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## SURGICAL MANAGEMENT OF CHERRY EYE USING MORGAN'S POCKET TECHNIQUE IN A DOG

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### ABSTRACT

An eight month old male Beagle dog presented with history of protrusion of pinkish colour mass on left eye since 15 days with mild ocular discharge and epiphora on the affected eye. The case was diagnosed as prolapse of third eye lid gland on the basis of clinical examination. All the physiological and hematobiochemical parameters were within the normal limits. The dog was treated surgically by Morgan's pocket technique. Recovery was uneventful and observed to have no recurrence of the condition until 3 months.

**Keywords:** Surgery, Cherry eye, Morgan's pocket technique, Dog

### INTRODUCTION

Cherry eye is the protrusion of the third eyelid gland in a dog (Morgan *et al.*, 1993). The probable reason for its development could be due to the prolapse of the gland resulting from

the inflammation and weakening of the connective tissue posterior and ventral to the membrane nictitans. This allows the gland migration dorsally and flip up to protrude above the leading margin of the membrane. This protrusion of the gland has also been associated with genetic predisposition (Mazzucchelli *et al.*, 2012). Breeds particularly Pekingese, Neapolitan Mastiff, Cocker Spaniel, Beagle, Bulldog and Basset hound are most affected by this condition (Moore, 1996). It was mostly reported in young ones and occurred during the two to three years of early age (Gellat, 1991). Clinical signs like epiphora, conjunctivitis and sudden development of a red pinkish mass at the medial canthus were normally observed (Martin, 2009). Morgan's pocket technique is a preferred technique for correction of cherry eye, rather than excision (Singh *et al.*, 2017). Total resection of the third eye-lid gland is not usually preferred as it may predispose a dog to develop keratoconjunctivitis sicca (Dehghan *et al.*, 2012).

**CASE HISTORY AND OBSERVATIONS**

An eight-month-old male Beagle dog was presented with history of protrusion of pinkish colour mass from left eye at medial canthus since last 15 days. The dog was under medical treatment without any signs of improvement. Clinical examination revealed protrusion of cherry like reddish fleshy mass over left eye (Fig. 1). The ocular discharge and mild epiphora was recorded in affected eye. The physiological parameters were within the normal limits. The parameters such as temperature (102.6 °F), respiration rate (60 per minute) and pulse rate (90 per minute) were recorded. The dog was panting at the time of presentation. Blood sample was collected on the day of presentation for hematological and biochemical analysis. Hematobiochemical parameters were within the normal limits (Table 1).

**TREATMENT AND DISCUSSION**

On the basis of history and clinical examination, the case was diagnosed as prolapse of third eye lid gland (cherry eye). It was decided to manage the case surgically by Morgan's pocket technique. The animal was placed in lateral recumbency and affected eye upwards. The periocular area was prepared and scrubbed with diluted povidone iodine solution. The surgery was performed under general anesthesia. The animal was premedicated with atropine sulfate @ 0.04 mg/kg b.wt. Intra-muscularly, followed by diazepam @ 0.5 mg/kg b.wt. Intra-venously. General anesthesia was induced with Propofol @ 4 mg/kg b.wt. intra-venously followed by maintenance with 2 per cent Isoflurane inhalant anesthesia. The prolapsed gland was held with a non-absorbable stay suture and two parallel semicircular incisions were made on inner and outer side of the gland

**Table 1.** The haemato-biochemical values

Hematological Parameters	The Day of presentation	Biochemical Parameters	The Day of presentation
Haemoglobin	15.5	ALT (U/L)	32.0
PCV (%)	47.2	AST (U/L)	20.8
TEC x 106/ $\mu$ L	7.16	ALKP (U/L)	184
TLC x 103/ $\mu$ L	14.2	Albumin (g%)	4.0
Neutrophils (%)	71.7	Total Protein (g%)	6.05
Lymphocytes (%)	24.7	CRTN (mg/dl)	0.52
Monocytes (%)	2.4		
Eosinophils (%)	0.2		

by using B.P. blade No.11. Conjunctival edge was undermined bluntly and the prolapsed gland was pushed into the gap and the suturing with 5/0 polyglactin 910 was initiated from outer surface of the third eyelid followed by its entrance into the inner surface of third eyelid. The incised edges of inner surface were closed, by using a simple continuous suture pattern. The knot was then tied on outer surface of the third eyelid. Post-operative medication included topically Gatifloxacin eye drops, 1-2 drops instilled four times in a day for 7 days; flurbiprofen eye drops, 1-2 drops instilled three times in a day topically for 3 days and carboxymethylcellulose eye drops; 1-2 drops instilled three times in a day topically for 3days. To avoid self-injury, Elizabethan collar was advised for

two weeks. The health status of the dog was monitored through telecommunication for any type of discharge, for the development of ulcer and reoccurrence for at least upto 3 months (Fig. 2).

Protruded gland appeared as a dark pink to reddish mass. The similar clinical findings were reported by several authors, with the most common clinical signs being the ocular discharge and mild epiphora along with the recorded physiological parameters within the normal range (Raza *et al.*, 2013., Thamizharasan *et al.*, 2016., Dewangan *et al.*, 2018 and Deveci *et al.*, 2020). In present study, hemato- biochemical parameters were reported in normal range. It was assumed that the occurrence of cherry eye either does not affect haematological parameters or the present condition did not



**Fig. 1:** Prolapse of the third eyelid gland in a Beagle dog before surgery



**Fig. 2:** A Beagle dog after 30 day of surgery

bring the changes in the blood parameters as the affection was the protracted condition (Kumar and Reddy, 2020). In the present study, Morgan's pocket technique for correction of cherry eye was used due to the ease of operation as well as due to very high success rate as reported by Singh *et al.* (2017). However, earlier practice was to remove the entire gland, which was the only method to get rid of the affection with documented complications like keratoconjunctivitis sicca (KCS) (Gellat, 1991; Raza *et al.*, 2013) hence became obsolete with time. Morgan's pocket technique cannot be employed in cases with more than 70 protrusion and irreversible / functional damage of third eyelid (White and Brennan, 2018). According to many studies, it was suggested that the third eyelid gland produced approximate 30 per cent of the total tears and it was very important for the protection of eyeball surface and conjunctiva (Gellat, 1991; Davidson and Kuonen, 2004). Few studies recorded reoccurrence with Morgans' pocket technique due to breaking up of the suture on place (Singh *et al.*, 2017). In the present study, no recurrence was reported and the animal recovered uneventfully.

## CONCLUSION

The Morgan's pocket technique was reported to be an effective method for repositioning of the prolapsed third eyelid

gland without any complication.

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