Feline Herpesvirus Infection

Herpesvirus infection is perhaps one of the more common ophthalmic problems diagnosed in cats. This virus causes conjunctivitis (inflammation of the pink tissue that surrounds the eye) and may also cause corneal ulcers. Occasionally, sneezing and oral ulcers are also present. It is important to note, this virus is contagious between cats.

What does a virus do?

A virus is not alive in the sense that people, animals and even bacteria are alive. A virus is a capsule which contains only protein or nucleic acids known as DNA. As crime shows like CSI have taught us, DNA is the building block that determines who and what we are.

A virus reproduces by attaching itself to a susceptible cell within the body; once attached to this cell, the viral DNA (vDNA) is injected into the cell. The vDNA then invades the cell’s nucleus (the ‘control centre’), and inserts itself into the cell’s DNA. This allows the cell to start manufacturing new virus particles.

New virus particles are created as the cell takes nucleic acids and proteins from the surrounding area, and uses them to form new vDNA. This concept is important in how we treat viral infections.

What is herpesvirus?

As indicated by its name, feline herpesvirus is a virus specific to cats. Not to be excluded, dogs, people, horses, cows and chickens all have their own unique form of herpesvirus; in fact, most animals do. These viruses are considered ‘species specific’, meaning a cat cannot infect its owner with the virus, just as a dog cannot infect a horse.

Feline herpesvirus is a common respiratory pathogen (infectious agent) causing an upper respiratory disease in most cats. This virus is widespread; subsequently it infects many cats in almost every shelter and cattery across the country. As a respiratory disease, it is an airborne virus; it is spread as easily as one cat sneezing while in the company of another. Within the environment, the virus is killed through exposure to sunlight, and drying. However, in a cool, moist environment the virus can live for many hours.

The problems associated with herpesvirus, depends on the age of the cat when the virus was acquired.

- Neonatal conjunctivitis occurs in kittens who have not yet opened their eyes
- In young cats (aged 6 months to 4 years) conjunctivitis and possible corneal ulcers (erosions) may occur
- In older patients, conjunctivitis is often present

Sneezing may occur in infected cats of any age. Frequently, the cat has a long history of conjunctivitis and/or corneal ulcers which will not heal.

Approximately 15 – 20% of cats with these infections will relapse; stress being the greatest contributing factor. Stress can be caused by changes in the cat’s routine, such as strangers or new animals in the home, or boarding while the owner is away, to name a few.
How is herpesvirus diagnosed?
Herpesvirus infection is suspected anytime a cat has an eye problem which does not respond to antibiotics. To diagnose herpesvirus, a blood sample is drawn and cells are collected from the conjunctiva with a swab. These samples are submitted to a laboratory for a test called a Polymerase Chain Reaction (PCR) test. This test is quite specific when compared to other tests.

What is the treatment for herpesvirus?
As bacteria are living cells which reproduce on their own, antibiotics are an effective means of treating these infections; they work to kill the organism responsible for the infection. Viruses are not alive in the same sense; they are dormant until they invade another cell. As antibiotics do not kill body cells, they are ineffective against viral infections.

Cells must bring in nucleic acids and protein building blocks from the local cellular environment to create new viruses. Therefore, the only way to kill susceptible viruses is to introduce abnormal proteins into the environment, in the form of medicated eye drops. When the infected cell draws these proteins in to create new viruses, the process is stopped.

In addition to the antiviral protein, the eye drops contain Interferon. Interferon is a natural chemical produced by the body to defend itself against viruses. Applying it to the eyes induces the body to increase its own production of Interferon.

As there is no definitive time frame for killing all the virus particles in this manner, treatment is required for 4-6 weeks or longer. Occasionally, the herpesvirus will become resistant to the medication prescribed, and the use of different medication is required.

While this is an effective means of treatment, it is important to note that any type of protein has the ability to cause an allergic reaction. If you notice your cat’s eye and eyelid becoming red, please call us. Therefore, regularly scheduled re-examinations are a critical component of this treatment.

Although feline herpes virus is treatable, regrettably, it is not curable. As all cats do not respond to treatment in the same way, changing medications is sometimes required. While this can certainly be frustrating, we share in your commitment to help your cat, and will strive to find the best treatment protocol for your cat.

Should you have any questions or concerns, please do not hesitate to contact us. We are happy to be of assistance!