



Wasatch View Eye Care

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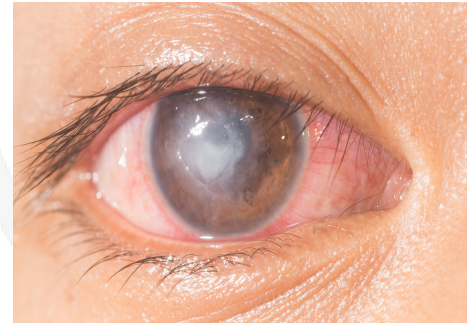
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Corneal Ulcer

Overview

A corneal ulcer is an erosion or open sore that has penetrated the cornea's epithelial (skin) barrier. It usually appears as a white or gray lesion in the cornea. Symptoms include pain, light sensitivity, redness and decreased vision. Causes usually involve some type of breakdown of the skin layer that protects the cornea from invasion of a pathogen. Your eye doctor will look at your cornea and eye very carefully with a biomicroscope. Treating a corneal ulcer usually starts with trying to identify the cause and then using the appropriate medication. Bacteria and viruses are the most common causes of an ulcer, but they can also be caused by fungus or parasites. Ulcers that are vision threatening, large or unresponsive to treatment should be cultured and referred to a corneal specialist promptly.



Signs and Symptoms

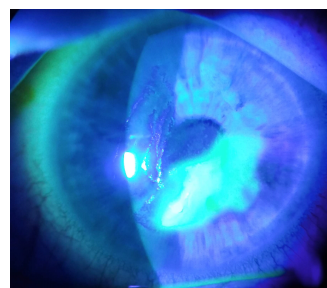
Infections that cause ulcers create an open sore, which accumulates a high concentration of white blood cells trying to fight the invading pathogen. Your eye doctor will notice a white erosion in your cornea. Small ulcers may require illumination and magnification to see them. The ulcer can cause lots of pain because the cornea has many nerves. Trauma from the infection causes a muscle behind the iris called the ciliary body to spasm and causes light sensitivity. The eye is usually red and irritated. If the ulcer is in the peripheral cornea, vision will usually be pretty good. However, if the ulcer is central there may be scarring that causes permanent vision loss.

Causes

Most corneal ulcers are caused by an opportunistic pathogen that made it through the cornea's protective skin barrier. These pathogens include bacteria, viruses, fungi and parasites. Common bacterial organisms include Strep, Staph & Pseudomonas. Viruses that cause corneal ulcers are Herpes Simplex (cold sores) & Herpes Zoster (chicken pox). A rare, but dangerous parasite called Acanthamoeba can cause extremely painful and vision threatening ulcers. The parasite most commonly causes ulcers in contact lens wearers that use tap water or swim in their contacts. Ulcers are more common with improper contact lens wear (sleeping in contact lenses), abrasions, injuries and surgeries.

Testing & Evaluation

A corneal ulcer is best evaluated by your eye doctor. They will carefully look at your cornea with a biomicroscope. Ulcers appear as a gray or white lesion



Large corneal ulcer staining with fluorescein

on the clear cornea. Fluorescein dye is often used to localize the area of the ulcer. Sometimes the pathogen can be identified based on the appearance of the ulcer. However, a definitive diagnosis is obtained by culture and laboratory testing.

Management

Standard of care is to start using a fortified or broad spectrum antibiotic drop every hour and follow-up daily to monitor for improvement. If a fungal or parasitic infection is suspected, referral to a corneal specialist is warranted because the treatment is more difficult and complications are more concerning. Referral and laboratory testing are also warranted when the ulcer is central, large or not responding to treatment.

Websites

All About Vision: <http://www.allaboutvision.com/conditions/corneal-ulcer.htm>

National Institute of Health: <https://www.ncbi.nlm.nih.gov/books/NBK539689/>

