

What is it?

A corneal ulcer refers to damage to the outer surface of the cornea, which is the clear outer layer at the front of the eye. It can be thought of as a graze on the surface of the eye. Corneal ulcers are painful. In some cases, the corneal ulcer will not heal because the natural healing mechanisms are not functioning properly. This is more common in certain breeds and in older patients.

Are there different types?

The cornea has three layers – a thin outer layer, a thicker middle layer, and a thin inner layer. A deep ulcer refers to an ulcer that extends into the middle layer of the cornea. This is often due to a bacterial infection, though it may also be caused by other factors (such as poor tear production, for example). It may also be the case that the original ulcer was deep, as seen in the case of a cat scratch.

What are the treatment options?

- 1. **Conservative** treatment through topical eye drops or ointment with oral pain relief and an e-collar. The success rate of this option is around 20%
- 2. **Corneal burring** involves the abrasion of the corneal surface with a small diamond-headed burr to stimulate healing, performed under a short anesthetic. The success rate of this option is around 65-70%
- 3. **Keratectomy**, performed under general anesthetic, entails taking a thin shave from the surface of the cornea. This delicate surgery is conducted under high magnification with the aid of an operating microscope. The success rate of this procedure is close to 100%
- 4. For deep ulcers, a keratectomy and **corneal graft surgery** may be required. Corneal graft surgery is performed under high magnification with the aid of an operating microscope. This surgery involves moving a healthy tissue graft into the deep ulcer to restore the integrity of the cornea and allow it to heal. Corneal graft surgery has a very high success rate, although occasionally, a second procedure may be required if the graft fails to 'take'.

What to expect after surgery?

Keratectomy and corneal graft surgery is a day procedure that does not require an overnight stay. Patients will be discharged with eye drops as well as some oral pain relief medications. A temporary suture is placed to position the third eyelid across the surface of the eye to protect and aid in the healing of the cornea. An e-collar will need to be worn for two weeks, after which time we will release the third eyelid suture and perform a post-operative check to ensure the cornea is healing. It may be the case an additional eye drop is prescribed at this visit to reduce inflammation.



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