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Surgical management of unilateral cherry eye condition in two male beagles

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Abstract

Two male beagles of 22 and 18 months of age respectively were presented to the Veterinary clinical complex, College of Veterinary and Animal Sciences, Pantnagar with the chief complaint of a round mass being present in the left eye of both the dogs. Ophthalmic examination was done to check for the reflexes and affected eyes appeared normal for both the beagles. Condition was corrected surgically by using Morgan's pocket technique. Post-operatively topical eye drops were recommended for one month. Dogs recovered successfully without any complications and no report of recurrence was reported for a period of 3 and 4 months respectively.

Keywords: Cherry eye condition, beagle, Morgan's pocket technique, dog

Introduction

Cherry eye condition is described as prolapse of the third eyelid gland from medial canthus of the eye and characterized by hyperemia, glandular expression and increased gland volume. This condition is also known as nictitans gland prolapse or cherry eye disease (Gupta *et al.*, 2016; White and Brennan, 2018) [3, 9]. Breeds which are prone to cherry eye condition includes American cocker spaniels, Poodle, Beagle, Boston Terrier and most dogs belonging to brachycephalic breed (Dugan *et al.*, 1992) [2]. Surgical resection of total gland leads to development of dry eye condition also known as Keratoconjunctivitis sicca (KCS) and therefore, Morgan's pocket technique is preferred over the surgical resection (Singh *et al.*, 2017) [7].

Clinical History and Diagnosis

Two male beagles of 22 and 18 months respectively were presented with the history of protrusion of a pinkish mass from the medial canthus of left eye since last 20 days in first case and one month in the second case. Clinical examination of left eyes of both patients revealed prolapsed mass at the medial canthus. There was excessive lacrimation in the first case. Physiological parameters including heart rate, respiratory rate and temperature were within the normal physiological range for both the cases. Palpebral light reflex and menace reflex were intact in both the affected eyes.

Surgical Procedure

On the basis of the clinical examination and history, the cases were diagnosed as cherry eye condition (Fig.1). Morgan's pocket technique was opted for the surgical correction and similar procedure was adopted in both beagles. Periocular area was prepared for the surgery after placing the animal in right lateral recumbency. Animals were premedicated with atropine sulphate and xylazine hydrochloride intramuscularly @ 0.02 mg/kg and 1mg/kg body weight respectively, keeping a gap of 10 minutes. A 5% thiopentone sodium at the dose of 12 mg/kg body weight was given intravenously for induction of anaesthesia and maintenance was done with the same agent. Antibiotic ceftriaxone was administered pre-operatively at 20 mg/kg body weight intravenously. Two stay sutures were placed on the either side of the prolapsed mass after grasping the third eye lid of left eyes. Two curvilinear incisions using BP blade no. 11 were made on the free margin on bulbar part of the third eyelid. Then conjunctival edges were undermined and a gap was created. Prolapsed gland was placed back in the gap created.

The margins or edges of the incision was apposed with Vicryl 5-0 suture material in a continuous suture pattern (Fig.2). Post-operative treatment included instillation of 2 drops of Gatifloxacin 4 times a day for 7 days, 1-2 drops of FLUR (flurbiprofen) TID for 3 days, and 2-3 drops of carboxymethylcellulose TID for 3 days. Elizabethan collar was advised to be applied for atleast 15 days to avoid any kind of self-injury. Thereafter, the health status of the dogs were updated telephonically for any sort of discharge, pigmentation or dry eye condition for a period of three and four months respectively.



Fig 1: Cherry eye condition in two male beagles (Left eye)



Fig 2: Repaired third eyelid gland in left eyes of both cases

Discussion

The surgical repositioning of third eyelid gland using Morgan's pocket technique is simple to execute and morphology of the ducts of glands remain unaltered which does not effect the tear production by the gland (Dugan *et al.*, 1992; Hendrix, 2007)^[2, 4]. Third eyelid gland contributes to the 70% of the total tear production and in case of surgical excision of the gland, keratoconjunctivitis sicca (KCS) develops (Saito *et al.*, 2001; Thamizharasan *et al.*, 2016)^[6, 8]. Only one side effect of the Morgan's pocket technique has been noted and that is the reduced mobility of the gland (Plummer *et al.*, 2008)^[5]. To avoid the development of KCS instead of surgical excision of complete gland, replacement of gland with Morgan's technique is preferred (Dehghan *et al.*, 2012)^[1].

Thus, it can be concluded that surgical management of cherry eye in dogs can be successfully done using Morgan's pocket technique without any major complications.

Conflict of interest: Authors declare no conflict of interest.

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