

**A CASE REPORT ON SURGICAL MANAGEMENT OF DERMOID CYST IN
DESHI CALF AT UPAZILLA VETERINARY HOSPITAL, KAPTAL,
RANGAMATI**



Presented by

Ukyawon Marma

Roll no.: 15/49

Reg. no.: 01466

Intern ID: 46

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RANGAMATI**



Approved by:

(Signature of Supervisor)

Dr. Mohammad Mahmudul Hassan

Professor and Head

Department of Physiology, Biochemistry and Pharmacology

Faculty of Veterinary Medicine

Chattogram Veterinary and Animal Sciences University

Khulshi, Chattogram-4225

PLAGIARISM CERTIFICATE

I myself Ukyawon Marma, strongly assures that I have been performed all work of this report. Information has been collected from Upazilla veterinary hospital, Kaptai, Rangamati and National, International Journals, Reference Book and Website. All references are cited duly. No data or information has been copied in any form. Therefore, I reserve entire responsibility of this report.

The Author

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ABBREVIATION

| Abbreviations | Elaborations |
|----------------------|------------------------------|
| V.S | Veterinary Surgeon |
| Mg/kg | Miligram per kilogram |
| UVH | Upazilla Veterinary Hospital |
| i/m | Intramuscular |
| BID | Bice in Dice |
| | |

ABSTRACT

A 20 days old male deshi (local) calf was presented at Upazilla Veterinary Hospital, Kaptai, Rangamati for ocular examination in November 2019 with a history of epiphora, blepharospasm and ocular discharge for 5 days. Clinical examination revealed that, there was hairy growth in the median canthus and ocular discharge on right eye. No pain noticed on the direct palpation. The present case was diagnosed as ocular dermoid cyst and surgical treatment was needed. On other clinical examination revealed that the calf had no other complication and feeding habit was normal. In the surgical process, no sedation was needed because the calf was restrained by owner. Firstly, regional nerve such as infraorbital and supraorbital nerve was blocked with 2% lignocaine to desensitize the eyeball. After desensitize the eyeball dermoid tissue of the eyeball was grasped gently by forceps and excised the cyst by surgical blade. This procedure is called superficial keratectomy. After surgery, post-operative care was suggested and combination of procaine penicillin & streptomycin antibiotics, antihistaminic drug & painkiller were i/mly administrated to prevent infection and pain. The calf was followed up after 6 days of surgery and no reoccurrence was seen. In conclusion, we can say that superficial keratectomy was the scientific way to remove dermoid cyst. Post-operative care with antibiotics and supportive treatment was followed to check secondary bacterial infections and avoid post-operative complication. After 6 days, the completion of post-operative period the calf was recovered well.

Keywords: Epiphora, Keratectomy, Blepharospasm, Dermoid cyst

CHAPTER-1

INTRODUCTION

Ocular dermoid cyst is a congenital defect recognized in animals characterized by skin like appendages present on the eye (Jena *et al.*, 2015). Dermoid cyst is an uncommon developmental anomaly that has been reported in animals especially in dogs, cats, horses, and cattle (Lawson, 1975). It is believed that these cysts originated from incarceration and subsequent growth of embryonic epithelial cells during the closure of neural tube and therefore most of these lesions occur along the median line (Munoz *et al.*, 2007). Ocular dermoid cyst are histologically normal but misplaced to an abnormal location usually the lateral canthus, limbus, third eyelid, cornea and corneo-conjunctival junction, conjunctiva (Yeruham *et al.*, 2002). It may be solitary or multiple, firm to fluctuant, well circumscribed, smooth and round and usually the overlaying skin is normal (Shields *et al.*, 1986). Dermoid occur sporadically in numerous cattle breeds and can be unilateral or bilateral (Williams and Gelatt, 1981). The cyst usually contain sebum, keratin, hair which may produce progressive enlargement of cyst so that it becomes clinically apparent (Edwards *et al.*, 2002). It cause irritation in eye which leads animal suffer from chronic epiphora, conjunctivitis and keratitis. It is hardly associated with other congenital defects like corneal opacity, which is described as recessive in Holstein crossbred (Deas *et al.*, 1959).

Dermoid containing hair follicle and enlargement of cyst are associated with irritation resulting in chronic inflammation of conjunctivae and cornea may result in visual impairment (Miller *et al.*, 2012). Ocular dermoid have not been demonstrated to be inherited in bovine (Yerhum *et al.*, 2002). Dermoids cysts are formed due to defective epidermal closure along embryonic fissure, which isolates an island of ectoderm in the dermis or subcutis (Edwards

et al., 2002). However, there are reports of acquired dermoid cysts secondary to traumatic epithelial dislocation (Jackson *et al.*, 2007). The increased size of the cyst occurs due to normal cell desquamation within the cyst cavity leading to secondary sings related to the compression of adjacent structures (Larazidis *et al.*, 2008). Ocular dermoid cyst can be corrected by superficial keratectomy. The present case also deals with the surgical correction of dermoid cyst in deshi male calf.

CHAPTER-2

CASE DESCRIPTION

History and observation:

A 20 days old deshi calf was presented in the Upazilla Veterinary Hospital, Kaptai, Rangamati with the history of having lacrimation for last 5 days. The owner also complained that mass and hairy growth on the right eye and increased the mass day by day since the growth of calf.

Clinical examination:

Clinical examination revealed that mild smooth, round cyst and hairy growth on the right eye which involved third eye lid and medial canthus. Otherwise, other clinical parameter such as heart rate, respiratory rate, dehydration level was normal. Feeding habit was normal and feces contain no egg of parasite.

Diagnosis and Recommendation:

Based on clinical examination by the Veterinary surgeon, complain and history from owner it was diagnosed as Ocular Dermoid Cyst. After diagnosis, we recommended the owner for surgery to correct the dermoid cyst.

Surgical Management:

At first, the surgical equipment was sterilized by boiling water. Then the calf was restrained by owner so calf was not sedated by any chemical anesthesia. In order to achieve complete anesthesia of eye, relaxation of eye globe and akinesia of eyelid; retrobulbular, auriculopalpabral, supraorbital nerve were blocked with 2% lignocaine hydrochloride. Then male calf eyelashes was trimmed with scissors and whole eye washed with 0.9% povidone

iodine to remove contaminates. After attainment of adequate sedation superficial keratectomy was performed.

Then the mass of dermoid was grasped with forceps gently and the tissue mass was completely excised by surgical blade. Bleeding from surgical wound was stopped by applying povidone ointment. Tarsorrhaphy was not needed because of no damage of cornea and conjunctiva.

Post- operative Treatment:

After performing superficial keratectomy post-operative treatment was given to the calf. To prevent bacterial infection in eye combination of ciprofloxacin and dexamethasone eye drop was given BID for 5 days. Systemic antibiotics penicillin was administered i/mly at the dose of 4 mg/kg body weight for 3 days. To reduce and prevent histamine release due to penicillin Meloxicam and chlorpheniramine chloride were given i/mly at the dose of 2mg/kg body weight for 3 days.

Follow up:

After 6 days of post- surgery to follow up the calf the surgery team visited to the owners place. The calf was normal and there was no sign of illness and in eye reoccurrence of mass was not found.

LIST OF FIGURE

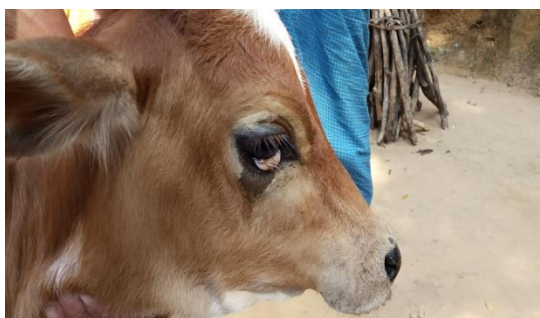


Fig 1: Cyst present in the right eye



Fig 2: Performing Surgery with VS madam



Fig 3: Dermoid cyst mass after surgery

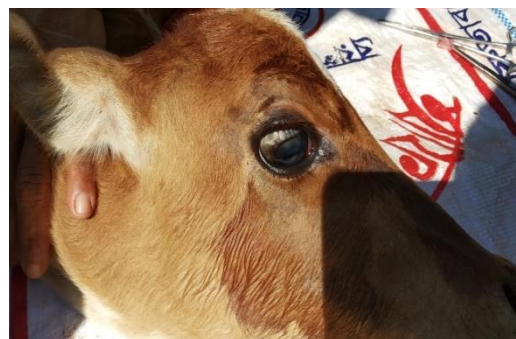


Fig 4: Condition eye after surgery

CHAPTER-3

RESULT AND DICUSSION

Clinical findings and history indicated that calf had congenital malformation of ocular dermoid in right eye. Dermoid was successfully removed by the kertotectomy. We used proper anesthetics, as we mentioned in the methodology just before the operation. Post-operative recovery was uneventful. The surgical wound in eye recovered in one week.

Ocular dermoid is a christoma of normal tissue formation at abnormal position (Prabhakar *et al.*, 2018). While, mechanism of dermoid cyst formation in eye was unknown but it is not transmitted through hereditary. Ocular dermoid are not coomon in cattle with a percentage of occurrence 0.002-.4% (Brudenall *et al.*, 2008). From our present case, we reported that the detected dermoid was not hereditary. Dermoid may be located in the third eyelid, cornea, corneo-conjunctival junction, limbus, medial canthus (Alam *et al.*, 2012). Similar findings were noticed in our case where dermoid was located in the third eyelid. The dermoid may contain hair follicle, skin appendages and sebaceous gland (Alam *et al.*, 2012). In present case dermoid also contained hair follicle and skin appendages. The calf shows moderate sign of lacrimation and blepharospasm on right eye. These findings were correlated with the study of surgical management of islands of ocular dermoid in a Holstein Friesian crossbred calf- a case study.

Early excision is the only way to recover from dermoid unless hair growth in mass can cause visual impairment (Kilic *et al.*, 2012). In the present case, visual impairment was not present due to less growth of mass. Nevertheless, continuous lacrimation was present. Treatment of dermoid can be done with superficial keratotomy had been suggested

(Farshid *et al.*, 2007). Nevertheless, there are other surgery like enucleation, exenteration, evisceration, cryotherapy, lamellar keratotomy or combination of technique can be done for correction ocular dermoid cyst (Farshid *et al.*, 2007).The study case was recovered by the performing superficial keratotomy without reoccurrence.

CONCLUSION

From over all study I have learned how a surgery performed properly. Also gather knowledge about dermoid cyst and the study encourage me near future to perform more complicated surgical cases. From study I am informed that ocular dermoid is not common in cattle but it can be happened sporadically. Dermoid in eye can be complicated if patient is presented to veterinarian in later stage. Early presentation and surgery are the way to recover from it.

LIMITATION

The clinical dermoid cyst case in the area of Kapati was very few. In UVH there was lack of operation theatre so surgery had to perform under the open sky and surgical equipment was not enough to perform any complicated case. Histological slide of mass could not be done due to lack of laboratory.

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BIOGRAPHY

I am Ukyawon Marma. I am the student of 20th Batch and an intern veterinarian under faculty of veterinary medicine in Chattogram Veterinary and Animal Sciences University. I have passed Secondary School Certificate (SSC) in 2012 (5.00) followed by Higher Secondary Certificate (HSC) in 2014. I am come from Rajosthali, Rangamati. In the future, I would like to work as a veterinary practitioner and do research on clinical animal diseases in Bangladesh.