

Cherry Eye in Puppies and its Surgical Correction via Repositioning of Prolapsed third Eyelid Gland

P.S. Chaudhary¹, J.P. Varshney², S. N. Desai³ and V.V. Deshmukh⁴

Shree Surat Panjarapole Prerit
Nandini Veterinary Hospital
Ghod-Dod Road, Surat - 395 007 (Gujarat)

Abstract

Twenty two pups (Neopolitan Mastiff, 18; Lhasa Apso, 2 and Cocker Spaniel 2) aged from 2 to 4 months were referred at Nandini Veterinary Hospital, Surat with complaint of red follicular mass protruding from inner canthus of eye were diagnosed for prolapse of gland of third eyelid (cherry eye) and were surgically operated for repositioning of the gland by modified Morgan's pocket/imbrication technique. In 90.90% (20/22) pups showed normal recovery within 8 to 10 days. In 2 cases (9.1%) prolapse of the gland recurred on 6th/7th day repositioning and therefore gland was removed. No other complication was observed and recovery was uneventful.

Key words : Cherry eye, prolapsed gland of third eyelid, Surgical correction.

Cherry eye, aptly known as prolapse of 3rd eyelid gland, is the protrusion of 3rd eyelid gland. Under normal circumstances the gland is not visible and is held in position by a small ligament. Though, cherry eye has genetic predisposition, in many circumstances it is spontaneous within recognized inciting cause (Moore, 1992). The condition may be unilateral or bilateral and protrusion of a swollen reddish follicular mass has led its popular name as "Cherry eye". The condition has been reported commonly in American Cocker Spaniel, Poodle, Basset Hounds, Bull dog, Chihuahua, Lhasa Apso, Beagle, Pekingese, Neopolitan Mastiffs and other brachycephalic breeds (Herrera, 2005).

Medical and conservative approach provides temporary response only. Surgical correction is the only recommended approach to retain glands lachrymal functions and to correct aesthetically unappealing look (Slatter, 2002).

The present report accounts for successful surgical correction of cherry eyes in twenty two puppies.

History, Clinical Examination and Diagnosis

Twenty two pups (Neopolitan Mastiff, 18; Cocker Spaniel, 2 and Lhasa Apso, 2) aged from 2 to 4 months were referred at the Nandini Veterinary Hospital, Surat during October 2008 to June 2009, with the complaint of red plumpy mass protruding from the eye for 6 to 8 days. Some of the pups were treated with topical eye drops at home or by local vets without success.

Detailed ophthalmic examination revealed pink to reddish follicular mass protruding from the inner canthus of the eye (Fig. 1 and 2) with noticeable inflammatory swelling, watery or thick discharge (Fig. 3), conjunctivitis and ulcerations (Fig. 4 and 5) (6 pups). The condition was unilateral (left or right) in 20 and bilateral in 2 pups (Fig. 6). Occasional pawing at the affected eyes in some pups was indicative of irritation reflexes.

Based on the ophthalmic examination and visual inspection of the affected eyes the condition was diagnosed as cherry eye (prolapse of gland of the third eyelid) and were opted for surgical correction. Initially, the pups with extensive swelling and ulcerations were medicinally treated with topical and parenteral antimicrobial, analgesics and anti-inflammatory agents for 3 days. Eye drops Betamethasone + Neomycin sulphate^a, 2 to 3 drops thrice daily; Inj. Ceftriaxone + Tazobactam, (Intacef Tazo^b) @ 15 mg/kg; Inj. Meloxicam

¹ Veterinary Surgeon

² Medicine Consultant

³ Chief Veterinary Officer

⁴ Veterinary Pathologist

^a A brand of Virbac Ltd., Mumbai

^b A brand of Intas Pharmaceuticals Ltd., Ahmedabad.

^c A brand of Intervet Ltd., Pune.

Cherry Eye in Puppies

(Melonex^b) @ 0.2 mg/kg and Inj. Prednesolone^c @ 1.1 mg/kg i/m respectively once daily for 2 to 3 days.

Surgical Technique

The pups were premedicated with atropine sulphate (0.04 mg) and diazepam @ 1 mg/kg body weight i/m, and anaesthetised with Ketamine hydrochloride @ 5 mg/kg b. wt. i/v. The pups were controlled in lateral recumbancy with the affected eye facing the surgeon. The eyes were prepared for aseptic surgery (Fig. 7). Initially, in all the puppies the surgical correction for repositioning of the prolapsed gland was done by pocket or imbrication technique (Maggs *et al.*,2007). The upper and lower eyelids were retracted with forcep (Fig. 8). The affected gland was held in alligator forcep for proper visualization. Then two parallel semi elliptical incisions were made through the bulbar conjunctiva around the periphery of the prolapsed gland. The line of the incision made around the gland was not allowed to meet or fused each other. The dissected conjunctiva was then secured with small forceps and then blunt dissection was made with blunt ophthalmic scissor to form small pocket (Fig. 9). The outer free edges of the previously incised conjunctiva were opposed over the proposed gland using 5-0 vicryl suture in a simple continuous pattern. The initial and final anchoring knots were placed on the anterior face of the third eyelid to avoid functional irritation of the cornea. Then second layer with continuous connell cushioning suturing pattern was placed with bites parallel to conjuntival incisions by placing knots on the anterior face the third eyelid. The same procedure was applied for other eye in two Neopolitan Mastiffs showing bilateral affections during same phase of anaesthesia. The operated eye was instilled with Neosporin eye ointment and covered with soft cotton guaze bandage till the recovery of the pups from anaesthesia (Fig. 10). The puppies (02) showing recurrence of the prolapse were opted for surgical removal of the gland (Fig. 11).

Post operative care

The pups were treated with inj. Ceftriaxone + Tazobactam (Intacef-Tazo^b) @ 15 mg/kg , im once

^d A brand of Burroughs Wellcome, Mumbai

daily for five days, Inj. Prednisolone^e @ 1 mg/kg, im Once daily for three days and Inj. Meloxicam (Melonex^b), @ 0.2 mg /kg, s/c Once daily for three days. Topical dressings were conducted thrice daily with ointment Neosporin-H^d for 5 to 7 days. The paws (fore and hind) belonging to the side of the affected (operated) eye were padded with the soft gauze to prevent from scratch injury due to nail while pawing.

Results and Discussion

Cherry eyes are aesthetically unpleasing to owners and troublesome to pups leading to eye injuries owing to constant irritation if not resolved within time. There seems to be the breed predisposition especially in the brachycephalic dogs like Neopolitan Mastiffs, Bull Dog, Cocker Spaniel, Lhasa Apso and Basset Hounds (Herrera, 2005 and Schoofs, 1999). In present study higher incidence of cherry eye was recorded in Neopolitan Mastiffs (18) which might be due to the genetic breed predisposition.

The mean operated time in present cases remained 30 minutes and recovery from anaesthesia was within one hour. The operated eyelids in all the puppies showed normal appearance soon after surgery (Fig. 12, 13 and 14), indicating proper repositioning of the gland. In, 90.90 % (20/22) pups, complete recovery was within 8 to 10 days without recurrence of gland protrusion (Fig. 15 and 16). However, prolapse of gland recurred on 6th / 7th day post surgery in two puppies. The chronic ulcerative and inflammatory changes of the prolapsed gland prior to surgery in these two puppies might have been responsible for recurrence. These two pups were subsequently reoperated for complete removal of gland to prevent further irritation and additional self inflicted traumas. Though removal of the gland is generally not advisable, as the gland is responsible for about 30 % of the eyes tear production and following removal of this gland leads to development of keratoconjunctivitis Sicca (Gellat, 1999). Old conventional therapy involved glands removal that led to cherry eye condition hence, modern techniques of repositioning of the gland to its normal location by anchoring or tacking (Blogg 1979, Gross 1983 and Kaswan and Martin



Figure 1 : Neopolitan Mastiff pup with Cherry eye.



Figure 2 : Cherry eye in Lhasa Apso pup.



Figure 3 : Affected eye with watery or thick discharge



Figure 4 : Prolapsed gland with severe conjunctivitis.



Figure 5 : Protruded gland showing marked ulcerations



Figure 6 : Bilateral cherry eye (Neopolitan Mastiff pup)

Cherry Eye in Puppies

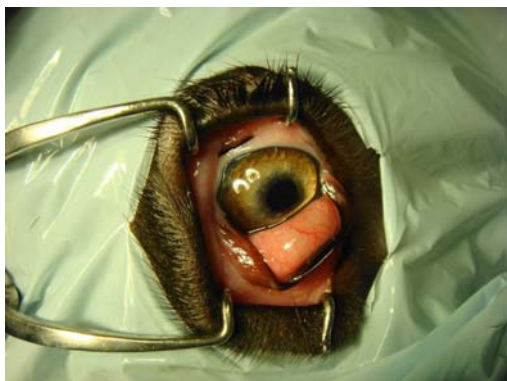


Figure 7 : Eye prepared for aseptic surgery



Figure 8 : Retracted gland before incision



Figure 9 : Repositioning of prolapsed gland within pocket.



Figure 10 : Post surgical bandaging of operated eye.



Figure 11 : Retrieved gland with strip of cartilage.



Figure 12 : Operated eye (Post surgery)



Figure 13 : Normal appearance of eye (Neapolitan Mastiff pup)



Figure 14 : Surgically corrected bilateral cherry eyes.



Figure 15 : Complete surgical recovery (Close view, 7th day)



Figure 16 : Lhasa Apso pup after complete recovery (10th day)



Figure 17 : Recovered Neapolitan Mastiff pup.

1985); the imbrication or pocket technique (Moore, 1983 and Morgan *et al.*,1992) or the modified pursestring (Moore, 1990) are being followed now a days. in present cases the modified Morgans pocket or imbrication technique as suggested by Maggs *et al.* (2007) was applied for repositioning of the prolapsed gland. The double row of suturing the pocket incisions around the gland were found more effective for retaining the normal position of replaced gland within the pocket.

Monthly post operative ophthalmic examination for 3-4 months revealed no complication and/or recurrence (Fig. 17). The owners were advised for not to breed such dogs in order to prevent/ decrease the occurrence of the cherry eye problems within the breed.

Cherry Eye in Puppies

Acknowledgement

The authors are thankful to the Chairman, Managing trustees and Board of trustees for providing necessary facilities at the hospital.

Reference

Blogg, J.R. (1979). Surgical replacement of a prolapsed gland of the third eyelid (Cherry eye) - A new technique. *Aust. Vet. J.* **9** : 75.

Gelatt, K.N. (1999). *Veterinary Ophthalmology*. 3rd Edn. Lippincott, Williams and Wilkins.

Gross, S. (1983). Effectiveness of a modification of the Magg's technique for replacing the prolapsed gland of the canine third eyelid. *Proc. Am. Coll. Vet. Ophth.* **14** : 28.

Hererra, D. (2005). Surgery of eyelids. *Proceedings, 30th World Congress of the Small Animal Veterinary Association*, Mexico.

Kaswan, R.C. and Martin, C.L. (1985). Surgical correction of third eyelid prolapse in dogs. *J. Am. Vet. Med. Assoc.* **186** : 83.

Maggs, D.J.; Miller, P.E.; Ron Ofri and Slatter, D.H. (2007). *Slatter's fundamental of Veterinary Ophthalmology*. 4th edn. Elsevier Health Services. pp. 153-154.

Moore, C.P. (1983). Alternate technique for prolapsed gland of the third eyelid. p. 52. In : Bojrab, M.J. (ed) : *Current Technique in Veterinary Surgery*. 2nd Edn. Lea and Febiger, Philadelphia.

Moore, C.P. (1990). Imbrication technique for replacement of prolapsed third eyelid gland. p. 126. In : Bojrab, M.J. (ed) : *Current technique in Veterinary Surgery*. 5th Edn. Lea and Febiger, Philadelphia.

Moore, C.P. (1992). Disorders of conjunctiva and 3rd eyelid. In : *Handbook of Small Animal Practice*. Morgan, R.V. (ed). 2nd Edn. W.B. Saunders Company, Philadelphia. pp. 1041-43.

Morgan, R.V.; Duddy, J.M. and McChung, K. (1992). Prolapse of the gland of the third eyelid in dogs : A retrospective study of 89 case (1980 – 1990). *J. Am. Anim. Hosp. Assoc.*

Schoofs, S. (1999). Prolapse of the gland of the third eyelid in a cat : A case report and literature review. *J. Am. Anim. Hosp. Assoc.* **35**: 240-242.

Slatter, D.H. (2002). *Textbook of Small Animal Surgery*. 3rd Edn. Elsevier Health Services. pp. 1362-64.



Eazypet Meltab

Internal parasites in dogs and cats pose a recurring health hazard, both for the pet and the owner. Now, Deworm pets easily with Eazypet Meltab, a flavoured deworming tablet. Eazypet offers broad spectrum protection against various internal worms.

For further information, please contact:
INTAS PHARMACEUTICALS LTD.
2nd Floor, Chinubhai Centre, Ashram Road, Ahmedabad - 380 009. INDIA.
Tel. : 079-26576655 (17 lines) Fax : 26576616, E-Mail : neovet@intaspharma.com
Visit us at www.intaspharma.com

Flavoured deworming tablets

For the use of registered veterinary practitioner, hospital or dispensary only