

SURGICAL CORRECTION OF OCULAR DERMoids IN SIX DOGS

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Six, 2-6 months old, dogs of GSD (1), Napoleon Mastiff (4) and Rottweiler (1) breed were presented for corneal dermoids and were treated with superficial keratectomy. Concurrent cherry eye and dermoid in one dog were managed by replacement of prolapsed gland by Morgan's pocket technique and complete surgical excision of dermoid tissue, respectively. No recurrence was reported till 4 months after surgery in all the six cases.

Key words: Cherry eye, Dermoid, Keratectomy, dog.

Introduction

Ocular dermoid is a congenital defect found in animals and characterized by island of skin misplaced to an abnormal location usually the lateral canthus, limbus, third eyelid, medial canthus, cornea or conjunctiva (Gelatt, 1973). Cherry eye is the most common ophthalmic condition of canine third eyelid involving eversion or prolapse of the gland of third eyelid (Plummer *et al.*, 2008). The condition is seen more frequently in younger animals, although dogs at any age can get affected (Gellat, 1991). The present communication describes the surgical management of corneal and conjunctival dermoids presented in six dog.

History and clinical observation

Six dogs (4 male; 2 female) aged 2 to 6 months; weighing 7-25 kg were presented to the Referral Veterinary Polyclinics, IVRI, with small corneal masses present in their

eyes. History revealed that the masses were present since birth in all the cases but had gradually increased in size since past 20 days. The masses containing long brown hairs were found attached to the corneal epithelium and were diagnosed to be corneal dermoids (Fig.1). One of the Neapolitan Mastiff weighing 24 kg was presented with two masses, equally of same size, present on medial and lateral aspect of right eye (Fig.1D). A swollen, reddish, cherry sized mass at 3-6 O'clock position, near the medial canthus diagnosed as cherry eye was also recorded in this case. Another mass, arising from the conjunctival surface of lateral canthus, at 6-10 O'clock position, containing tuft of long inward directing hairs was diagnosed as conjunctivaldermoid. (Fig.1). The hair contained in dermoids caused constant irritation of conjunctiva and cornea leading to lacrimation and great discomfort to the dogs.



(A)



(B)



(C)

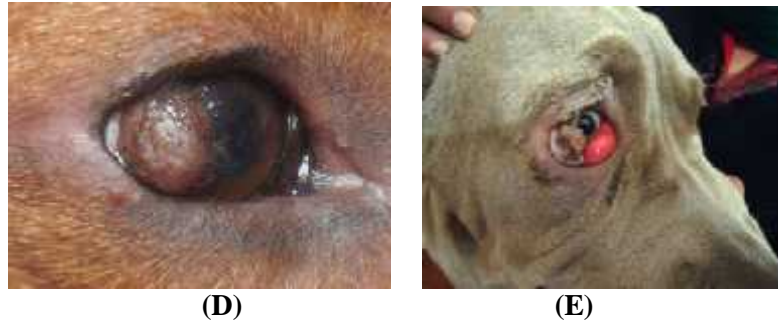


Fig. 1. Corneal dermoid (A, B, C and D) and concurrent dermoid and cherry eye (D) in dogs

Treatment

All the dogs were premedicated with atropine sulfate 0.04 mg/kg b.wt. SC, followed five min later by diazepam and pentazocine 0.5 mg/kg and 0.03 mg/kg b.wt. IV, respectively. Anaesthesia was induced and maintained with 5% thiopentone sodium 12 mg/kg b. wt. IV. Inj. Intacef 20 mg/kg body weight was administered preoperatively. The abnormal tissue present on the palpebral conjunctiva of lateral canthus was removed by sharply dissecting out the dermoid tissue from the conjunctival epithelium using tenotomy scissors. Histopathological examinations of resected tissue was performed (Fig.2). Concurrent Cherry eye present in one of the case was corrected using Morgan's pocket technique (Morgan *et al.*, 1993). The prolapsed gland was exteriorized

and two superficial, parallel, curvilinear incisions were made into the bulbar conjunctiva, on either side of the prolapsed gland. The prolapsed third eyelid gland was tucked into the pocket and bases of conjunctival incisions on both sides were joined together using No. 6-0 Vicryl in a simple continuous suture pattern. A second layer of continuous Cushing pattern was applied after first layer and knots were tied on external side of eyelid to avoid abrasion of cornea by suture ends. Post-operative treatment included Eye drops, Ciprofloxacin and Gentamicin, 3-4 drops, four times a day for 10 days and Inj. Meloxicam @ 0.2mg/kg body weight once a day for 3 days. To avoid self-mutilation Elizabethan collar was advised for a week.

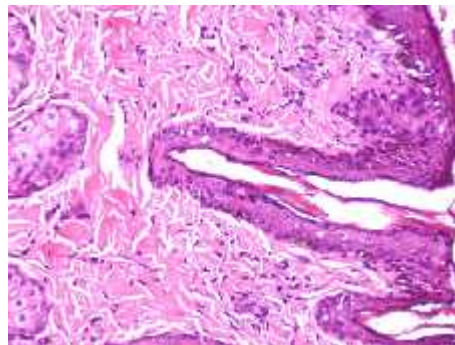


Fig.2. Histopathology of the dermoid tissue confirmed presence of hair follicles sebaceous glands in the tissue at 20X

Results and Discussion

All dogs recovered well and no recurrence was noticed up to 4 months after surgery. Follow up of dog after 3 weeks

revealed complete absorption of the sutures with no post-operative complications. Re-examination after 4 months did not reveal any reoccurrence of dermoid or cherry eye.

Ocular dermoids are congenital abnormalities which may be noted at birth, within a few weeks of life and may occur solely or accompanying ocular malformations (Glaze, 2005). All the cases of present report were of 2-6 months old and having these abnormalities since birth. The hair from the tissue is predominantly responsible for the irritation resulting in chronic inflammation of conjunctiva and cornea and may cause visual impairment. The hairs on dermoid tissue were the main cause of discomfort to all the animals presented for treatment. It is believed to occur due to heritable autosomal recessive or polygenic trait. Large dog breeds like German shepherd, Saint Bernard and Golden retrievers are predisposed to ocular dermoids (Martin, 2005).

Corneal dermoids can be removed successfully by superficial keratectomy while conjunctival dermoids can be treated by conjunctivectomy or by a simple surgical excision of dermoid tissue. Similarly, superficial keratectomy was performed successfully to remove corneal dermoids in all the six cases of present report. However, it is important to completely excise the dermoid tissue to prevent reoccurrence. Early surgical excision of a dermoid tissue is warranted else the long hairs arising from such a tissue may cause conjunctival and corneal irritation leading to chronic epiphora, conjunctivitis or pigmentary keratitis and may even cause visual impairment.

The third eyelid gland which accounts for 30% of total tear production is very important for the intactness of eyelid, eyeball surface and conjunctiva. Loss of tensile strength of peri-orbital supporting ligaments anchoring third eyelid gland to peri-orbit leads to prolapse of the gland of third eyelid (Mitchel, 2012). Prolonged

exposure of prolapsed gland to external environment can lead to increase in glandular size making treatment difficult. The replacement method (Pocket technique) is preferred over the traditional excision method for treating cherry eye, as it is more cosmetic and lacks complications as reported by Morgan *et al.* (1993).

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