

SURGICAL CORRECTION OF CORNEAL DERMOID USING SUPERFICIAL KERATECTOMY AND THIRD EYELID FLAP IN A ROTTWEILER DOG

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ABSTRACT

A 7 months old female Rottweiler dog was presented with the history of ocular discharge from the right eye and partially opening of the eyelid since 2 weeks from adoption. Ophthalmic examination revealed epiphora, blepharospasm, congested sclera, cloudy cornea with tissue like growth along with hairs on the lateral temporal limbal region on the right eye and the left eye had no abnormalities. Schirmer tear test and fluorescein dye test was performed. Based on the ophthalmic examination findings, the condition was diagnosed as corneal dermoid. Surgical excision of corneal dermoid was done to correct the abnormalities and animal had an uneventful recovery.

Key words: Corneal dermoid, Superficial keratectomy, Third eyelid flap, Dermoid

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INTRODUCTION

Adermoidisalsoknownaschoristoma characterized by the presence of heterotopic cutaneous tissue in an inappropriate places such as eyelids, conjunctiva, nictitating membrane and cornea (Jhala *et al.*, 2010).

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Ocular dermoids could be composed of connective tissue, skin, hair follicles, blood vessels, nerves, smooth muscle, fibrous tissue, sebaceous glands, sweat glands and adipose tissue covered by keratinised stratified squamous epithelium but however not all the cutaneous appendages are present in each case (Weber and Van Hoven, 1990). The formation of these dermoids occurs during embryonic development through defective tissue differentiation; however the pathophysiology of the dermoid is not known (Lope Huaman *et al.*, 2021). Dog breeds such as the German Shepherd, Golden Retriever, Saint Bernard and Dachshund have genetic predisposition. The clinical signs secondary

to ocular dermoid include epiphora, corneal pigmentation, corneal ulcers, blepharospasm and keratitis. The primary corneal diseases develop from the irritation due to long hairs extending from the dermoid surface (Glaze, 2005 and Erdikmen *et al.*, 2013).

Case history and Diagnosis

A 7 months old female Rottweiler was presented with the history of ocular discharge from the right eye with partial completely opening of the eyelids for the past 2 weeks. Ophthalmic examination revealed epiphora, blepharospasm, congested sclera, cloudy cornea with tissue like growth along with hairs on the right eye (Fig.1). Left eye had no abnormalities.

Schirmer tear test values were 23 mm/min on the right eye and 20 mm/min on the left eye. Fluorescein dye test revealed no corneal ulcers on both the eyes. Based on the ophthalmic examination findings, the condition was diagnosed as corneal dermoid on the right eye.

Treatment and Discussion

The animal was pre-medicated with Inj. Xylazine @ 1 mg/kg b.wt IM and Inj. Tramadol @ 2 mg/kg b.wt IV. Anaesthesia was induced with Inj. Ketamine @ 5 mg/kg b.wt IV, Inj. Diazepam @ 0.5 mg/kg b.wt IV cocktail and maintained with Inj. Ketamine @ 2 mg/kg b.wt IV. Inj. Ceftriaxone @ 15 mg/kg b.wt IV was given preoperatively. Right eye was prepared aseptically using 0.5% povidone iodine solution. Dermoid tissue with wide margin was excised using

BP Blade No. 11 exposing the corneal stroma (Fig. 2). Third eyelid flap was performed to cover the corneal ulcer created by the superficial keratectomy using 2-0 polyamide.

Postoperatively the animal was maintained with eye drops 0.3% Gatifloxacin and hydroxyl propyl methyl cellulose ophthalmic solution one drop thrice daily for two weeks. Parenteral medications include Tab. Cefpodoxime @ 10 mg/Kg b.wt SID for 7 days, Tab. Tramadol @ 2 mg/kg b.wt BID for 3 days were given postoperatively and Elizabethan Collar for the protection of the operated eye.

After 2 weeks, third eyelid flap suture was removed. Healing at the cornea was noticed with moderate corneal opacity and sclera congestion. Schirmer tear test values were normal and FDT revealed no corneal ulcers on both the eyes. Eye drops 0.3% Gatifloxacin and hydroxyl propyl methyl cellulose ophthalmic solution one drop thrice daily were continued for a week. Postoperative third week revealed reduction of corneal opacity and healing cornea at the lateral quadrant with no corneal ulcers on FDT. Animal had an uneventful recovery with no complications/recurrence (Fig.3).

Corneal dermoid is a congenital condition which is more frequent in dogs. Surgical removal of the dermoid is the gold standard treatment. Superficial keratectomy and conjunctivectomy are the choice of treatment. Surgical method is chosen based on the size and location. Large dermoids require surgical excision with additional

procedure to close the defect. The common post operative complications include infection at the surgical site and incomplete excision results in re-growth of the dermoid (Rajput *et al.*, 2018).

Third eyelid flap technique is useful in the treatment of superficial and deep corneal ulcers by protecting ocular surface and prevents the occurrence of new lesion on their aggravation. Third eyelid flap is useful

in protecting and supporting the weakened cornea and assist corneal healing.

In the present case, the superficial keratectomy after corneal dermoid removal was successfully treated with third eyelid flap along with standard medical therapy. Animal had an uneventful recovery and no recurrence was noticed during the follow up.



Fig.1 Dermoid with long hairs at the temporal cornea



Fig. 2. After excision of corneal dermoid

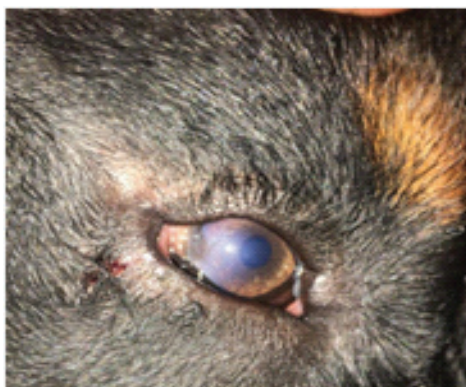


Fig. 3 Post operative follow up at 6 weeks

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