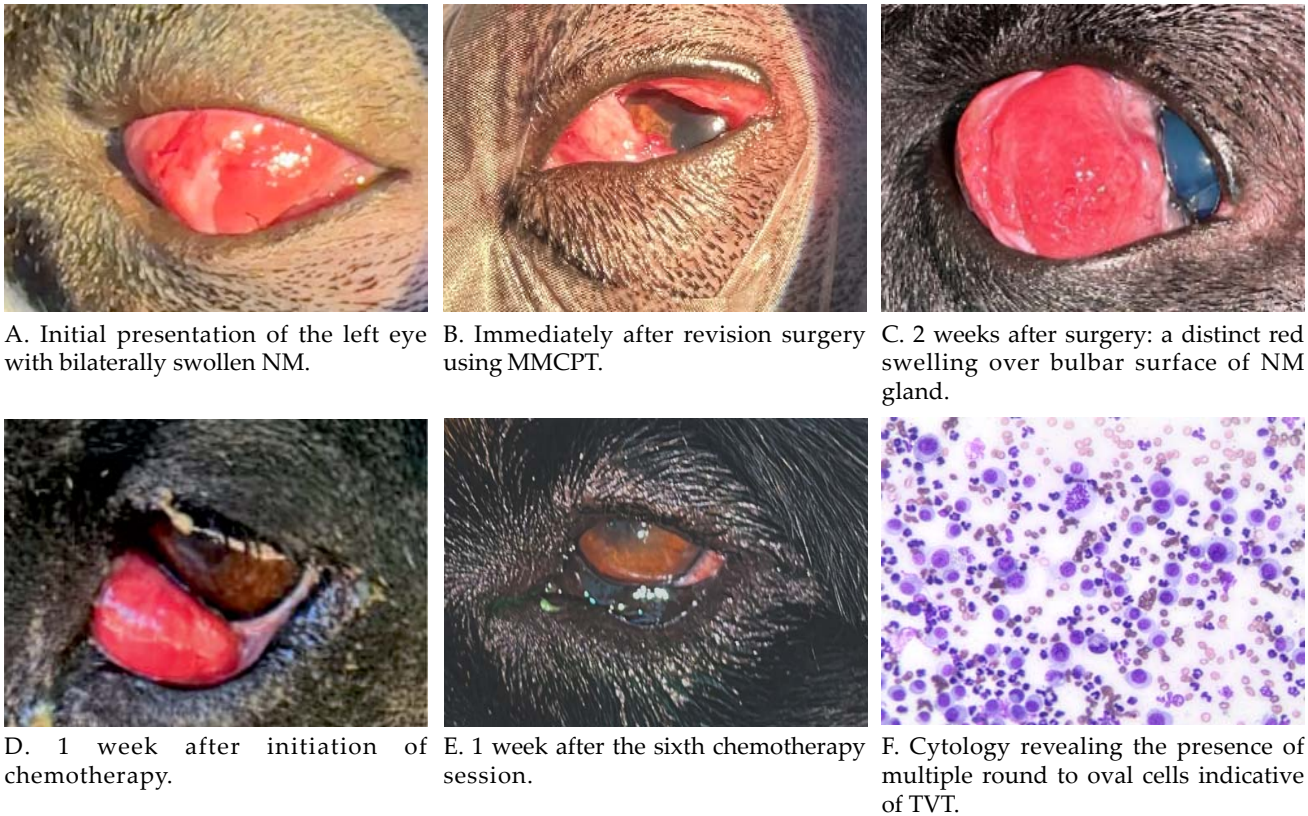
MMCPT. The care was taken to leave sufficient stoma (2 mm) on either side of conjunctival pocket to allow egress of NM gland secretions postoperatively. The NM remained moderately protruded even after surgery. However, the appearance of the eye was considered satisfactory given the large size of reposed NM gland and the chronicity of retention cyst. To reduce the inflammation fast, sub-conjunctival injection of dexamethasone (1 mg) was administered after surgery. The other post-operative treatment included systemic antibiotic tab Amoxicillin and Potassium clavulanate @ 25 mg/kg body wt, b.i.d orally; tab Carprofen @ 4 mg/kg body wt, s.i.d orally and triple ophthalmic ointment consisting of Neomycin, Polymyxin-B sulphate, Bacitracin Zinc with hydrocortisone t.i.d. for a week. The animal owner was instructed to keep Elizabeth-collar on the neck of dog throughout the day for 2 weeks.

The protrusion of NM gland did not subside postoperatively on expected line, rather a reappraisal on 15 day revealed further increase in the size of NM protrusion, which was seen pushing the cornea temporally. A distinct reddish mass was observed on bulbar surface of NM along with congested conjunctiva in surrounding area. An impression smear of this mass was taken whose cytological examination detected a number of round to oval neoplastic cells with moderate pleomorphism, hyperchromasia, vacuolar cytoplasm, prominent nucleoli and mitotic figure suggestive of a round cell tumour (TVT) involving NM conjunctiva.

It was thus decided to undertake chemotherapy (Pigatto *et al.*, 2011). Inj. Vincristine was administered (0.6 mg/m<sup>2</sup> i.v.) diluted in 100 mL of 0.9% normal saline on weekly intervals. In addition, syrup Platogrow was administered (7.5 mL PO b.i.d.) for 2 months. Gradual remission of the tumour was observed in postoperative period and it disappeared by 6 weeks restoring the normal NM margin (Fig. 1).

Almeida *et al.*, (2003), Boscos *et al.* (1998) and Pigatto *et al.* (2011) reported that treatment with Vincristine often resulted in full remission of CTVT of the ocular adnexa, including the conjunctiva and

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**Fig. 1:** Round cell tumour (CTVT) of nictitating membrane in dog.

nictitating membrane. This case study describes an uncommon CTVT in a dog on NM conjunctiva leading to misdiagnosis as “retention cyst” following MMCPT surgery for the “Cherry eye”. Hence, CTVT should also be kept as a differential while ascertaining the diagnosis of large swellings of nictitating membrane in dogs.

#### References

- Almeida, O.C., Pimenta, P.A., Lopes, A.P., Costa, M.M., Oliveira, J.P. and Sousa, A.P. 2003. Joint meeting of the British Association of Veterinary Ophthalmologists, European College of Veterinary Ophthalmologists, European Society of Veterinary Ophthalmology, and the International Society of Veterinary Ophthalmology, Cambridge, UK. June 26-29, 2003. Abstract No. 13: Ocular localization of canine transmissible venereal tumor: A case report and literature review. *Vet. Ophthalmol.* **6**: 343-350.
- Boscos, C.M., Ververidis, H.N., Tondis, D.K., Stamou, A.I. and Samartzi, F.C. 1998. Case report: Ocular involvement of transmissible venereal tumour in a dog. *Vet. Ophthalmol.* **1**: 167-170.
- Papazoglou, L.G., Koutinas, A.F., Plevraki, A.G. and Tontis, D. 2001. Primary intranasal transmissible venereal tumour in the dog: A retrospective study of six spontaneous cases. *J. Vet. Med.* **48A**: 391-400.
- Pigatto, J.A.T., Hunning, P.S., Bercht, B.S. and de Albuquerque, L. 2011. Transmissible venereal tumor in the palpebral conjunctiva of a dog: Case report. *Semina: Ciências Agrárias.* **32**: 1139-1144.
- Rajmani, R.S., Mishra, M., Singh, P.K., Sahoo, A.P., Tiwari, A.K., Doley, J. and Kumar, G.V.P.P.S.R. 2012. Common neoplasms in animals-an overview. *J. Anim. Res.* **2**: 127-137.