

MANAGEMENT OF CHRONIC DEEP CORNEAL ULCER IN A CALF - A CASE REPORT

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ABSTRACT

A Seven months old female Jersey cross bred calf was presented to the Veterinary Clinical Complex, Veterinary College & Research Institute, Tirunelveli with the history of trauma on the left eye. Ophthalmic examination revealed chronic deep corneal ulcer on the left eye. The presented case was successfully treated with temporary tarsorrhaphy and medical management. Animal had an uneventful recovery.

Keywords: calf, corneal ulcer, Descemetocoele

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Corneal ulceration is a vision threatening condition requiring early clinical diagnosis, appropriate medical and surgical therapy (Jhala *et al.*, 2012). The causes of corneal ulceration includes trauma, chemical, bacterial, viral, fungal infection, tear film abnormalities, exposure keratopathy, sharp or blunt trauma and cilia abnormalities (Peiffer and Peterson-Jones, 2001). Superficial injuries to epithelium produces abrasion while deeper injuries involving the stroma results in corneal

ulcers. Deep corneal ulcers could result in descemetocoele and corneal rupture.

A seven months old female Jersey cross bred calf was presented to the Teaching Veterinary Clinical Complex, Veterinary College & Research Institute, Tirunelveli with the history of traumatic injury on the left eye for the past one month and was treated locally with topical medications. Ophthalmic examination revealed epiphora, blepharospasm, hyperaemia of circumcorneal blood vessels and deep ulcerative keratitis at the centre of the cornea (Fig. 1). The right eye was normal. Left eye and the peri-ocular surface were prepared aseptically using 0.1% Povidone Iodine solution and local anaesthesia of eyelids was achieved with linear infiltration

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of 2% lignocaine HCl each 1ml on upper and lower eyelid.

Partial thickness horizontal mattress sutures were placed on the eyelid margins anterior to gray line using non-absorbable polyamide 2-0 with stents (Scalp vein tubing) which brought the upper and lower eyelids together and a small space was left unsutured at medial canthus to facilitate application of medications (Fig. 2). Injection ceftriaxone at 15 mg/kg body weight was given intravenously for 5 days. Eye drops 0.3% Gatifloxacin and eye drops Hicool® each one drop four times a day for 2 weeks were administered at the medial canthus post-operatively. Sutures were removed on the 15th post-operative day. Examination of left eye on 15th postoperative day revealed formation of anterior epithelium with superficial vascularisation on the cornea (Fig. 3).

Corneal epithelial defects generally heal within 48 hours without complications. Persistent epithelial defects and chronic corneal ulcers are difficult to treat and potentially lead to serious complications such as infection, inflammation, corneal scarring, opacification, corneal thinning and perforation ultimately leading to vision loss. Standard therapy includes aggressive lubrication with preservative free eye drops and antibiotics to prevent infection. In case of non healing ulcers more invasive treatments such as topical autologous serum, amniotic membrane graft, eyelid tarsorrhaphy, nictitans flap, keratoplasty can be considered (Lazreg *et al.*, 2020). Tarsorrhaphy provides partial coverage and helps in the treatment of corneal ulcers by bringing about apposition of the eyelids which protects cornea from further damage and also helps to retain the topical medication



Fig. 1. Chronic deep corneal ulcer on the left eye



Fig. 2. Partial thickness temporary tarsorrhaphy with stents – left eye



Fig. 3. Post-operative 15th day – healing of corneal ulcer - left eye

for longer periods (Tripathi *et al.*, 2009). In the present case, the chronic deep corneal ulcer was successfully treated with temporary eyelid tarsorrhaphy and standard medical therapy.

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