

Infectious Keratitis of Cattle (Pink Eye Blight)

Etiology

- Hemolytic moraxella bovis.

Other organism can exacerbate the severity ,

-level of solar ultra violet radiation change

-Rickettsiae

-chlamydia

-mycoplasma

-Acholeplasma .

Epidemiology

1 -disease occur in most countries and in summer and autumn

2-there is no mortality and morbidity rate 80%.

3 -transmission occur by contaminated by ocular and nasal discharge of infected cattle .

4 -face fly important vector .

-The flies feed on infected secretions and move from animal to animal, spreading the bacteria.

- Carriers may also carry infection in the nose and vagina,

- so that discharges from these areas are also a source of infection.

predispose cattle to infection include:

- dusty conditions
- flies
- bright sunlight
- physical irritation of the eye (such as from thistles)
- long grass

Pathogenesis

-Attachment of morexila bovis ,to corneal epithelium .

-microscopic corneal erosion are present within 12hr. of infection ,indicating initial production of corneal ulceration is due to direct **cytotoxic activity of the organism.**

Focal loss of corneal epithelium, degeneration of keratocytes and fibrillar destruction.

Moraxella bovis produce **hemolysin , leukocidine ,dermo necrotizing toxin .**

Clinical Finding

1- Incubation period 2-3days to up to 3weeks .

2- Injection of corneal vessels and edema of conjunctiva and copious water lachrymation ,
,blepharospasm ,photophobia .

3- Slight fever ,fall in milk yield ,depression of appetite .

4- In 1-2 day a small opacity appear in the center of cornea may become elevated

- And ulcerated during the next 2 days although spontaneous recovery .

5-color of opacity varies from white to deep yellow ,

6- Ocular discharge become purulent and the opacity begins to shrink ,complete recovery occurring after a total course of 3-5weeks .

7- In sever cases the cornea becomes conical in shape

8 -the eye may rupture and result complete blindness.

Clinical Pathology

-1- swabs should be taken from conjunctival sac

2-serological test .

Differential Diagnosis

1-Traumatic conjunctivitis

2- infectious bovine rhinotrachitis .

3-rinder pest

4-bovine malignant catarrhal fever.

5- bovine viral diarrhoea .

6- photo sensitization keratitis .

7- thelaziasis.

8- pasteurella multocida .

Treatment

RX

1-eye ointment and solution containing antibiotic ,furazolidone ,oxytetracyclin ,
penicillin

–streptomycin mixtures /3 time ,daily .

2- corticosteroid and antibiotic ,healing is rapid

**- including prednisone, prednisolone, methylprednisolone, and dexamethasone,
are well absorbed when administered orally and are particularly useful when
anti-inflammatory treatment is required for a period of one to several weeks.**

Other preparations are available for parenteral use.

3-dexamethasone 1mg with 2ml penicillin- streptomycin

4- sulfadimidine 100mg/kg .

Control

1-Eradication or prevention of the disease

2-Insecticide impregnated area tags may help in control

3-Keep animal under close condition and isolate .

4- Treated any cattle show excessive lacrimation and blepharospasm .

5- Killed ,whole -cell vaccine have been available ,3 injection 14 day apart .

6- Weekly treatment of both eye of calves, but in the cow with furazolidone eye spray more effective prophylaxis than vaccination.