



INTERNAL MEDICINE:
Feline Herpes Virus – 1

Overview

Feline Herpes Virus – 1 (FHV-1) is an alpha herpes virus containing double stranded DNA. It is highly susceptible to common disinfectants and is highly labile in the environment. FHV-1 is generally widespread throughout the feline population and has been reported to have higher prevalence within multi-cat households. It is shed via ocular, nasal, and oral secretions, and it is typically spread via direct contact with an infected cat or fomites. Nearly all cats who are infected become latently infected carriers. Intermittent shedding of the virus by carriers can occur, most often during times of stress, usually with a lag time of 1-2 weeks. The duration of shedding is likely to last 1-2 weeks as well.

Viral multiplication usually takes place within the mucosa of the nasal septum, turbinates, nasopharynx, and tonsils. FHV-1 can usually be detected in oropharyngeal and nasal swabs as early as 24 hours after infection. Viremia is rare. Infection leads to epithelial necrosis. Infection can lead to osteolytic changes within the nasal turbinates that may become permanent. The severity of infection with FHV-1 may also be increased with concurrent bacterial infection.

Clinical signs

Clinical findings associated with FHV-1 infection include severe upper respiratory signs. Incubation is usually 2-6 days from the time of infection to onset of signs. Early signs are general, and include depression, sneezing, pyrexia, and inappetance. These are usually followed by serous ocular and nasal discharge. Conjunctivitis, with hyperemia and chemosis, as well as ulcers, keratitis, and corneal sequestration, can occur as ocular manifestations of FHV-1 infection.

Mortality rate of very young kittens and immunosuppressed cats infected with FHV-1 is high, but for otherwise healthy, immunocompetent cats, it is low. In cats that suffer permanent nasal turbinate damage as a sequela to FHV-1 infection are more prone to developing chronic bacterial rhinitis, osteomyelitis of the turbinates, sinusitis, and conjunctivitis. Persians and Himalayans appear to have an increased risk of chronic upper respiratory complications compared to other breeds. In comparison with other upper respiratory pathogens, FHV-1 infections tend to cause more sneezing, with more severe respiratory and conjunctival signs. Viral isolation may be performed from oropharyngeal or conjunctival swabs (IFA, ELISA, or PCR).

Treatment

Treatment options vary. Anti-virals, such as acyclovir, a human anti-viral used in herpes infections, do not seem to be very effective in cats with FHV-1 infections. Broad spectrum antibiotics are used to treat secondary bacterial infections. Other aspects of treatment should focus on appetite stimulation, as nasal secretions can block the sense of smell, an important part of a cat's drive to eat. Aromatic foods and canned or blended diets may also be easier for feline patients to eat.

Steam inhalation, nebulization, and mucolytics may also be used to help clear mucous nasal discharge.

Vaccination with a modified live or inactivated FHV-1 strain is possible. This generally protects most cats. Some studies have shown that efficacy of the inactivated vaccine may drop from around 80% to as low as 50% over a several year period, making routine vaccine important for prevention, especially in multi-cat households. Anecdotal reports indicate that interferon-alpha and L-lysine may benefit some cats in the treatment of the respiratory and ocular manifestations of FHV-1 infection, although there are no large evidence-based studies to support these observations.

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Michigan Veterinary Specialists provides Internal Medicine Service at all three hospital locations. A member of the medicine team is on-call 24/7 to provide consultations to MVS emergency doctors and to perform the emergency services. Our specialists are available for questions and consultations on medical conditions during the weekdays.

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