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Surgical correction of a unilateral cherry eye in a bull dog using Morgan's pocket technique

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Abstract

Prolapsed nictitans gland ("cherry eye", PNG) of dogs is an ailment commonly encountered by veterinarians and we encountered one such case of a Female Bull Dog having age 10 months, weighing about 22.2 kg presented to the Teaching Veterinary Clinical Complex (TVCC) with the condition of unilateral Cherry Eye affected from 2 months and using Morgan's pocketing technique the condition was corrected surgically under general anaesthesia. Post-operative treatment included instillation with ophthalmic preparation of Gentamicin and Ciprofloxacin. The dog recovered uneventfully and the dog did not show recurrence of cherry eye thereafter.

Keywords: Bull, cherry eye, unilateral, Morgan's pocketing technique

Introduction

Prolapsed nictitans gland ("cherry eye", PNG) of dogs is an ailment commonly encountered by veterinarians, particularly in predisposed breeds and can be defined as outcrop of gland of third eye lid manifested by glandular swelling at the medial canthus shadowed by development of hyperaemia and escalation in gland volume [15]. Some of the breeds which are more prone to this pathological condition include Neapolitan Mastiff, Cocker Spaniel, Pekingese, bull dog, beagle and basset hound [6, 7]. Among different age groups which are commonly affected by this condition include dogs less than 1 year age [5]. The main basis of prolapse is weakening of supportive ligament that fixes the gland [10, 11]. There is secondary inflammation and swelling due to abrasion and drying of the exposed gland [12].

Multiple surgical techniques for improvement of prolapsed nictitans have been described in the veterinary literature which entail varying surgical proficiency and equipment, of which gland excision has been dejected due to beneficial contribution of the gland to tear production and a study showing higher risk of keratoconjunctivitis sicca (KCS) in dogs following excision and thus to avoid the development of keratoconjunctivitis sicca (KCS) replacement of the gland with Morgan's pocket technique is preferred [1, 15]. The present case records successful surgical correction of cherry eye condition by using Morgan's pocketing technique.

History and Diagnosis

A 10 months old female Bull dog, weighing about 22.2 kg was presented to the Teaching Veterinary Clinical Complex (TVCC), FVSc & AH, SKUAST-Jammu with anamnesis protrusion of pink coloured mass from medial canthus of right eye (Fig. 1). This condition existed from past 60 days and due to severe irritation dog was in stress from 10 days.

General clinical examination revealed respiration and pulse rate were within the normal range and normal body temperature (103.1⁰ F). After careful examination of the affected eye, the prolapsed mass was congested with ocular discharge and epiphora and the animal was displaying severe irritation and exasperating to mutilate, this case was tentatively diagnosed as Prolapse of Nictitans gland (Cherry Eye) and it was planned to correct the condition surgically using Morgan's pocketing technique following standard procedure outlined by Fossum [3].

Surgical procedure

The dog was primed for surgery subsequent to placement of the dog in sternal position and followed by aseptic preparation of peri-orbital area.

The dog was pre-anesthetised with atropine sulphate @ 0.04 mg/kg followed by Xylazine hydrochloride @ 0.5 mg/kg intramuscularly and maintained with combination of Ketamine hydrochloride and Diazepam @ 5 mg/kg and 0.5 mg/kg, respectively. Ceftriaxone @ 20 mg/kg b. wt. IV was administered pre-operatively. The eye was flushed with normal saline. Once prolapsed mass was completely exteriorized by applying traction to third eye lid and maintaining the traction (using stay sutures; Fig.2), two parallel incisions *i.e.*, bulbar and palpebral conjunctival surface were given on either side of prolapsed gland and bases



Fig 1: Prolapsed 3rd eyelid of right eye



Fig 2: Exposing third eye lid for resection



Fig 3: Incision site was closed with simple continuous suture pattern

Discussion

Protrusion of gland over the free edge of nictitating membrane is termed as hypertrophy, hyperplasia or adenoma and commonly termed as 'Cherry Eye'. Of total tear production third eyelid gland contributes 30% and in case of excision, Kerato-conjunctivitis sicca (KCS) gets developed determined by the schirmer's tear test^[9, 14]. Surgical treatment is only effective remedy, but tear production is remarkably affected^[13]. In small breeds and young animals particularly less than one year of age replacement technique is more preferred^[3]. The Morgan's pocket technique of surgical repositioning is easy to perform with high success rate and also it does not alter the tear production or the morphology of the third eyelid gland ducts, as in this method the gland is gently sewn back in to the place where it can recommence tear production^[2, 4]. The only side effect, that is the reduced mobility of the third eyelid have been observed with the pocket technique in few cases^[8].

Overall, the success rate and client satisfaction makes the pocket technique, a preferable procedure for repositioning of

of the incisions were joined with a simple continuous suture using 3/0 catgut. To avoid irritation of cornea by suture ends, anchoring on the external side of eyelid is necessary (Fig.3)^[7]. Postoperative treatment included instillation of ophthalmic antibiotic preparations (Gentamicin and Ciprofloxacin) 3 times daily for 7 days. The dog was monitored for KCS, any type of discharge, corneal vascularization or pigmentation and for the development of ulcer for at least 20days postoperatively and thereafter on telephone for 1 month. The dog didn't showed recurrence.

prolapse of the nictitating membrane gland in dogs and the present study re-establishes that Morgan's pocket technique for the repositioning of the prolapsed gland of the third eyelid is reliable.

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