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HOTZ-celsus method for the correction of bilateral Entropion in an Indian mastiff: A case report

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Abstract

A six month old male Indian mastiff was presented to TVCC, Mannuthy with severe bilateral blepharospasm, epiphora and reduced food intake. The condition was diagnosed as bilateral entropion and its secondary complications. Due to the severity of the condition decided to manage it surgically. Animal had an uneventful recovery.

Keywords: Canine, entropion, Hotz-Celsus method

Introduction

Entropion is the inward rotation of all or a part of eyelid which causes irritation to the eye. The degree of entropion will increase if the condition become prolonged and may leads to severe ocular inflammations (Willis *et al*, 1999) [6]. The Hotz-Celsus method involves excision of a crescentic area of eyelid skin and underlying orbicularis muscle adjacent to the area of lid margin to bring it back to a normal position (Read and Broun, 2007) [3]. In puppies, temporary sutures are placed in the affected eyelid or both eyelids may be used to evert the eyelid margins, which is called palpebral tacking (Johnson *et al*, 1988) [2]. Hotz- Celsus method is the widely used procedure for the correction of entropion and the incision near to the margin of the eyelid is considered as a critical part of the surgical procedure (Stades, 1987) [5]. Successful correction of bilateral entropion by Hotz-Celsus method in an Indian mastiff dog is kept on record.

Case History and Observations

A six month old male Indian mastiff weighing 25 kg body weight was presented to Teaching Veterinary Clinical Complex, Mannuthy with visual deficit due to severe blepharospasm, epiphora and reduced food intake (Fig.1). On clinical and laboratory examination all the physiological, haematological and biochemical parameters were found within the normal limits. Ocular examination revealed severe bilateral entropion and associated trichiasis and scleritis. Epiphora was observed bilaterally. The episcleral vessels were injected and the cornea showed mild cloudiness. Increased Schirmer tear test (STT) value was observed in both eyes. Flourescein dye test (FDT) was negative on both eyes. The condition was diagnosed as bilateral entropion and it was decided to correct the condition surgically.

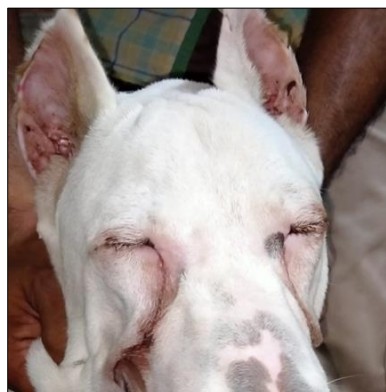


Fig 1: Animal presented with severe blepharospasm, lacrimation and epiphora

Treatment and Discussion

Premedicated the dog with inj. xylazine at the dose rate of 0.5 mg/kg body weight and inj. tramadol at the dose rate of 3mg /kg body weight intramuscularly. Prepared the periocular region for an aseptic surgery. General anaesthesia was induced with a combination inj. of ketamine and diazepam 1:1 (v/v) "to effect". Anaesthesia was maintained with isoflurane at 2% in oxygen. After the appropriate assessment about the degree of entropion a skin incision, was made around 2 mm distal and parallel to the lower eyelid. The second parallel skin was made after proper assessment of the excess skin fold to be removed. A crescent shaped portion of skin flap along with a portion of orbicularis oculi muscle was removed. The skin edges were apposed by monofilament nylon in simple interrupted suture pattern (Fig.2).



Fig 2: Hotz – Celsus procedure

Post operatively animal was treated with topical application of moxifloxacin ophthalmic ointment at the suture site for ten days, moxifloxacin-bromfenac ophthalmic drops for five days and oral carprofen at the rate of 3 mg/kg body weight for three days. After ten days of surgery, the sutures were removed and animal did not exhibit any signs of ocular irritation. All the associated symptoms were also got completely subsided (Fig. 3).



Fig 3: Recovery 10th postoperative day

The normal functions of the eyelids include the entrapment of debris, distribution of the tear film and protection of the eyelids. Absence of a fully functional eyelids can leads to secondary complication and damage the eye. The common clinical signs for entropion include visible inversion of the eyelid, blepharospasm, epiphora, pain and redness of conjunctiva and cornea (Reddan, 2012) [4]. The condition is more common in dogs compared to cats.

Entropion or lid-in turning is the inward rolling of eyelid margin and it can be three types: congenital or developmental, spastic and cicatricial. Developmental entropion arises from primary factors involving the conformation of tarsus, orbit and globe and their inter- relationships. Spastic entropion arises from severe blepharospasm secondary to painful ocular diseases like distichiasis, ulcerative keratitis and conjunctivitis. Cicatricial entropion arises from acquired lid deformities secondary to previous surgery, injury, trauma or chronic inflammation (Read and Broun, 2007) [3].

Breed predisposition include chow chow, St. Bernard, English bulldog, Great Dane, bull mastiff and sporting dogs. The disease occurs sporadically or may be inherited as an autosomal dominant trait (Gelatt, 1981) [1]. In this present case report the occurrence of this condition in Indian mastiff dog is recorded.

Summary

Bilateral entropion and its surgical - correction through Hotz Celsus method in an Indian mastiff dog is reported.

Acknowledgment

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