

# SURGICAL CORRECTION OF OCULAR DERMOID CYST IN A NEAPOLITAN MASTIFF DOG – CASE REPORT

\*S.W. Monsang, D.N. Madhu, Prakash Kinjavdekar, Amarपाल and A.M. Pawde

Surgery Division, Indian Veterinary Research Institute, Izatnagar, (Bareilly), U.P.

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## Introduction

Ocular dermoid is a skin or skin-like appendage containing hair, arising congenitally, usually on the limbus, conjunctivae and cornea (Tyagi and Singh, 1993). Constant friction and irritation by hair may lead to conjunctivitis, pannus formation, keratitis and ulceration (Sastri, 2006). This condition is known to occur in large breed dogs such as St. Bernards and German shepherds (Gelatt, 1971), short-legged dogs such as Basset hounds, Dachshunds and Welsh corgis (Priester, 1972) and cats (Lettow *et al.*, 1974). Frank (1981) reported dermoid cysts involving nictitating membrane and cornea in equines and also in bovines by O' Connor (1985). Complete excision of the dermoid cyst is always curative (Lee *et al.*, 2005). The present paper describes surgical management of ocular dermoid cyst and histopathological findings in Neapolitan mastiff dog.

## Case history and Clinical Observations

A 9-month-old female Neapolitan mastiff dog was referred to Division of Surgery, IVRI, for repair of congenital choristoma in the left eye along with cherry eye condition in the right eye. The patient had suffered from chronic epiphora and ocular discharge for the past few months. On ophthalmic examination, hyperemia was observed in left conjunctiva of the temporal canthus due to choristoma with hair. A light peach colour lesion measuring about 3-4 mm in diameter was noted grossly at the limbus region and there was hair growing from the surface (Fig.1). The surface of lesion was rough and slightly protruded compared with

the surrounding normal cornea.

## Treatment and Discussions

The patient was premedicated with atropine sulphate (0.02 mg/kg, IM) and diazepam (0.5 mg/kg, IV) and pentazocine (1mg/kg, IV) was administered after 5 minutes of atropinisation of dog. Surgical anaesthesia was attained by injecting thiopental sodium (15 mg/kg, IV) and also maintained with the same. The patient was administered a balanced electrolyte solution (10ml/kg/hr, IV), and ceftriaxone (20 mg/kg, IV) was administered before surgery as prophylactic treatment. After fixation of the globe, abnormal tissue at the conjunctiva and cornea was removed using the blade (No. 11) and microsurgical instruments. The lesion invaded by stromal layer of the cornea, and extended to limbus and conjunctiva was surgically resected. After surgery, eye drops such as atropine sulphate, gentamicin along with systemic antibiotics and analgesics were prescribed for one week.

For histopathological evaluations, the tissue sample was collected in 10% neutral phosphate-buffered formalin, routinely processed and stained with hematoxylin and eosin. Based on the anatomical location and histopathological features of the removed tissue, the choristoma was diagnosed as corneal dermoid. After two weeks, the region of conjunctiva was epithelized and the scar remained (Fig. 2). The dermoid has not recurred for three months since the surgical correction and hyperaemia of conjunctiva and epiphora disappeared. There was no report of any visual impairment after one month of surgery.

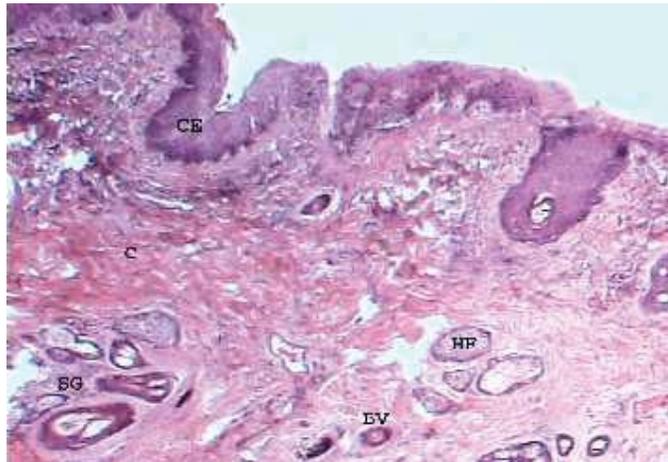
\*Present Address - Assistant Professor, College of Veterinary Science & A.H., R.K. Nagar, Tripura



**Fig. 2: Gross appearance of dermoid cyst before surgery Fig.2: Healing tissue after surgery (3<sup>rd</sup> week)**

Corneal dermoids are ectopic eyelid tissues. Although, hair may be removed by manual epilation or electroepilation, it may regrow. Corneal dermoid has been reported in various species of animals and in humans, and it is commonly believed that this disease is generally congenital, although not hereditary (Horikiri *et al.*, 1994). If the dermoid has not been totally removed, some degree of recurrence can be expected (Gelatt,

1971). Thus, the dermoid have to excise completely without scarring of the cornea. Once corneal epithelization is completed, topical antibiotic-corticosteroid preparations can be administered to reduce postoperative corneal scarring and improve the transparency of the cornea. Microscopically, the corneal dermoid contain normal skin such as hair follicles, corneal epithelium, cornium, sebaceous gland and blood vessel. (Fig. 3).



**Fig. 3. Light microphotograph of dermoid from dog; corneal epithelium (CE), cornium(C), hair follicle (HF), blood vessel (BV), Sebaceous gland (SG). H&E × 40.**

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