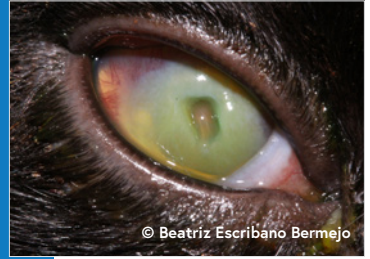


Corneal Ulcers



The cornea

The cornea refers to the clear 'window' at the front of the eye and is made up of three main layers of tissue. The outermost layer is the epithelium and the innermost layer is the endothelium. The thicker middle layer is the corneal stroma which is made up of collagen. Despite its relative strength the cornea is susceptible to damage and loss of the epithelium with exposure of the underlying stroma is known as corneal ulceration.

Causes of ulceration

There are many causes of corneal ulcers however the most common include:

- Dry eye
- Eyelid abnormalities – ectropion, entropion, macropalpebral fissure, lagophthalmos
- Cilia (eyelash) abnormalities – distichiasis, ectopic cilia
- 'SCCED' (Spontaneous chronic corneal epithelial defects) – See separate leaflet.
- Trauma
- Foreign bodies (thorns, grass seeds)
- Infectious disease (Feline Herpes Virus-1)

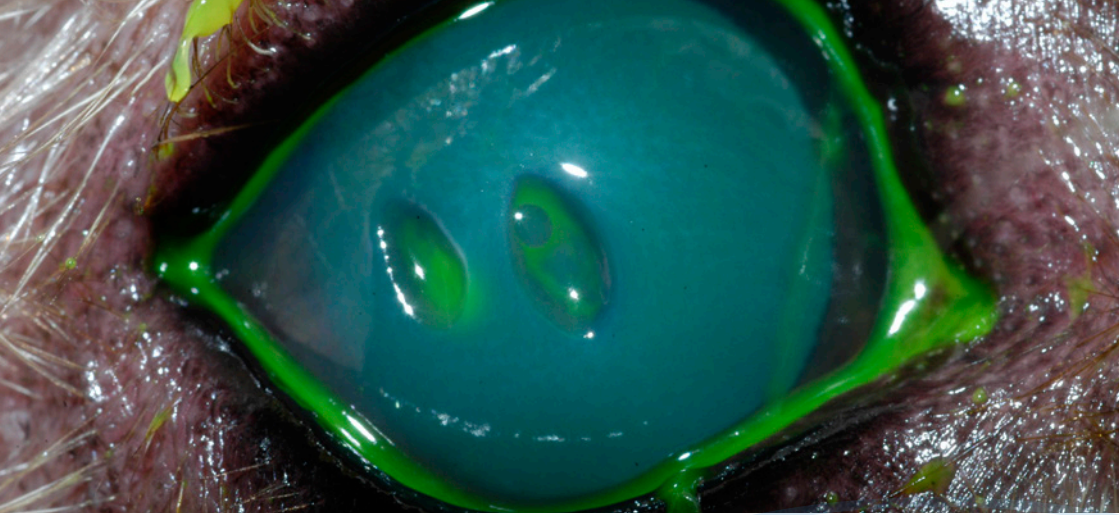
Types of ulcers

Ulcers are classified as simple or complicated. Simple ulcers involve the outer epithelium and usually heal within 7 days. Complicated ulcers include SCCEDs, those that have become infected resulting in keratomalacia ('melting' of the corneal stroma) or deeper ulcers involving the stromal layers.



eye vet

01928 714040
admin@eye-vet.co.uk
www.eye-vet.co.uk



Treatment of complicated ulcers

Melting ulcers

Intensive medical management is required to treat the underlying infection and this can be combined with corneal collagen cross-linking. This non-invasive procedure both stabilises the stromal collagen and sterilises the corneal surface to prevent further loss of tissue. If the ulcers become deep then surgical treatment as for deep ulcers may also be required.

Deep ulcers

If >50% of the stroma has been lost surgical treatment in the form of corneal grafting is advised in order to fill the defect, promote healing and stabilise the fragile cornea. The most common grafting techniques performed use the patient's own cornea and conjunctiva, and such surgeries require specialist equipment and microsurgical skills. Artificial grafts can also be used for particularly large defects.

Descemetocoeles

An ulcer is called a descemetocoele once the defect has eroded through the stroma to the very thin, fragile layer known as Descemet's membrane. This lies next to the innermost layer of the cornea; the endothelium. These are classed as surgical emergencies as the eye is at risk of imminent rupture. Surgery is performed as for deep ulcers.

Corneal grafting

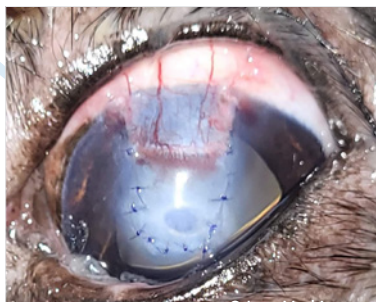
There are different corneal grafts which can be used to provide tectonic support to deep ulcers or descemetocoeles.

1. Conjunctival pedicle graft
2. Corneo-conjunctival transposition graft
3. Biocornea graft
4. A-cell/amnion graft

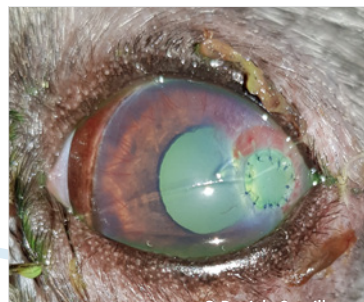
Please do not hesitate to contact Eye Vet should you have any concerns following treatment.



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