



Successful Surgical Management of Corneo-conjunctival Dermoid Cyst with Bilateral Nasal Choristoma in a Red Kandhari Calf

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ABSTRACT

An old Red Kandhari calf presented at teaching veterinary clinical complex, veterinary college Parbhani with corneo-conjunctival haired masses on the left eye and bilateral nasal growth at nasolabial planum since birth. As the mass was completely covering on cornea due to which vision was hindered completely after physical examination and considering the health status of the calf the surgery was scheduled. The masses were surgically excised from the cornea and bulbar conjunctiva of eye and the left and right side of the dorsomedial nasolabial planum. Then the eye was flushed with normal saline and the tissue of both corneo-conjunctival and nasal were stored in 10% formalin later histopathology of the excised tissue confirmed as a unilateral corneoc-onjunctival dermoid with ectopic lacrimal glands and bilateral nasal choristomas with loose stroma and hair follicle. Two months of follow up was done where there was no reoccurrence of the growth observed. Surgery was curative and healing was uneventful.

Key words: Calf, Corneoc-onjunctival dermoid, Nasal choristoma

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INTRODUCTION

Ocular dermoid is a congenital defect recognized in animals characterized by skin like appendages present on the eye. These represent histologically normal Island of skin but misplaced to other location usually arising on the limbus, conjunctivae and cornea (Jena et al., 2015). It is believed that these cysts originate from an incarceration and subsequent growth of embryonic epithelial cells during the closure of the neural tube, and therefore, most of these lesions occur along the median line (Tunio et al., 2016). However, there are reports of acquired dermoid cysts, secondary to traumatic epithelial dislocations they are readily diagnosed because they appear as a piece of skin attached to the cornea, sclera, conjunctiva and eyelids (Rashmi et al., 2018) and they usually occurred unilaterally. Most dermoids are quite superficial and involved the epithelium and very superficial stroma. Choristomas are benign, congenital lesions that consist of an over growth of normal tissue in an abnormal location (Rashmi et al., 2018). Dermoids are choristomatous abnormalities that often arise in the ocular region. Bilateral ocular dermoids have been found in animals (Aher et al., 2017). However, ocular dermoids are not common in cattle with their prevalence estimated at 0.002% (Kilic et al., 2016). This paper reports a case of unilateral corneocconjunctival dermoids in a calf in conjunction with bilateral nasal choristomas.

CASE REPORT

History and initial clinical findings

An old Red Kandhari calf (aged one month) was presented with an abnormal appearance of left eye since birth. A large fleshy mass was attached to the dorsal and ventral part of cornea and bulbar conjunctiva spacing on cornea with a large number of superiorly directed hairs arising from the surface of the mass (Figure 1).

The calf exhibited moderate blepharospasm and watery discharge from affected eye. Superficial corneal ulceration was present on the cornea as a result of trichiasis. The corneo-conjunctival dermoid was extending up to medial canthus of the left eye. No other ocular abnormalities were detected in the eye. A nodular skin mass was also present on the left and right dorsomedial aspect of the nasolabial planum of both the nostrils (Figure 2). The clinical diagnosis was unilateral corneal dermoid and bilateral nasal choristomas.



Figure 1. Corneoconjunctival dermoid in one month old Red Kandhari calf before surgery at COVAS Veterinary Hospital

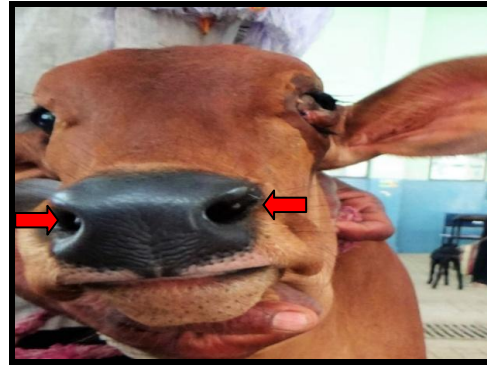


Figure 2. On physical examination observed Bilateral nasal growths on nasolabial planum in calf before surgery at COVAS Veterinary Hospital

Surgical procedure

The calf weighed 30 kg, was in good level of body condition and no further abnormalities were detected on physical examination. Corrective surgery was performed under mild sedation with injection Pentazocine lactate 0.5 mg/kg body weight intravenously followed by supra orbital and Peterson nerves block with 2% lignocain hydrochloride (Figure 3). The dermoids were excised by superficial keratectomy with Bard Parker blade (No. 11) at both dorsal and ventral aspect of cornea and bulbar conjunctiva (Figure 3).

The nasal masses were also excised (Figure 4). All excised tissue was preserved in 10% formalin for histopathological examination. Later cornea was cauterized by 1% silver nitrate and topically applied Tobramycin eye drops two times daily for two weeks (Figure 5). Postoperatively a course of antibiotic gentamycin 3mg/kg body weight, intramuscular, cadistin 0.2mg/kg body weight, intramuscular and Melonex 0.5mg/kg body weight, intramuscular along with this to accelerate the healing injection of vitamin A 10000 IU/kg body weight, intramuscular was given (Figure 5). Ocular and nasal healing was uneventful with prominent corneoconjunctival granulation tissue observed on 6th days postoperatively, which was noticed to be largely resolved by the six-week follow-up examination (Figures 5 and 6).



Figure 3. During surgery performing superficial keratectomy to excise the growth of dermoids in calf at COVAS Veterinary Hospital



Figure 4. Excision of nasal growths from its base in calf at COVAS Veterinary Hospital

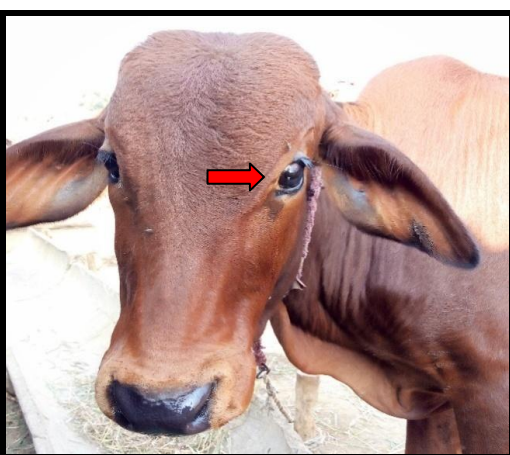


Figure 5. Complete recovery after six weeks of surgery at COVAS Veterinary Hospital

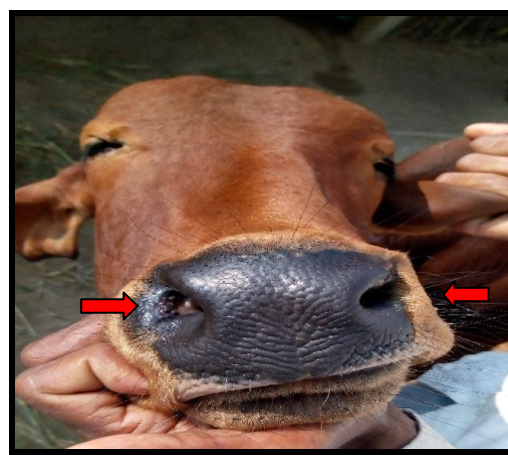


Figure 6. No reoccurrence of the nasal growth after six weeks of surgery at COVAS Veterinary Hospital

growth at the entrance of the left nasal passage in association with bilateral corneal and eyelid dermoids in a Rathi calf (Rashmi et al., 2018). Histopathologic examination was not performed on the nasal masses in either of these two reports.

The combination of congenital ocular and nasal abnormalities in this calf is compatible with the intimate early developmental origin of the optic and nasal regions and a common abnormality in neural crest migration whether this abnormality has a genetic basis or not is less clear (Aher et al., 2017). Superficial keratectomy is required to surgically excise a corneal dermoid although the depth of the dermoid within the cornea cannot be ascertained by ophthalmic examination until surgery is undertaken (Rashmi et al., 2018). In the case of large corneal dermoids, surgical excision should be performed early in the life of the patient to achieve optical improvement and allow functional development of the eye.

DECLARATIONS

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Author's contribution

P.R. Balage, B. Bhadane and V. Aher performed surgery and written article. G. Dhage, A.A. Mate and D.Sh. Lokhande helped during surgery and writing article. And G. Gangane contributed for histopathological examinations.

Competing interest

The authors declare that they have no conflict of interest with respect to the research, authorship, and/or publication of this article, the author declares that he has no competing interests.

REFERENCES

- Aher VD, GP Dhage, GR Gangane and Pradeep RB (2017). A Successful Surgical Repair of Cranial Meningocele with Bilateral Nasal Choristoma in a Calf, *International Journal of Veterinary Science*, 6(3): 141-143.
- Alam MM and Rahman MM (2012). A three years retrospective study on the nature and cause of ocular dermoids in cross-bred calves. *Open Veterinary Journal*, 2:10-14.
- Brunedall DK, Ward DA, Kerr LA and Newman JS (2008). Bilateral corneconjunctival dermoids and nasal choristomas in a calf. *Veterinary Ophthalmology*, 11(3): 202-206.
- Jena B, Ahmed A and Pagrut NK (2015). Surgical management of islands of ocular dermoids in a Holstein Friesian cross bred calf—a case study. *Journal of Livestock Science*, 6:1-3.
- Kilic N, Toplu N and Epikmen ET (2016). Surgical Treatment of Corneal Large Dermoid in a Simmental Calf. *Acta Scientiae Veterinariae*, 40(2): 1041.
- Nijhawan N, Morad Y, Seigel-Bartelt J and Levin AV (2002). Caruncle abnormalities in the oculo-auriculo-vertebral spectrum. *American Journal of Medical Genetics*, 113(4): 320-325.
- Rashmi, Tamilmahan P, Singh P and Prabhakar (2018). Surgical management of dermoid cyst in a cross bred calf. *Journal of Entomology and Zoology Studies*, 6(2): 2574-2576. Available at: <http://www.entomoljournal.com/archives/2018/vol6issue2/PartAC/6-1-345-481.pdf>
- Tunio A, Bughio S, Abro SH, Kalhor DH and Meghmon AA (2016). Eye dermoid in a thari breed cattle calf and its surgical management: A case study. *Pakistan Journal of Agriculture, Agricultural Engineering and Veterinary Sciences*, 32(2): 295-299.