Indian J. Vet. Surg. 45(2): 151-152 December 2024

ijvs

Extraocular transconjunctival foreign body in a mixed breed dog

Ramani Chandrsekhara Iyer[1†], Pushkin Raj[2], Gayathri Kanakasabesan[3] and Niranjana Chandrsekharan[2]

Tamil Nadu Veterinary and Animal Sciences University, Chennai- 600007 (TN)

[1]Professor and Head (Retd.), Department of Clinics; [2]Assistant Professor, [3]PG scholar, Department of Veterinary Surgery and Radiology, Madras Veterinary College, Chennai

DOI: 10.5958/0973-9726.2024.00038.4 *Received: March, 2024*

Non-penetrating injury of the eye or any extra-ocular foreign body mandates emergency intervention with exact seriousness and care as that of any obvious penetrating foreign body. Sometimes, a non-penetrating minute or bigger foreign body may cause chronic irritation with granulomatous tissue reaction, fibrosis and acute pain. Pawing or maiming of the eye by the dog to remove the object may in turn damage the delicate ocular tissues resulting in loss of vision if the condition is ignored. Hence, a case wherein an obvious foreign body is not found in the eye on preliminary examination must not go undiagnosed. This paper describes successful retrieval of a non-penetrating, hidden, extra-ocular foreign body with minimal intervention thereby restoring visual function.

A one-year-old intact male mixed-breed dog was referred with the history of acute blepharospasms, blepharitis and pain in the right eye for the past 12 hr. The referring veterinarian administered systemic analgesics to reduce the ocular pain and subsequently referred for an expert ophthalmic consultation. On presentation, the dog was found to be normal in appearance with blepharospasm and a tendency to rub the right eye often was noticed. An indirect ophthalmoscopic examination after instillation of proparacaine eye drops revealed diffuse corneal oedema (2+) and congestion of medial canthal conjunctival tissue (Fig. 1). Strange and unusual black deposits were also retrieved from the palpebral conjunctival folds. The menace reflex was inconclusive on the right eye though a positive pupillary light reflex (consensual) was elicited in the left eye. A fluorescein dye test revealed an intact cornea with diffuse epithelio-stromal oedema and a normal uvea. Slit lamp bio-microscopy showed a normal anterior chamber. Hematobiochemical parameters were within normal range. On careful digital palpation, a firm swelling was evident in lower palpebral region of the fornix. Intraocular examination of the left eye was normal. The patient was not cooperative to an ocular B-scan, hence an emergency exploratory surgery was scheduled.

The dog was premedicated with butorphanol (0.2 mg/kg body wt. i.v.) and diazepam (0.2 mg/kg body wt, i.v.), and subsequently anaesthesia was induced with propofol (3 mg/kg body wt, i.v.) and maintained on isoflurane with oxygen in a rebreathing circuit. The patient was placed on left lateral recumbency with air bags to position the head and eye. Under general anaesthesia in sternal recumbency, the left eye of the patient was examined under an operating microscope. The eye was prepped aseptically, draped and Gatifloxacin eye drops were instilled. On gentle digital palpation of the conjunctival fornix, a gritty hard object was felt. A careful trans-conjunctival dissection was performed around the object with minimal blunt dissection along the tissue planes. With aid of a Willis forceps and a moist corneal shield to protect the cornea, the presumed foreign body block was grasped (Fig. 2), eased out gently in the rostral direction and slid out without much resistance. It was likely that the inflammatory exudate lubricated the foreign object. The object was found to be a huge charcoal piece measuring 3.2 cm X 1.4 cm with a smooth surface (Fig. 3). The fornix was lavaged with ample balanced salt solution. Topical antibiotic was administered. The conjunctival fornix and bulbar

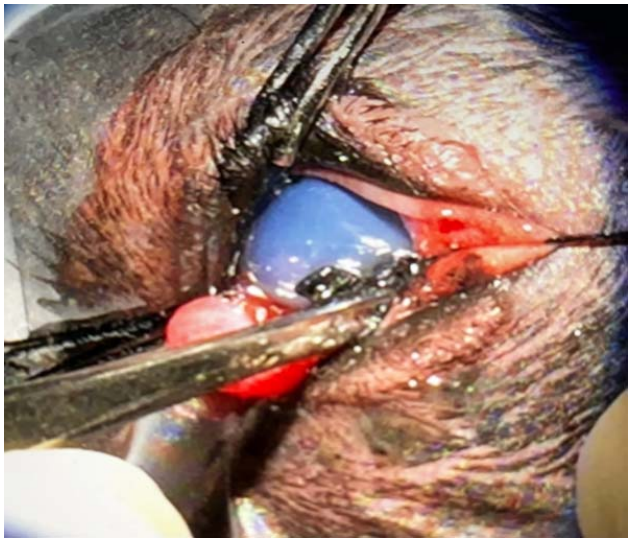

Fig. 1: Corneal oedema (2+) fornix dissection.

†Corresponding author; E-mail: ramaniophthalmologist@gmai.com

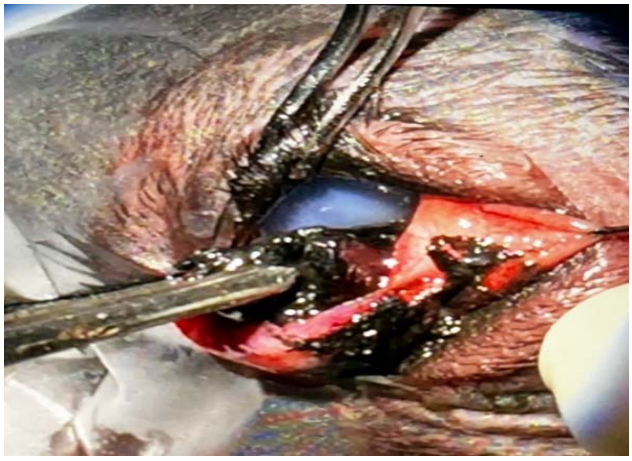

Fig. 2: Trans-conjunctival entry– grasping of the foreign body.

Fig. 3: The charcoal piece, 3.2 cm X 1.4 cm.

Fig. 4: Ist postoperative day with a clear cornea with normal vision.

conjunctivae were re-examined for any additional lacerations or wounds. The corneal oedema which was initially 2+ became less and remained only 1+ immediately following the object removal. Epithelial erosion was ruled out by a negative fluorescein test. An intra-oral examination was also performed and it was normal.

A course of topical antibiotic (Gatifloxacin 0.3%) and lubricant (hydroxy propyl methyl cellulose) were instilled thrice a day. Corneal transparency improved within 48 hr and the vision was restored. To control the inflammation, medications were continued for a week's period. The nictitans, orbital adnexa and posterior segment were all clinically normal. No cranial nerve or vascular abnormalities were noted postoperatively. The patient was pain free and visual on the first postoperative day itself (Fig. 4).

Transconjunctival entry of a stick has not been previously reported in the dog. Orbital wooden foreign bodies via the conjunctiva are reported in humans as a result of both accidental injury (Tite *et al*., 2002; Yoshi *et al*., 2004) and self-inûicted wounds (Akguner *et al*., 1998). Because of the lack of a bony orbital ûoor in dogs these foreign bodies can potentially reach the retrobulbar space from a ventral direction (White *et al*., 1988). There has also been a similar case report of a conjunctival wooden foreign body in a Weimaraner, wherein the physical examination did not reveal anything but was diagnosed by an MRI.

This unique case throws light on the need for a timely diagnosis and ophthalmic intervention for occult, non-penetrating foreign bodies in the eye or adnexa.

References

Akguner, M., Atabeyam, A. and Top, H. 1998. A case of self-inûicted intraorbital injury: wooden foreign body introduced into the ethmoidal sinus. Ann. Plast. Surg. **41**: 422-424.

Tite, D.J., Batstone, M.D. and Lynham, A.J. 2002. Penetrating orbital injury with wooden foreign body initially diagnosed as an orbital ûoor blowout fracture. ANZ J. Surg. **72**: 529-530.

White, R.A.S and Lane, J.G. 1988. Pharyngeal stick penetration injuries in the dog. J. Small Anim. Pract. **29**: 13-35.

Yoshii, M., Enoki, T. and Mizukawa, A. 2004. Intraorbital wooden foreign body. Acta Ophthalmol. Scand. **82**: 492-493.