



By your veterinary ophthalmologist

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## Indolent corneal ulcer

### Indolent Corneal Ulceration in the Dog

#### Normal Ulcer Healing

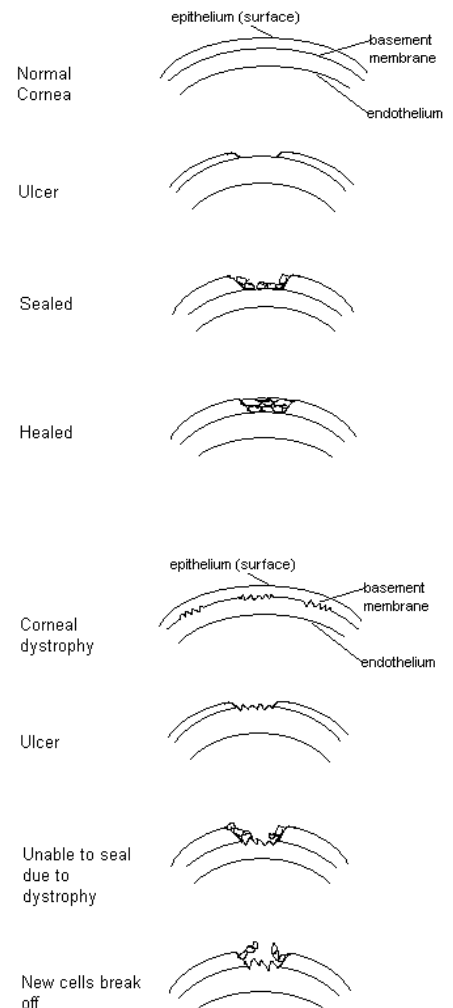
A corneal ulcer is a break in the outer (epithelial) layers of the cornea. (The cornea is the clear, front part of the eye that acts like a windshield, protecting the inside of the eye while allowing light to pass through.) Normally, when there is a defect or ulcer on the surface of the eye, the cells at the outer edges grow into the center and healing is often complete within 2-4 days.

#### Indolent (non-healing) Ulcer

Indolent ulcers are most frequently seen in older dogs. The specific cause is unknown. With an indolent ulcer, the cells growing in from the edges are unable to adhere to the surface of the cornea due to an underlying layer of denatured tissue. Imagine laying sod on pavement – if the grass roots could penetrate the pavement to the soil below, it would survive, since it cannot, the grass dies. Since this layer on the cornea is not allowing the healing edges to root down, the ulcer is unable to heal. To promote healing, a procedure called a grid keratotomy is often recommended.

#### Grid Keratotomy

The loose “flaps” of healing tissue at the edges of the ulcer are gently scraped / debrided away with sterile swabs and then a small needle is used to scratch a grid pattern over the surface of the dead tissue to the healthy cornea below. The intention of this procedure is to create

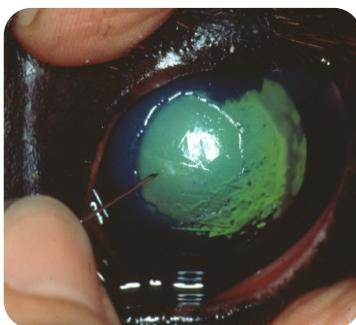


openings through the denatured layer down to the healthy cornea so the healing edges are able to root themselves down. Medical treatment and the wearing of the Elizabethan collar 24h\24 is very important in the healing process following the procedure.

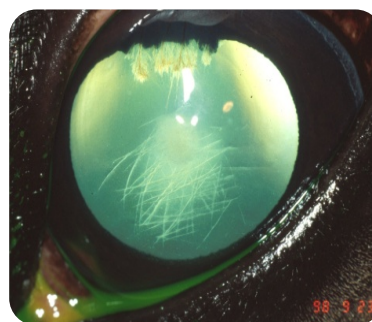
Approximately 90% of indolent ulcers heal within two weeks following this treatment. If a patient has a large amount of scar tissue and blood vessels that have grown into the cornea, procedures additional to the grid keratotomy may be required. These may include corneal debridement / recontouring with a small scalpel blade, placement of a bandage contact lens on the eye, and the eyelids may be partially closed with sutures for several days to improve comfort and encourage healing. Indolent corneal ulcerations non-responsive to these treatments may be cured surgically by a superficial keratectomy.



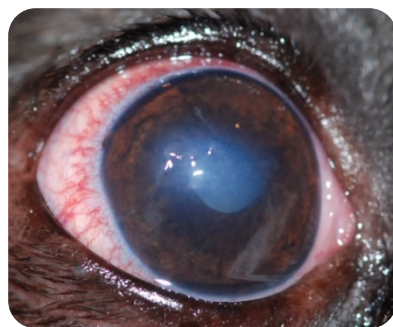
Q tip debridement



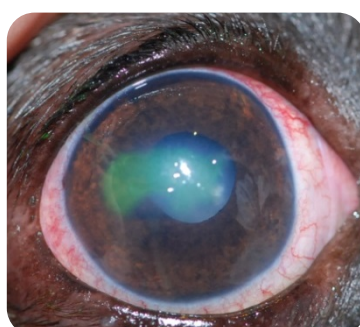
Needle scarification



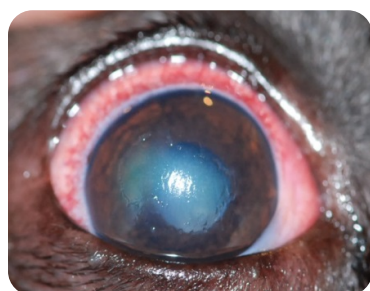
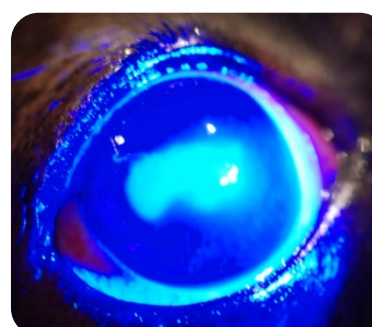
Healed ulcer with a faint scar



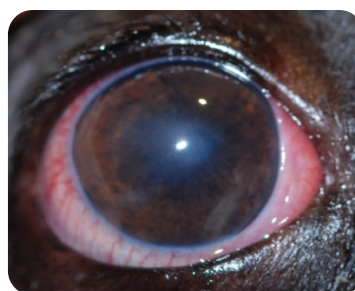
Indolent corneal ulcer



Fluorescein stain showing the ulcer (white en blue light)



The same eye after debridement and keratotomy



The same eye 12 days later, healed ulcer