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Clinical Article

SURGICAL CORRECTION OF UNILATERAL THIRD EYELID CONJUNCTIVAL DERMOID IN A HOLSTEIN FRIESIAN COW

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SUMMARY

A 2 years old Holstein Friesian heifer was presented with a gradually increasing mass with tuft of hair protruding from the left eye since birth. Ophthalmic examination revealed epiphora and blepharospasm but no evidence of keratoconjunctivitis. Surgical excision of the mass was done using standing sedation and local nerve blocks. The excised mass was sent for histopathological examination. The animal recovered uneventfully with no postoperative complications.

Keywords: Ocular dermoid, Third eyelid, Conjunctiva, Holstein-Friesian

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Dermoids are congenital non-cystic choristomatic overgrowths containing skin and hair observed unilateral or bilaterally in the eyes of calves. Usually, the conjunctiva and cornea are involved, however dermoids of the membrana nictitans and eyelids have been rarely recorded. This article discusses a unique case of a two-year-old, Holstein Friesian heifer brought to the VCC, KNPCVS, Shirwal with the chief complaint of a soft mass with hair growth protruding from its left eye. The anamnesis revealed that the growth had been present since birth and gradually been increasing in its size.

Ophthalmic examination revealed epiphora, blepharospasm, pain along with circumscribed soft growth having tuft of hair erupting from lower margin of palpebral surface of membrana nictitans of the left eye (Figs. 1 & 2). There was no evidence of keratitis or conjunctivitis inspite of irritation resulting from hair in dermoid. The ocular condition was diagnosed as a dermoid of the third eyelid based on clinical examination and as per recommendation of Miller & Gelatt (1981) its surgical removal was undertaken using Peterson block.

The animal was restrained using standing sedation with inj. xylazine hydrochloride @ 0.05mg/kg body weight administered intramuscular (Raptopoulos *et al.*, 1984) and the area around the left eye was clipped, shaved and prepared aseptically using 1:50 dilution of povidone-iodine in normal saline. Petersen eye block and Auriculo-palpebral nerve block was performed by injecting 5mL of 2% lignocaine HCl using 20G spinal needle and 21G needle respectively. Local infiltration of 2% lignocaine at the base of protruded mass was also performed (Bekele *et al.*, 2014).

The mass was held using Babcock's tissue forceps and complete excision using B.P. blade No. 15 was carried out to remove it from the base to avoid recurrence. The base was ligated using catgut No. 2-0 in through and through suture pattern. Post-resection, eye drops moxifloxacin and flurbiprofen were instilled in the affected eye. Post-operative treatment with Inj. strepto-penicillin 5g, Inj. melonex 10mL and Inj. Belamyl 10 mL intramuscular OD for 3 days and eye drops moxifloxacin and flurbiprofen @ 5 drops each QID for 7 days was advised to the owner. Histopathological examination of the mass revealed proliferation of fibrous connective tissue with presence of mature hair follicles and abundant collagenous stroma throughout the growth (Fig. 4) The tissue also revealed the presence of sebaceous glands of normal histomorphology with focal hyperplastic changes suggestive of dermoid cyst in the medial aspect of the ocular region (Fig. 3), unlike the normal histopathological findings of conjunctiva i.e., presence of columnar epithelial cells, goblet cells and substantia propria with blood vessels. As explained by Maggs (2012) it is a normal tissue at abnormal place. The histopathological findings were in congruence with the observations of Munoz *et al.* (2007) who reported dermoid cyst in a horse.

Therefore, it could be concluded that the present case was diagnosed with dermoid which is a non-cystic developmental malformation arising from conjunctiva containing tissue related to skin and its appendages that may have caused visual impairment. The findings were similar to Philip *et al.* (2021). Uneventful recovery in this animal occurred with no postoperative complications. The surgical removal of the dermoid mass has yielded favorable results with no recurrence.

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Fig. 1. Dermoid cyst growth with tuft of hair on membrana nictitans and epiphora

Fig. 2. Dermoid cyst protruding from the left eye

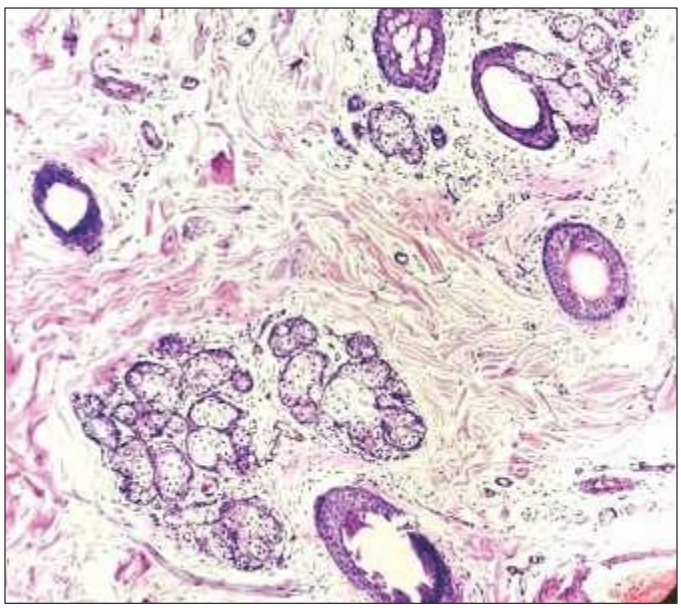

Fig. 3. Histopathological section of growth shows presence of sebaceous glands with focal hyperplastic changes and focal areas of inflammatory cellular infiltration and hair follicles

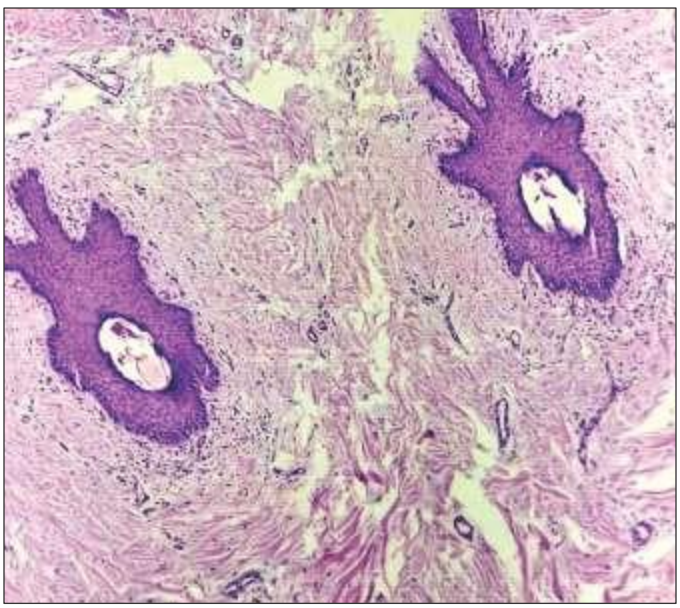

Fig. 4. Histopathological section of growth shows proliferation of fibrous connective tissue with presence of mature hair follicles

Fig. 5. Normal eye postoperatively after two weeks

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