



OPHTHALMOLOGY REFERRALS

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Corneal Ulcers

The cornea is the clear part of the front of the eye through which the coloured iris can be seen. Although transparent the cornea is composed of several different layers.

Corneal ulcers

A corneal ulcer is an erosion through the outer layer of epithelial cells. If damage is only to the very superficial layers it can be called corneal erosion or shallow ulcer. Deeper ulcers involve more layers of the cornea (e.g. the stroma) and are potentially very serious.

Signs of corneal ulceration

Corneal ulcers are usually painful and so the patient will hold the affected eye closed or squint frequently. A discharge is common – usually it is watery to begin with but it can become sticky and pus like. The white of the eye will look red and inflamed. The pet might want to rub the eye as well.

What causes a corneal ulcer?

Trauma or injury is the most common cause. This may simply be the result of the dog rubbing an itchy eye (i.e. blunt trauma) or can follow from a cat scratch or injury from a grass seed or damage from a protruding branch. Irritating shampoo or cigarette smoke can also cause ulceration.

Other causes include bacterial and viral infections (especially cat flu) and secondary to other ocular problems such as abnormal eyelid position (entropion).

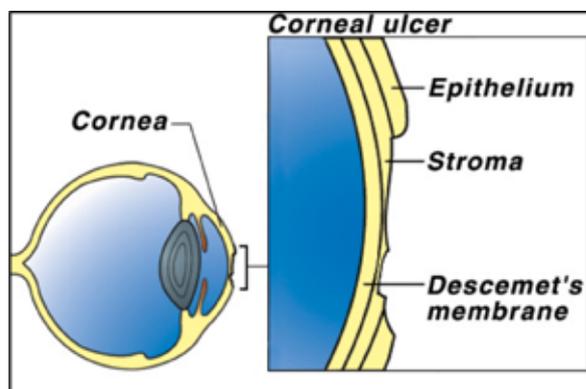


Diagram showing position of Corneal ulcer.



Which pets are prone to ulcers?

Dogs with very prominent eyes such as Shih tzus, Pekingese and pugs tend to suffer from corneal ulcers. Persian cats are also more prone than domestic moggies. Young dogs playing in the undergrowth, and working breeds, also develop traumatic ulcers quite frequently, and sometimes pieces of plant material can become embedded in the cornea requiring specialized surgery to remove them.

Other breeds such as the Boxer, can inherit conditions such as epithelial dystrophy which leads to weakening of the cornea and the formation of painful ulcers. Older dogs commonly develop superficial ulcers which can be slow to heal.

Breeds such as the West Highland white terrier can suffer from a condition known as dry eye – keratoconjunctivitis sicca (KCS) which results in lack of tear secretion and the lack of lubrication increases the risk of ulceration.

Treatment options for corneal ulcers

The treatment required depends on the cause of the ulcer and its severity. Eye preparations in the form of ointments or drops are usually prescribed to prevent infection and relieve the pain and discomfort. Some ulcers require removal of the surrounding unhealthy tissue (often performed in the awake patient after the cornea has been numbed with anaesthetic drops). If the ulcer is fairly deep there is always a risk that the eyeball could be perforated in which specialist surgery might be necessary. This might be a conjunctival graft for example. Samples of discharge can be evaluated for signs of bacterial or viral infection which could complicate healing. Other treatments involve the use of special contact lenses to protect the ulcer and allow healing.

What specialist procedures might be required

Specialist surgery includes conjunctival grafts and corneoscleral transpositions. These microsurgical techniques, performed under general anaesthesia, provide support and nutrition to the weakened, damaged cornea and speed the healing process. Aftercare in the form of multiple eye drops might be necessary.



Signs of healing

During the healing a process called neovascularisation occurs. This involves tiny blood vessels growing across the cornea from the sclera or white of the eye to aid the healing of the damaged area. This can make the eye appear more red. Once healing has occurred these vessels sometimes remain and potentially can obstruct vision. However normally they gradually reduce (with the aid of drops if indicated) and all being well vision will be maintained.