



**E-ISSN: 2320-7078**  
**P-ISSN: 2349-6800**  
JEZS 2018; 6(4): 59-61  
© 2018 JEZS  
Received: 12-05-2018  
Accepted: 16-06-2018

#### **A Rajput**

MVSc Student, Department of  
Veterinary Surgery and  
Radiology, College of Veterinary  
Science and Animal Husbandry,  
DUVASU, Mathura, Uttar  
Pradesh, India

#### **V Malik**

Assistant Professor, Department  
of Veterinary Surgery and  
Radiology, College of Veterinary  
Science and Animal Husbandry,  
DUVASU, Mathura, Uttar  
Pradesh, India

#### **R Vijay**

MVSc Student, Department of  
Veterinary Surgery and  
Radiology, College of Veterinary  
Science and Animal Husbandry,  
DUVASU, Mathura, Uttar  
Pradesh, India

#### **H Gangwar**

MVSc Student, Department of  
Veterinary Surgery and  
Radiology, College of Veterinary  
Science and Animal Husbandry,  
DUVASU, Mathura, Uttar  
Pradesh, India

#### **RP Pandey**

Professor and Head, Department  
of Veterinary Surgery and  
Radiology, College of Veterinary  
Science and Animal Husbandry,  
DUVASU, Mathura, Uttar  
Pradesh, India

#### **Correspondence**

##### **A Rajput**

MVSc Student, Department of  
Veterinary Surgery and  
Radiology, College of Veterinary  
Science and Animal Husbandry,  
DUVASU, Mathura, Uttar  
Pradesh, India

## **Surgical correction of ocular dermoid in a Labrador dog: case report**

**A Rajput, V Malik, R Vijay, H Gangwar and RP Pandey**

#### **Abstract**

Eight month old Labrador dog was presented for the evaluation of an abnormally haired appearance of both eyes since last month. Ophthalmic examination of the dog revealed slightly elevated haired tissue arising from the temporal palpebral conjunctiva. Under general anesthesia, superficial keratectomy and conjunctivectomy were carried out to treat the animal. Dermoids are usually considered to be choristoma (normal tissue in an abnormal location) when they are located on the ocular surface (cornea and/or conjunctiva) and as hamartoma when located on the palpebral skin. The dermoid had not recurred and also there was no report of any visual impairment even after one month of surgery.

**Keywords:** Ocular dermoid, dogs, superficial keratectomy, conjunctivectomy

#### **Introduction**

Corneal dermoid is a congenital eye affection characterized by unusual presence of cutaneous tissue in the eye [1]. Dermoids result from the formation of histologically normal cutaneous tissue in an abnormal location during embryonic development [2]. A dermoid is a choristoma that is a histologically normal tissue in an abnormal location [3]. Ocular dermoids are composed of dermis-like connective tissue containing skin, hair follicles, blood vessels, nerves, smooth muscle, fibrous tissue, sebaceous and sweat glands, adipose tissue, covered by keratinised stratified squamous epithelium [4]. In dogs, there appears to be a breed predisposition to ocular dermoids in the German shepherd dog (GSD), Saint Bernard (SB), golden retriever and dachshund [5]. It is commonly believed that, this disease is generally congenital, but not hereditary [6]. The most common site of corneal dermoids in the dog is at the temporal canthus. And most of them are unilateral [5]. Chronic epiphora, keratoconjunctivitis, cutaneous outgrowths with hair clusters at various corneal locations were the most common clinical findings in corneal dermoid in dogs and cats [6]. Ocular dermoids are best treated by surgical excision (keratectomy and/or conjunctivectomy) [7].

#### **2. Methodology Used for Diagnosis**

##### **2.1 History**

An eight month old male Labrador dog weighing 18 kg was presented to the teaching veterinary clinical complex, College of Veterinary Science and Animal Husbandry, DUVASU, Mathura (U.P.), with history of an abnormal hair growth in left eye since one month (Fig. 1). As per owner's observations, the patient was suffered from chronic epiphora and ocular discharge.

##### **2.2 Clinical examination**

Ophthalmic examination of the dog revealed slightly elevated haired tissue arising from the temporal palpebral conjunctiva with chronic epiphora and ocular discharge. Hyperemia was observed because of continuous irritation of conjunctiva with the hairy tuft.



**Fig 1:** Abnormal haired tissue appearance at initial presentation

### 3. Surgical management

The affected animal was treated by superficial keratectomy and conjunctivectomy under general injectable anesthesia. Prior to surgery, routine clinical examinations were performed, followed by blood analysis. Preoperative administration of broad spectrum antibiotic (ceftriaxone @ 25 mg/kg) and analgesic (meloxicam @ 0.5 mg/kg) was done. The dog was first pre-medicated with intramuscular injection of 0.03 mg/kg of atropine sulphate followed 20 min later with 1 mg/kg of xylazine hydrochloride. Thereafter, anesthesia was induced with intramuscular injections of 5 mg/kg of ketamine hydrochloride. Following premedication, venous access was secured with a size 22 gauge intravenous catheter and the cardiovascular system supported with lactated Ringer's solution at a rate of 0.1 mL/kg/min. Following endotracheal intubation, general anaesthesia was achieved with 4% isoflurane and maintained at 2%. The patient was placed on the operation table with the affected eye uppermost and their head was positioned for the surgeon to operate with ease.

After asepsis and antisepsis of the ocular bulbus, fixation of the eye globe was established. The conjunctival dermoid was incised around its periphery, using the microsurgical instruments (Fig 2). In the post-operative period, ciprofloxacin ophthalmic drops (four times a day) along with systemic antibiotics and analgesics were prescribed for 10 days. The wearing of an Elizabethan collar was prescribed for one week.



**Fig 2:** Post-surgery image after excision of dermoid tissue

### 4. Discussion

Dermoids are usually considered as an abnormally located section of dermal tissue producing hairs. The use of the term "dermoid" seems controversial. As for some authors, dermoids are strictly defined as choristomas (when occurring on the eye surface)<sup>[4]</sup> and cannot be applied for a skin location, whereas for some others<sup>[2]</sup>, the term "dermoid" can be used for either hamartomas (when occurring on the eyelid)

or choristomas. Hairs chronically traumatize the ocular surface, leading to superficial inflammation characterised by conjunctivitis, corneal neovascularisation, and pigmentation<sup>[2]</sup>. This abrasion is painful for the patient and provokes a chronic ocular discharge as well as an intense blepharospasm. The patient's abnormal ocular appearance and pain are usually the primary reasons for consultation<sup>[2]</sup>. Similar findings were seen in the present case.

Dermoids have been reported frequently in canine<sup>[8]</sup> and bovine<sup>[9]</sup>, less in feline<sup>[10]</sup> and rarely in other domestic species like equine<sup>[11]</sup>. In case of canine species, corneal dermoids were previously recorded in Basset Hounds, Dachshunds, Welsh Corgis, Labrador retriever, Chih-tzu and Beagle dogs<sup>[12]</sup>. In the present study, the recorded case of corneal dermoid was in Labrador breed.

Superficial keratectomy and conjunctivectomy were successful treatments for corneal dermoids in dog, healing was uneventful in the present case. No recurrence of the corneal dermoid and disappearance of ocular discharges and epiphora were reported post-surgically. Corneal epithelization was completed within one month of treatment. Neovascularization, corneal scarring and impaired vision were also not observed in the present study. Similar surgical procedure to treat canine corneal dermoid has been reported<sup>[6]</sup>. In contrast, other author stated that hair of the corneal dermoid can be removed by periodical manual epilation but it may regrow<sup>[10]</sup>. If the dermoid has not been totally excised, some degree of recurrence can be expected<sup>[11]</sup>.

Findings of this case study are in agreement with the reports that eye dermoid is a ocular malformation which resembles normal skin tissue, but frequently irritate eye of the animal leading to conjunctivitis<sup>[13, 14]</sup>.

### 5. Conclusion

In conclusion, corneal dermoid is a congenital eye defect which is seen more frequently in the dogs. Superficial keratectomy and conjunctivectomy are the treatment of choice. The standard treatment for ocular dermoid is surgical removal. The type of surgery or treatment is dependent on the size and location of the dermoid. Small asymptomatic lesions can be left alone, or if mild irritation is present, treatment can involve topical steroids. Postsurgical complications of corneal or conjunctival dermoid removal are uncommon and may occur if a large dermoid is excised and the resultant defect becomes infected or requires additional surgery for closure. Occasionally, with incomplete excision, the dermoid may regrow, and resection is indicated.

### 6. References

1. Slatter D. Fundamentals of Veterinary Ophthalmology. Edn 3, Saunders, Philadelphia, 2001, 208.
2. Cook CS, Gelatt KN, Gilger BC, Kern TJ. Ocular embryology and congenital malformations in Veterinary Ophthalmology. Edn 5, Wiley-Blackwell, Ames, Iowa, USA, 2013, 3-38.
3. Maggs DJ. In, Slatter DJ. (Ed). Conjunctiva. Textbook of Small Animal Surgery. Edn 3, Saunders, Philadelphia, 2003, 1346.
4. Brudenall DK, Bernays ME, Peiffer Jr RL. Central corneal dermoid in a Labrador retriever puppy. J Small Anim Pract. 2007; 48:588-590.
5. Martin CL. Cornea and sclera. In, Ophthalmic Disease in Veterinary Medicine. Manson Publishing Ltd. London, 2005, 282.
6. Lee JI, Kim MJ, Kim IH. Surgical correction of corneal

- dermoid in a dog. J Vet Sci. 2005; 6(4):369-370.
7. Slatter DJ, Dietrich U. Cornea and sclera. Textbook of Small Animal Surgery. Edn 3, Saunders, Philadelphia, 2003, 1379-1391.
  8. Bodh D, Singh K, Gopinathan A, Sangeetha P, Amarpal, Singh KP. Surgical correction of ocular dermoids in six dogs. Indian J Canine Pract. 2015; 7(1):71-73.
  9. Roh YS, Gi DB, Lim CW, Kim B. Asymmetrical ocular dermoid in native Korean cattle. J Anim. Plant Sci. 2014; 24(3):976-978.
  10. Glaze MB. Congenital and hereditary ocular abnormalities in cats. Clinical Techniques in Small Animal Practice. 2005; 20(2):74-82.
  11. Greenberg SM, Plummer CE, Brooks DE, Craft SL, Conway JA. Third eyelid dermoid in a horse. Vet. Ophthalmol. 2012; 15(5):351-354.
  12. Abu-Seida AM. Corneal Dermoid in dogs and Cats: A Case Series and Review of Literature Global Veterinaria. 2014; 13 (2):184-188.
  13. Sarrafzadeh RF, Farshid AA, Saifzadeh S. Congenital ocular dermoid cyst in a river buffalo (*Bubalus bubalis*) calf. J Vet. Med. 2007; 54(1):51-54
  14. Pandey SS, Bharti B, Patidar A, Shukla N. Surgical correction of corneal dermoid in a cross bred calf. Vet. Practitioner. 2011; 12(1):32-33.