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ULCERATIVE KERATITIS IN KHILLARI BULL-A CASE REPORT

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Abstract: A Khillari bull of one and half year old age was presented to Animal Rahat team with complaints of excessive lacrimation and blepharospasm in right eye. On clinical examination of the affected eye in dark, a milky white spot on cornea and fluorescent dye strip test after washing of eye leaving light fluorescent green colour on the affected part of the cornea, confirmed a case of corneal ulcer. Then bull was treated by using local topical antibiotic gentamicin eye drop and diclofenac eye drop instilled four times a day and the bull was also administered parenteral injection of Phenyl Butazone and Salicylate @ 4.4 mg/kg of body weight with tapering dose for one-week time. Bull was followed up 3 times at a weekly interval and every time fluorescent dye test was done to check the size of corneal ulcer in the affected eye. After a week's time, clinical signs such as excessive lacrimation and blepharospasm got subsided. On 28th days after initiating the treatment, no corneal ulcer was observed on carrying out the fluorescent dye strip test which confirmed that ulcer has healed completely in 4 weeks' time.

Keywords: Corneal ulcer, Khillari Bull, Fluorescent dye test.

Introduction

A corneal ulcer or ulcerative keratitis is an inflammatory condition of the cornea involving loss of its outer layer. The cornea is a tough transparent membrane which consist of five layers. It protects the eye by making a strong barrier between eye and environment and it allows the light to enter inside eye for making images. The trigeminal nerve supplies the cornea via the long ciliary nerves. Corneal ulcer is a painful condition, manifested by excessive lacrimation, photophobia and blepharospasm which are outstanding signs and also other signs including corneal irregularity, edema and vascularization (R.P.S. Tyagi and Jit Singh (2013).

Ulcerative keratitis (based on depth) may be superficial, deep, deep with descemetocele, or perforating. Unilateral keratitis frequently is traumatic in origin. In dogs and horses, most ulcers are mechanical in origin; in cattle, sheep, goats, cats, and reindeer, infectious agents and mechanical causes are important. To detect small ulcers, topical fluorescein may be required. Therapy for superficial ulcers is usually medical and consists of topical broad-

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spectrum antibiotic(s) administered 3–6 times daily with correction of any mechanical factors. Corneal healing is monitored by frequent clinical examinations and gradual reduction in the size of the fluorescein retention by the non-epithelialized ulcer. Kirk N. Gelatt, (2014).

Case history, diagnosis & treatment

A bull of Khillari breed of one and half year age old was presented to Animal Rahat emergency team with history of excessive lacrimation and blepharospasm of right eye for last two days. On physical examination it was observed that white focal mark is observed on cornea and while taking history, the owner revealed that accidentally the tip of whip was slashed to the right eye of bull when he was using whip for moving the bull aside. On further examination of eye under dark by using Meg light torch, anterior chamber was clean, pupil size was normal. Then Fluorescent dye test was done. First eye was cleaned with normal saline and Lignocaine 4 % was instilled topically and then florescent dye strip was kept for one minute and then after removing the strip from the surface of the affected eye, the eye was washed again with normal saline. Immediately after washing the eye surface a greenish color (**figure 1**) spot appeared on cornea which confirmed that it was a case of corneal ulcer.

Then bull was treated with topical 3% Gentamicin eye drop (Gentalab, Laborate pharmaceuticals India Ltd, Himachal Pradesh) and 0.1% Diclofenac sodium eye drop (Syntho pharmaceuticals Pvt. Ldt, Lucknow) four times a day for two weeks' time. Bull was also treated with parenteral Phenyl Butazone @ 4.4 mg/kg of body weight with tapering dosages for a week's time. After one week; again fluorescent dye strip test was repeated, size of corneal ulcer (**figure 2**) was reduced as compare to size on the first day of treatment. Fluorescent dye strip test was done 2 more times at week's interval and on 28th day, no ulcer was observed. Ulcer was healed completely in four week times. (**figure 3 and 4**).

Fig 1: Fluorescent dye strip test confirmed a case of ulcerative keratitis

Fig 2: After one week- size of ulcer is decreased

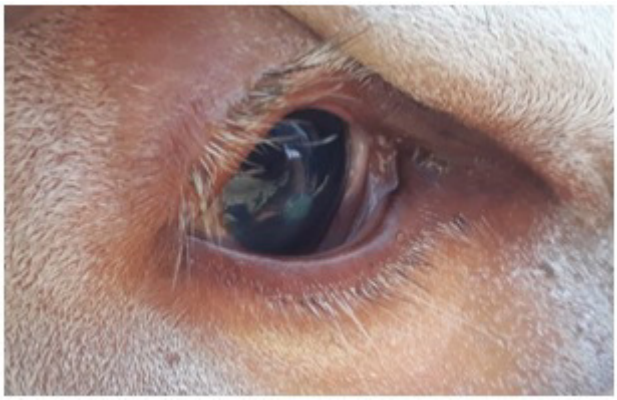

Fig 3: Size of ulcer further reduced and faint color of dye is visible on 3rd week

Fig 4: Ulcer is completely healed in 4weeks' time

Discussion

Joon Young Kim (2009) stated in his study that the recovery rate from superficial corneal ulcers was 100% and that from deep corneal ulcers 55%. He also stated that treatment with medication alone, the recovery rate was 71%, although the recovery rate was 100% after surgical treatment. Superficial corneal ulcers healed relatively well, without complications.

Superficial corneal ulcers treated with medication, took an average of 5.1-13.4 days to heal completely.

Roberto Luiz Ferrone Neto *et.al*., (2018) reported that the eye drop containing antibiotics like Tobramycin, one drops every 8 hours for 21 days and topical non-steroidal anti-inflammatory, one drops every 8 hours for 15 days would have large efficacy in animals with ulcerative keratitis with regression of signs within 21 days. In this case study of use of same group of antibiotic, Gentamicin, which led the decision of the use of complementary therapy.

Conclusion

Fluorescent dye strip test helps in confirming corneal ulcer which subsequently help in appropriate treatment and speedy recovery of bull. Use of topical antibiotics gives good response without any further irritation with faster recovery.

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