

Herpes Viral Conjunctivitis: A Feline Problem

The conjunctival membranes of the eye are basically the pink part under the eyelids and the lining of the eyelids themselves. When they are irritated, they redden and can become itchy, dry, and uncomfortable. The cornea, or clear dome-like covering of the eye, can become involved in the inflammation. It can become cloudy or even ulcerated. Tear production can be reduced leading to a chronic dry, uncomfortable eye.



Conjunctivitis in cats is usually of viral origin and usually that means a Herpesvirus (Feline herpesvirus-1 to be specific). Herpesvirus grow in the tissues of the body that interface with the environment, such as the upper respiratory tissues and conjunctivae. The infection begins with an initial phase, which is usually the most severe in terms of symptoms. This phase resolves but the virus itself does not go away; instead, it retreats into the Trigeminal Ganglion (a neurologic structure in the head) where the patient's immune system holds it prisoner. In times of stress, the immune system is taxed and the virus is able to escape from the ganglion, traveling out via the nerves exiting the ganglion and leading to return of symptoms.

Baby Kittens: A Special Situation

Herpes infection is extremely common in young kittens especially those facing other stresses (fleas, poor nutrition, environmental cold etc.). Feral kittens, outdoor kittens, shelter kittens, etc. are all high risk for Herpes infection. Young kittens can produce so much ocular discharge that their eyes gum closed sealing the infected secretions around the eye. It is important that the eyelids be opened manually to allow drainage of secretions as well as application of medicine. The swelling of the conjunctivae can be so severe that the eye itself is not visible.

In severe cases, the eye can rupture and become permanently blinded. Treatment is crucial and response to topical therapy is usually dramatic.

Herpes infection typically causes respiratory signs as well: snotty nose, congestion, etc. These signs can result in life-threatening loss of appetite and dehydration in a young kitten, while signs are generally minor in an adult cat whose immune system is mature. Kittens with obvious discomfort should be examined by a veterinarian. Oral antibiotics will most likely be needed and sometimes hospitalization is also necessary for proper supportive care.

Adult Cats

Since kittens are so commonly affected with Herpes, it is not unusual to find oneself in possession of an adult cat with a history of Herpes infection. These individuals will have recurring conjunctivitis in times of stress. Typical signs include squinting slightly in one eye, a noticeable increase in ocular discharge (usually brownish in color), redness of the conjunctivae, or all of the above.

How Do We Know It Is Herpes?

There is only one test that is accurate enough to be worth doing if one wants to know for sure if Herpes is present or not, and that is the PCR (Polymerase Chain Reaction) test. This is a DNA test that amplifies the presence of viral DNA so that even one single virus can be detected in a sample from a conjunctival swab. The extreme sensitivity of this test has made it somewhat problematic for laboratories to run. Prior to PCR technology, serum antibody levels were run but widespread vaccination against Herpes has made these results difficult to interpret. At this point, the clinical presentation of the patient is what leads to the diagnosis of Herpes in most cases.

How Can We Treat It?

There are several treatment methods that can be combined in the treatment of Feline Herpes eye infections:

- **Topical Antibiotics**
These quell secondary bacterial invaders and are helpful in controlling initial infections or severe recurring infections. It is important to realize that antibiotics do not affect the Herpesvirus itself; they only work on secondary bacteria.
- **Topical Antivirals**
There are several eyedrops available that act directly against the herpesvirus. They include: Herplex® (idoxuridine), Viroptic® (trifluorothymidine), and Vira-A® (vidarabine). These medications are relatively expensive and typically require administration five times daily. If the cornea is involved in the infection, this would be a clear indicator that antiviral medications would be needed.
- **Oral Interferon**
This inexpensive oral solution uses a natural immune system modulator to suppress herpesvirus symptoms. Though interferon use has not been scientifically tested, it has certainly been in use for many years as something that seems to help shorten the course of infection. In tissue culture, herpes infected cells are inhibited much more easily by anti-viral drugs if they are exposed concurrently to interferon. Interferon has no side effects potential at the doses used and it appears there is no reason not to try it as it may be helpful.
- **Oral Lysine**
Herpesviruses as a group are highly dependent on the presence of an amino acid called arginine. Without arginine, Herpes cannot reproduce. The amino acid lysine is taken up by the virus in favor of arginine. We can take advantage of this situation by saturating the virus with lysine and thus suppressing the virus' ability to replicate. Lysine is readily available in most health food stores as a tablet or capsule. One should be sure that the formula used is free of the preservative propylene glycol as cats can have blood reactions against this compound. A month or so of supplementation is required in order to determine if supplementation has been helpful.
- **Vaccinating Affected Animals**
In general, vaccination is a process meant for healthy animals to prevent infections that do not already exist. But what about vaccination as a treatment for existing infection? In the case of feline Herpes infection, this may be a reasonable thing to do at least if one uses the nasal/ocular vaccine. The local vaccine produces extra immune stimulation to the area where Herpes infection is active and may help palliate the signs of infection. Injectable vaccine is not useful in this regard.

It should probably be noted that some infections lend themselves to prevention by the vaccination process and others do not. Herpes rather does not. This means that vaccination of healthy cats does not prevent infection for feline Herpes; what it does do is lead to less severe signs. Vaccination against feline Herpes has been deemed helpful but one should understand that, in this case, the goal is not total prevention of infection but palliation.

Can Humans Get Feline Herpes? Can Cats Get Human Herpes?

Happily, humans and cats cannot share their herpes viruses. Feline herpes is contagious among cats only and human herpes is contagious among humans only.